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Innovating Community-Based Change in the Area of Weight Loss and Lifestyle Change: The Power of Ethical Relationships and Leadership

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Abstract
Obesity is increasing around the world, with lower-income individuals showing more obesity than wealthier ones in high-income countries. Addressing this issue, Te Whatu Ora (Ministry of Health) and Total Healthcare (THC, a large Primary Health Organisation) worked together to put together a "unique and unsolicited proposal" (instead of competitive tender) to fund Brown Buttabean Motivation (BBM) to provide its 12 week From the Couch (FTC) lifestyle change and weight loss program more widely to a predominantly Māori and Pacific clientele in South Auckland. Results from a formative evaluation of 109 individuals struggling with obesity (BMI>=30) across 3 cohorts showed weight loss of 7.1 kg from an initial average weight of 173.1 kg, and mental health gains (i.e. only 20% showing depressive symptoms at the end compared to 60% at the start) for the 57% who completed the program. THC nurses, doctors, and health coaches contributed to and supported the delivery of FTC, which followed BBM's well-defined program of motivating lifestyle change. It was found that a supportive environment (no judgment) and peer-based education (accepting no excuses) motivated clients through not only diet and exercise training, but also through social media where Facebook groups formed helpful communities that supported face-to-face work in the gym. We close with a discussion of BBM's principles for success, and how extensible this might be to other communities.

Keywords: Obesity, lifestyle change, FTC program, social support, mental health

Abstrak
Obesitas semakin meningkat di seluruh dunia, dengan individu berpendapatan lebih rendah menunjukkan tingkat obesitas yang lebih tinggi dibandingkan dengan yang lebih kaya di negara-negara berpendapatan tinggi. Menanggapi masalah ini, Te Whatu Ora (Kementerian Kesehatan Selandia Baru) dan Total Healthcare (THC, Organisasi Kesehatan Primer berskala besar) bekerja sama untuk menyusun "proposal unik dan tidak diminta" (alih-alih tender kompetitif) untuk mendanai Brown Buttabean Motivation (BBM) dalam menyediakan program perubahan gaya hidup dan penurunan berat badan, From the Couch (FTC) selama 12 minggu, secara lebih luas kepada klien Māori dan Pasifik yang sebagian besar berada di Auckland Selatan. Hasil dari evaluasi formatif terhadap 109 individu yang berjuang melawan obesitas (BMI>=30) di tiga kelompok kohort menunjukkan penurunan berat badan sebesar 7,1 kg dari berat awal rata-rata 173,1 kg, serta peningkatan kesehatan mental (yaitu, hanya 20% yang menunjukkan gejala depresi di akhir dibandingkan dengan 60% di awal) untuk 57% yang menyelesaikan program tersebut. Perawat, dokter, dan pelatih kesehatan THC berkontribusi dan mendukung pelaksanaan FTC, yang mengikuti program BBM yang terdefinisi dengan baik untuk memotivasi perubahan gaya hidup. Ditemukan bahwa lingkungan yang mendukung (tanpa penilaian) dan pendidikan berbasis rekan (menerima tanpa perlu alasan) memotivasi klien tidak hanya melalui pelatihan diet dan olahraga, tetapi juga melalui media sosial di mana grup Facebook membentuk komunitas yang membantu mendukung kerja tatap muka di gym. Kami menutup dengan diskusi tentang prinsip-prinsip keberhasilan BBM, dan bagaimana hal ini mungkin dapat diperluas ke komunitas lain.

Kata Kunci: Obesitas, perubahan gaya hidup, program FTC, dukungan sosial, kesehatan mental

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Introduction

We live in a strangely interconnected world, where 39% of the adults were overweight in 2016, as measured by the BMI (or Body Mass Index, weight in kilograms divided by the square of height in meters). Obesity rates (BMI>=30) have tripled worldwide since 1975 (WHO, 2023). At the same time, 8% of the world lives in extreme poverty where they cannot get enough to eat. All of this is interconnected by global capitalism. As poverty trends down, obesity is trending up, with the World Obesity Federation (2023) projecting half the world's population (excluding children under 5) to become overweight by 2035. Much of the increase is to come from currently low to middle-income countries, as population-level obesity (BMI>30) being known to be highest in high-income countries (World Obesity Federation, 2023, p. 26). As developing economies grow, individuals grow more overweight within them. There are system-level features within these trends: in high-income countries, it is lower-income individuals (who live in more obesogenic environments with more fast-food stores and fewer grocery stores, see Giskes et al., 2011; Pearce et al., 2007) that show the highest levels of obesity (Pampel et al., 2012). But in low-income countries, where there is still the threat of famine, there is a reversal, with high-income individuals showing more obesity. According to the World Obesity Federation's latest Atlas (2023), "Every country is affected by obesity, with some lower-income countries showing the highest increases in the last decade. No country has reported a decline in obesity prevalence across their entire population, and none are on track to meet the World Health Organization's (WHO) target of 'no increase on 2010 levels by 2025'." (p. 10).

