

Original Research

Health interventions as vehicles for increased sport participation for women and girls: Socio-managerial insights from a Netball-for-Development Program in Tonga

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ABSTRACT

Against the background of ever-rising non-communicable disease rates, an area that has received increased attention from sport-for-development practitioners and academics is sport-for-health (SFH). SFH projects attempt to contribute to the development of healthy lifestyle behavior and physically active societies through sport-related programs and interventions. The purpose of this paper was to explore the socio-managerial challenges and opportunities of a netball-based SFH program in Tonga. Based on local focus group and interview data, findings were grouped