This paper examines how to combat obesity in the OECD country of New Zealand, and theorizes about what elements of a novel intervention employed in New Zealand could be applied more generally to other countries, including developing countries.

There are three basic strategies to reduce obesity: regulation of unhealthy foods, education to teach people to adopt more healthy eating habits, and interventions to encourage healthier lifestyles and weight loss. While each has value, and all are needed to make any inroads against population-level obesity, this paper focuses on the last strategy, as we describe an innovative community-based intervention funded by government and in alliance with a mainstream medical organization that has valuable lessons for how to promote health more generally.

The International Context for Growing Obesity

The United States (USA), the world's largest economy, its medical technology leader, and host to most of the world's leading health, nutrition, and medical journals, is also home to the highest levels of obesity in the developed world, ranking 14th fattest (with an obesity rate of 36.47%) out of 200 counties (World Obesity Federation, 2023). Its obesity rate was only 12% in the early 1970s, but it has risen steadily since then, with the advent of ultra-processed and sugar-heavy foods introduced in the 1970s (Temple, 2022). The USA (#14) and other English-speaking countries (New Zealand #18 with 31.07% obese, Australia #19, Canada #20, UK #29, with a 27.88% obesity rate) appear powerless to prevent rising obesity rates. This is even more true for the small island nations of the South Pacific, which have the highest obesity rates in the world (and form a significant cohort of those reported on in this study). The policy dossiers on the World Obesity Federation's website, like imposing a sugar tax on sweetened beverages, or putting education programs in primary schools, cannot stop what some have referred to as an obesity epidemic (Pearce & Witten, 2009). Capitalist food production systems are responsible for producing and marketing heavily processed, high-calorie, poor-nutrition foods at lower prices than healthier, more nutritious whole foods. This is a fundamental driver of the rise in global obesity: poor people in wealthy countries are particularly vulnerable to the favorable cost and availability structure of eating fast fatty sugary foods (Pearce et al., 2007). East Asia has thus far been the exception to the global rule. Senauer and Masahiko (2006) provide extended discussion and analysis of Japan, and note that a traditional culture of the slow and social eating of a healthy diet has helped prevent obesity. But even in Japan and South Korea, the slimmest of OECD countries at present, obesity is increasing (World Obesity Federation, 2023).

In summary, wealthy and middle-income countries around the world appear powerless to prevent a growing prevalence of obesity in their populations (obesity is still low in very poor countries, e.g. sub-Saharan Africa). This costs their medical systems billions (Okunogbe et al., 2022), but the medical-industrial complex has been powerless to stem this tide. For example, a highly-publicized top-down intervention administered by doctors and abetted by communities, involving tens of thousands of obese children across 8 European countries,

failed to achieve its weight loss goals (DeHenauw et al., 2011, 2015). As a sign of the times, the most effective and durable means of achieving weight loss in Western countries today is bariatric surgery (that is, inserting a balloon into the stomach to reduce appetite, see Maciejewski et al., 2016). Freedom of choice (people and especially children all over the world love sugar!), coupled with market forces is driving the rise of obesity.

In this capitalism-driven context, any interventions are largely ameliorative. In the USA, weight loss is a $75 billion per annum industry, with most client-initiated attempts to lose weight achieving little. Repeated failures by individuals to lose weight feed into a burgeoning marketplace (U.S. Weight Loss & Diet Control Market, 2023). Clinical trials show that non-surgical weight loss interventions can work (Appel et al., 2011), but meta-analytical reviews have sometimes found minimal effects (Booth et al., 2014). Reviews of commercial weight loss programs in the USA show that intervention effect sizes are small (Gudzune, 2015), and non-cumulative over time, with peak weight loss at 6 months following intervention in a review of impacts extending out to 48 months (Franz et al., 2007). There is growth in the areas of weight loss pills and drugs (U.S. Weight Loss & Diet Control Market, 2023) on the one hand, and rejection of weight loss imperatives through counter-discourses such as fat shaming (Farrell, 2011) on the other. Both trends show how problematic obesity is as a wicked social problem in developed countries.

It would be ideal and more cost-effective if non-surgical weight loss interventions had a social structural component, that is, if interventions could be built to last through leveraging social forces. Bariatric surgery has enduring effects because it is a physical change to the individual (Elder & Wolfe, 2007) resulting in long-term appetite loss. But it is a prohibitively expensive procedure available only to the rich in rich societies. The purpose of this article is to present an analysis of a community-based healthy lifestyles and weight loss intervention that is on-going in Auckland, New Zealand, because it has structural components useful to construct newer forms of best practice, for poorer individuals living in societies faced with capitalist incentives to adopt unhealthy food choices.

The New Zealand (NZ) Context for Population-level Obesity

As an OECD country, NZ has higher levels of obesity among its less affluent. This is especially prevalent among its Pasifika and Māori (Polynesian) minorities (Ministry of Health, 2022) compared to the dominant majority, NZ Europeans. One of the most important modifiable risk factors for mortality is obesity, as it increases prevalence of diabetes, heart disease, and common cancers. In terms of class, more economically-deprived neighborhoods had greater access to fast food, and lower access to supermarkets (Pearce et al., 2007). In terms of ethnicity, studies by Tobias and Cheung (2003) and Chan et al. (2008) found that both economic deprivation and ethnicity impacted negatively on overall health of Māori and Pacific adults. Objective deprivation (including lower access to hospitalization and other health services, see Ministry of Health, 2020) and institutional discrimination/racism (Talamaivao et al., 2020) contribute to Māori and Pacific adults having substantially lower lifespans than NZ Europeans (Marriot & Sim, 2015; Ministry of Health, 2020). Mechanisms that perpetuate discriminatory practices related to obesity include the allocation and gatekeeping of funding, the presence of obesogenic environments (Norman et al., 2022), insufficient access to health and social services in terms of availability, accessibility, and affordability (Ministry of Health, 2004), as well as the scapegoating of Māori and Pacific individuals dealing with obesity (Theodore et al., 2015; Kumanyika, 2019). As an example of these impacts, Pasifika have the highest obesity rates among any ethnic group in NZ, but are five times less likely to get bariatric surgery compared to NZ Europeans (Rahiri et al., 2018).

Such inequality appears to be endemic, built into the post-colonial structure of the society. Post-colonial structures, such as discriminatory practices in New Zealand's public health system, influence access to healthcare and increase health inequalities. Studies consistently show there is differential treatment by doctors towards Māori compared to non-Māori, to the disadvantage of Māori. Lack of cultural awareness, latent biases and institutional racism consistently lead to poorer health outcomes (Ellison-Loschmann & Pearce, 2006; Keene & Dalton, 2021).

There have been concerted efforts to try to address these structural inequalities (Keene & Dalton, 2021). One major avenue of redress is through the principles of Te Tiriti o Waitangi, the founding document for the nation's sovereignty (Orange, 2004). Partnership, protection, and participation are the principles of the Treaty that have been used by progressive elements in NZ society to try to reduce the systemic inequalities faced by Māori, as signatories to Te Tiriti (The Treaty). Given the deep cultural connection

between Māori and Pasifika (Māori migrated from the Pacific region around 800 years ago, whereas most Pasifika migrated to NZ after WWII), their spatial proximity in urban centers, and the high rates of inter-marriage (see Teaiwa and Mallon (2005) for an articulation of this relationship), the current research focuses on a lifestyle change and weight loss intervention focusing on both these minority cultural groupings.

We should note that although there has been some discussion that BMI should be adjusted for particular ethnic groups because they have different body types, a study of health risk factors by Taylor et al. (2010) found no support for the idea that people of Polynesian descent should be assigned a higher BMI cutoff to be classified as obese.

Necessity as the Driver of Innovation

The lifestyle change and weight loss evaluation reported here was initiated by leaders of Total Healthcare, one of the largest primary healthcare organizations in Auckland (serving over 230,000 clients) that supports general practitioners (GPs) to provide better medical services tailored to client needs; and Te Whatu Ora's (Ministry of Health, TWO) long term conditions team. Nua's (2023) masters thesis drawing from interviews and talanoa (a Pacific way of facilitating dialogue as a sharing of lifeways), reported that both organizations independently came to the conclusion that existing services for obese Pasifika and Māori in Auckland were inadequate. One member of the TWO team acknowledged that "Our focus has been very secondary care focused ambulance at the bottom of the cliff. When you look at the data and the results, not a lot has changed, we haven't stemmed the prevalence of diabetes and other long-term conditions, so you know you have to take a reflection and go we're not we're not getting the gains that we need" (p. 66, Nua, 2023).

Māori and especially Pasifika are more likely to be provided with advice from their GPs to engage in more physical activity (Croteau et al., 2006), but Total Healthcare observed that their clients were unlikely to take up such advice. There were too many clients on their rolls who were obese and out of touch with their GP. So they felt like they had to go outside business as usual to reduce the long-term conditions (like obesity) afflicting their clientele: "Engagement. It is their {BBM's] ability to engage with patients that we can't despite our best efforts. We know they have proven to be very effective in engaging with the community that we've not been great in engaging with…" (p. 70, Nua, 2002).

As noted in the above quote, the inability of government and health providers to reach certain populations most in need of improved health outcomes is well-established, yet proven interventions are few and far between. TWO also was aware that client responses to Green Prescriptions (advice from GPs to engage in more physical activity, see Croteau et al., 2006) were not being followed by Māori and Pacific citizens. Hence, both organizations simultaneously reached out to Brown ButtaBean Motivation (BBM), whose founder David Letele is salient in New Zealand society as an innovator of lifestyle change and weight loss for Pacific and Māori clients.

As the government ministry responsible for maintaining the health of the nation's citizens, the Ministry of Health (Te Whatu Ora, or TWO, its Māori name) was able to activate funding through its commitments to Te Tiriti o Waitangi. An initial two years of funding support was aligned with a new approach to "commissioning for equity" underpinning the Labour-Greens government's approach to funding. This involved a commitment to putting relationships first, letting communities lead, embedded learning within such communities, and investing in people. It was achieved by the funders allowing BBM to make decisions and to lead their communities as they would with or without the funding, instead of dictating bureaucratic imperatives at BBM. While the partners and funders would partake in governance meetings, autonomy remained with BBM staff. This built trust between BBM and THC. Meanwhile, THC staff became embedded in, and contributed to the learnings of the BBM community. BBM was able to retain its organizational norms regarding how it invests in the people.

All this is in marked contrast to typical government funding rounds that involve competitive bidding and shorter-term micro-managed contracts (typically 1 year, with very specific and inflexible targets). An opt-out exemption from open advertising was agreed upon through a "unique and unsolicited proposal" under government procurement rules to fund this initiative. BBM had never previously applied for government funding, as its charismatic founder Dave Letele has a high profile as a motivational speaker and fund-raiser. He was reluctant to engage with the amount of bureaucracy required for government funding. Unusually, the first government funding contract between TWO, Total Healthcare (THC), and BBM was articulated from the start as a commitment to forming a partnership to address long-term conditions for Māori and Pacific clients in Auckland. Built into this contract was an

evaluation that included not only a quantitative investigation into the effects of making From the Couch, BBM's 12-week lifestyle change and fitness program more widely available to obese and overly obese clients, but also a description and analysis of the process of forging a tripartite alliance between TWO, THC, and BBM.

Evaluating a Unique and Unsolicited Funding Proposal

Given that a "unique and unsolicited proposal" was the basis of funding efforts to make From the Couch (FTC) more widely available, it might be helpful to describe BBM and its Māori/Samoan founder Dave Letele. Letele maintains a strong social media presence (with tens of thousands of followers across different platforms). His story can be viewed online on BBM's website.

He is a gifted communicator, and a significant part of the appeal of BBM is in his willingness to share the ups and downs in his life, as the story basis for BBM forming as a community. Letele was born into a gang family. His father was a Mongrel Mob (gang) chapter president at 19, and was sent to prison for armed robbery when Letele was 5. Dave worked hard to go to university, and then to become a semi-professional rugby league player, a career that brought him success in Australia. After his sporting career, he started a business that thrived for a time, and like many Māori-Pacific men he began to gain weight as he got older and more sedentary. But he really gained weight when his business and family failed. He found himself living on his sister's couch in Auckland, depressed and weighing in at over 200 kg. A friend offered him a career in boxing, where he began losing weight with his training and fights. That got him out from the bottom, but what was enduring from that time was sharing with others the lifestyle change and weight loss process that began when he decided to change his own life. BBM was birthed out of those conversations with others of like mind and situation. In his video, Letele describes mental health as important or more important than physical health. Peer-based training, and the formation of a positive community to share one's life journey has been the basis for BBM (see Savila et al., 2021), whose approach is grounded in Pacific and Māori models of holistic health, where mind, body, spirit, and community are entwined (Savila et al., 2022). In BBM's approach, there is less focus on individualistic factors like body image and self or peer-esteem, that is prevalent in Western biopsychosocial models (Ricciardelli et al., 2003), and more focus on community. The social media presence and the community-based reputation of BBM is what brought TWO and THC to seek to form this alliance.

In this funding situation, where there is no competitive tender, a robust evaluation process is exceedingly important. The Massey University team was tasked with delivering two evaluation documents. The first was a formative evaluation of the team-building process between the main alliance partners, THC and BBM. The second was a quantitative evaluation of the effectiveness of From the Couch (FTC), BBM's signature 12 week lifestyle change and weight loss program for entry level (obese and highly obese) clients. That evaluation is currently under review elsewhere.

This two-part evaluation is worth mentioning, in the context of delivering innovation in a neo-liberal funding environment. Compliance costs for making competitive tenders for governmental funding requirements can be high for small NGOs. Time and expertise needed to bid, requirements for data security and data sovereignty (Kukutai & Taylor, 2016), and draconian rules for reporting are all features of government funding that can put the cart before the horse. Entrepreneurs in the charitable sector like Dave Letele, who are sought after and earn good incomes as motivational speakers (he was named 2022 Kiwibank Local Hero of the Year), need to consider the costs versus benefits of government funding compared to fund-raising from the private sector. The gatekeeper in the funding process in this case was not competitive tender, but rather, the positive reputation of the charitable trust and the star quality of its founder. In this context, the two-part evaluation served as a post-hoc check and balance, allowing government to assess the benefits and sustainability of funding a socially innovative practice after proof of concept. It also allowed the entrepreneur to assess the costs and benefits of government funding (in terms of compliance costs). In this context, the ability of THC as a partner to work through some of the governmental compliance exercises was very helpful for BBM. In the Massey ethics application to do research, for example, it was THC (that employs a full-time programmer to help manage their 230,000+ client database) that was designated to hold client data, manage data security and data sovereignty, an exercise that would have been onerous for BBM (a smaller organization with no programmers or data specialists).

Relational Ethics as an Innovation Enabler

The formative evaluation further documented the process of relationship formation between Letele and his team at BBM, and the leaders and staff of Total Healthcare (THC). Regular online governance meetings began between BBM and THC soon after funding was acquired, with TWO sometimes attending. All issues involved in the collaboration were talked through at a strategic level involving agreement in principle among the leaders, and then at the operational level with detailed planning and feedback for implementation on the ground. THC CEO Mark Vella and General Manager (GM) Kate Moodabe were invariably present at governance meetings, and moreover, frequently took part in FTC training sessions in person once they started. The formative evaluation by the Massey research team, including both interviews and ethnography (Nua, 2023) documented the willingness of THC to move out of its comfort zone of standard PHO practices (where clients come to GPs, and the PHO supports the GPs) into building an alliance with BBM on BBM grounds. All interventions for clients took place at BBM gyms, and ultimately involved all BBM clients in FTC, including those who were not THC clients. THC brought nurses, doctors, health coaches, and their CEO and General Manager to sessions. The THC CEO and GM got onto a first-name basis with many of the regular clients also working out in FTC. THC doctors and nurses and health coaches not only worked to support delivery of FTC (providing medical expertise and clinical expertise to support the BBM trainers), but they also got to see their clientele on a different basis, unfettered by the formal distances imposed by a standard medical setting. This opportunity for empathy building was valuable for them, and at a distance from the typical burn-out pressures that confront a health care worker's daily life. Their integration into BBMs FTC delivery was perceived to be relatively seamless, as the Massey research team did not document many instances where BBM clients noticed practices that were out of line with the BBM ethos. The only thing BBM clients didn't enjoy was the needles required for blood tests (to measure cholesterol and HbA1c). In response, THC invested in blood testing technology that involved just a pinprick instead of a needle. These types of adjustments were made throughout the course of the formative evaluation period.

The most important adjustment made was method of recruiting clients. Individuals struggling with obesity (BMI>=40) on the THC roll who lived within 5 km of the BBM gym in South Auckland were invited to participate in the first cohort through a phone call from BBM describing the free program. However, this method of recruitment failed: out of 28 individuals who agreed to participate in FTC, only 4 turned up to the first meeting. This did not improve with further reminders. None of the first four completed the 12 week program, and so the first cohort had to be treated as a pilot study. The governance group pivoted out of cold calling people struggling with obesity on the THC roll, and into BBMs digital ecology. Letele has a robust following on social media, with more than 160,000 followers on Facebook alone. He issued a call for FTC participants through his various social media accounts. For example, Letele posted a video on Facebook saying: "Transform your life with BBM. We have a free Health and Well-being program designed for those with long-term health conditions…". While no explicit inclusion criteria were announced, the self-selected second cohort (N=50) all had BMI>=30 (obese), and were mainly Māori and Pasifika. A BBM staff member contacted every interested person over the phone: fitter persons were referred to FTC 2, a more advanced course following on from the FTC program evaluated here. Sixty percent of the first cohort completed the 12-week course, with excellent results. We later report the overall quantitative results of cohorts 2-4 combined (N=109 completions).

A qualitative account of this process shows that to reach under-served populations, it may be necessary to deviate from orthodox medical science research practices. Cold calling from a database was a completely ineffective way of reaching obese Māori and Pacific individuals. They were simply not ready to commit to the process of lifestyle change and weight loss, even though they indicated verbal consent by phone. The motivational process to undertake serious weight loss is complex, and gaining compliance with weight loss recommendations can be difficult (see De Henauw et al., 2015).

Furthermore, it would have been unethical for researchers to have put ½ of those individuals who responded to Dave Letele's call for FTC participants into a control group (i.e. give them no real treatment). Such disregard for client health and well-being in favor of medical research protocols would have been very damaging for Letele's hard-earned reputation as a passionate advocate for health and wellbeing in South Auckland. Hence, the quantitative evaluation was always going to be a longitudinal (pre-test/post-test) design allowing all participants to receive FTC treatment, not a randomized control trial (RCT) with half the participants receiving no treatment (i.e. a control

group). It is an indictment of the academy that this automatically excludes our evaluation research from being publishable in high-ranking (or even middle-ranking) academic journals rooted in the discipline of medical science. This state of affairs contributes to the continued invisibility of under-served populations in the leading medical science journals, despite decades of calls for increased attention to such people (Nelson, 2002; Smedley et al., 2003).

Fundamentally, BBM is a community-based organization steeped in Pacific and Māori values, that emphasizes a holistic approach to health where human relationships rather than clinical processes are essential to establishing the basis for effective intervention (Alefaio-Tugia, 2022; Durie, 1994). The RCT is anathema to a relational approach, because it assumes that it is objective procedures that are essential to the effectiveness of an intervention, and that these procedures can be administered effectively anywhere. By contrast, for BBM it is the relationships and trust between the client and the health team that is central. The two masters theses detailing interviews and talanoa among the health practitioners, administrators, and clients involved in the FTC evaluation revealed that trusting relationships in a community that nurtured such relationships (both in person and on-line) were central to realizing positive outcomes. For the under-served clients of BBM, who never see people like themselves in the weight loss programs advertised on TV, their BBM trainers act as relatable role models. As one participant in Finau's (2024) thesis observed "that's one of the things I really like about BBM, is that, I mean, you know, they've lived that ay, they've lived that life, they've eaten that, they've touched it. You know all this stuff, they've made these bad choices and now, you know they've got a testimony. They're giving back to everybody else, they're encouraging everybody else and you're never alone." Other participants contrasted the empathy they felt from BBM trainers compared to trainers in other gyms. As has been theorized elsewhere, human science must be grounded in human relationships (Hopner & Liu, 2020). Without leveraging the power of human relationships, bariatric surgery is the most reliable long-term intervention for obesity, and that excludes most people getting needed help.

BBMs From the Couch (FTC) program: The Role of the Evaluators

The FTC program is 12 weeks of 3-hour long sessions per week. Two days per week are devoted to exercise, and 1 day to diet and nutrition. The exercises are based on what worked for Dave Letele during his journey. 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). If they see anyone turning red, they ask them to take a break. In accord with the international literature, the FTC intervention includes different components, with the exercise component designed to complement the diet and nutrition component (Hamman et al., 2006; Kirk et al., 2012). Classic research in Western societies (Chambliss & Murray, 1979) has observed that an internal locus of control (e.g. attributing weight loss and ability to lose weight to oneself) is helpful for weight loss (see also Adolfsson et al., 2005). But to transfer this to the majority world where most people are collectivist in orientation is a challenge (see Cheng et al., 2013). BBM is able to provide an environment for individuals to take control over their own weight loss, through a renewed commitment to lifestyle change that is backed by a supportive environment. This is the art of navigating and building bridges between internal and external locus of control.

Over various iterations of FTC, the diet and nutrition sessions became less academic, and better attuned to the dietary habits and lifeways of BBM's predominantly working-class Māori and Pacific participants. They had little interest in calorie counts or nutrition lectures, and a keen interest in how to adapt their food preparation and intake habits to become healthier, without using middle-class European diets and dietary discourses as the starting point for discussion. Available time and accustomed methods were anchors for the behavioral changes that they were interested and willing to undertake. The formative evaluation was useful in feeding back information to BBM that earlier versions of the nutrition classes were too far removed from everyday local eating habits to be of much use to FTC participants (the participants themselves were too polite to complain).

Three members of the Massey research team were on the ground at the BBM gym for considerable portions of the first 4 cohorts to go through FTC as part of the evaluation. Two of them have written masters theses from their experiences, grounded in cultural participant observation, interviews, and talanoa (Finau, 2024; Nua, 2023). Two experienced academics guided the research students who formed relationships with FTC participants (and BBM and THC staff). Another PhD student was responsible for the quantitative analyses of data, and a third student (training in clinical psychology) was the on-the-ground coordinator. The lead researcher was responsible for

attending all governance meetings, and for ensuring timely delivery of various reports, including interim and final reports, as well as papers submitted for publication. Everyone in the team felt like a participant, not just an observer in the on-going process of research, development, and forming relationships between BBM and THC. Our approach was both engaged and critical: engaged in contributing to the on-going process, and critical in the sense that analysis of research data had to be objective and separate from the positive relationships forming (see Hopner & Liu 2020).

The approach taken in the quantitative analysis was both collaborative and rigorous. The research team worked with BBM, THC, and TWO to set the parameters for the evaluation. It was obvious that weight loss would be assessed, as well as indicators of vulnerability to diabetes through blood tests, but the researchers were also made aware that objective measures of health gains were only a crude measure of the full spectrum of health needs addressed by BBM and FTC.

In one early talanoa, Dave Letele told us that one indicator of satisfactory progress would be if his FTC participants were able to tie their own shoelaces at the end of the 12 weeks. As the average weight for FTC participants at the start of the program was 180 kg, such simple things can be difficult. Not all of these challenges could be easily captured using quantitative measures, but in addition to obvious before/after questions about healthy food and exercise choices, the research team importantly decided on including the PHQ-9 (Kroenke et al., 2001), a widely used short measure of the severity of depressive symptoms, as our main measure of mental health. Members of the research team were on hand for all data collection sessions (in fact, one of the team were present at most of the FTC sessions for 4 cohorts evaluated), but the data were held by FTC, to enable the members of the health alliance described here to have access and control to the fruits of their labor in the long run. The research team requested access to these data for publication and evaluation purposes. Results are reported in Liu et al. (under review) and summarized below.

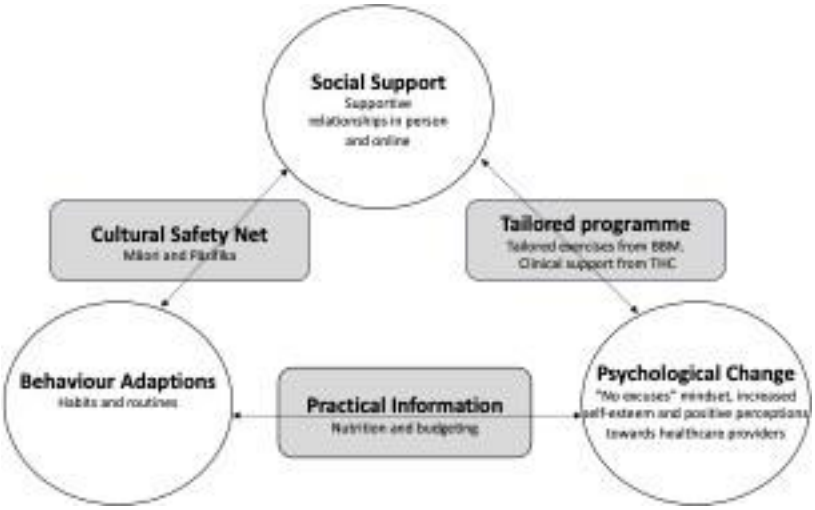
FTC Short and Long term Outcomes

Totals across the N=109 who made up cohorts 2-4 of the FTC evaluation revealed positive results across a range of health indicators. There was a 57% completion rate, with N=72 completing the final survey, and N=55 with blood tests and weights taken by nursing staff on the final week. Average weight loss was from 180 kg at week 1 to 173 kg at week 12, which was significant. There were also statistically significant decreases in glycated hemoglobin (HbA1c) and systolic blood pressure. The intervention yielded no significant effects on cholesterol or diastolic blood pressure.

Additional analysis showed that the degree of participation moderated the impacts of the program, with those who attended more sessions losing more weight. Among those who lost 2% of body weight or less, average session attendance was 18 out of 30. Those who lost between 2-5% attended 24 sessions on average, and those who lost 5% or more body weight (clinically significant losses) attended 28 out of 30 total sessions on average. Drops in diastolic blood pressure, cholesterol, and systolic blood pressure were also significant across the three weight loss groups from week 1 to week 12, but PHQ-9 and HbA1c did not differ significantly between groups.

Perhaps the most stunning result was that the largest single effect size (0.36) observed among those who completed the program was lower depressive symptoms, as measured by the PHQ-9. Whereas 65% of participants at week 1 showed signs of severe depressive symptoms, this decreased to only 20% by completion at week 12. Qualitative results suggest that these improvements to mental health were achieved through not only session attendance, but with online social support. Each cohort established its own Facebook group, that was used to organize additional activities and to encourage one another, especially if a group member was not turning up. Finau (2024) reported one talanoa conversation as follows: “Well, they’ve created a page, they’ve created a Facebook, you know we chat most of the time. You see people’s comments, you see people supporting each other and you know and when I walked in, you know, big is special. To me, big is not “oh you’re big”. Cause I’m hearing people say “Oh, you know when you go to BBM, it’s only for big people”….And I and I’m prepared to say “hey you know what? Actually, they’re beautiful, they’re good people” and we’ve just made the wrong choice in life.

Figure 1.
Virtuous Cycle of Foundational Elements in Lifestyle Change according to the BBM FTC program



And if we don't support each other, that's what we're gonna be, that's our words that going to come out of our mouths, that doesn't support a big person. I don't, I don't buy that." The previous quote embodies the BBM motto of no judgment and no excuses, showing a particular indigenous approach to balancing internal and external locus of control.

It appears that a virtuous cycle of improvements to mental health went hand-in-hand with changes to physical activity levels, diet/nutrition, and weight loss over the 12-week period for BBM FTC participants. Motivation is the most difficult aspect of weight loss for individuals struggling with obesity, with the international literature showing only modest weight losses during and after intervention stabilizing after just 6 months. There is a lack of long-term studies showing weight loss and lifestyle changes over the course of years, with most studies showing weight loss peaking after just 6 months (Franz et al., 2007). Our future research is going to follow up on the research reported here using more long-term case studies and a longer-duration quantitative longitudinal study.

Our formative evaluation showed that BBM's FTC was in line with the best results in the international literature on non-surgical weight loss interventions, but the alliance set up to achieve these results has the potential to go beyond the current state of the art. Both BBM and THC are organizations with extensive databases and outreach, and thus have the potential to follow up on clients long-term. For some, BBM has become a new community, a positive community that enables positive lifestyle changes in the future. Dave Letele has a pithy saying along these lines: if your 5 best friends are all idiots, what does that make you? Such sayings (made in jest, very Pasifika) are a form of wry acknowledgement of the challenges facing some BBM clients. In the interim and final reports, the research team noted a case study of a participant who had been involved in gangs, and another who was addicted to drugs: both these individuals left those situations over the course of their extended time with BBM. Even if a particular individual does not stay with BBM, if their mental health remains non-depressed, they have a better chance to continue to make positive lifestyle changes over the long run. After the evaluative success for 12 weeks of FTC, there is the more substantial task of documenting long-term lifestyle change, something that has not been much seen in the literature.

On that note, we return to the larger context of the worldwide growth of obesity. It could be argued that BBM's work is just a bandage on a broken system that produces obesogenic environments with lots of fast-food outlets and few supermarkets for people living in poor neighborhoods in rich countries (e.g. Giskes et al., 2011; Pearce et al., 2007). It is true that weight loss and lifestyle change interventions must take place in concert with the regulation of unhealthy food options and education about the importance of diet and exercise in good health. But on the flip side, BBM is not just about weight loss, it is about lifestyle change, in the context of healthy food and exercise choices being

embedded within healthy relationships. The social component of BBM was highly salient in talanoa examining client accounts of why FTC worked for them. A structure of trust and relationship building characterized the growing alliance between BBM and THC, and it characterizes the way clients and trainers talk about BBM. It is seen as a culturally safe place to engage in weight loss and lifestyle change, a supportive community where no one imposes judgments based on another's physical appearance, and a place where one is encouraged not to make excuses, but to put the work in to make a positive commitment to good health, for oneself and one's neighbors. It is in that context of community-building that holistic health building takes place. It is hence an open question to what extent this specific intervention can be extended to other communities in NZ, that are predominantly Caucasian and Asian.

However, we believe that any effective weight loss intervention must build and build upon community, for that is what liberal economic development compromises in the process of creating wealth. Transformative change requires us as a society to change our belief systems about how we respond to obesity. Community organisations such as BBM should be viewed and perceived as an equal partners alongside health and medical establishments, not as charitable add-ons. This must be reflected in funding. Developing such a realization is something that can be foundational to preventing the obesity pandemic in developing countries, especially in Asia where only a small percentage of the population is obese today. But obesity is growing, together with economic development. Approaching weight loss from the perspective of community-building to replace what is lost from human relationships in the context of economic growth is an important lesson from this research to majority world contexts.

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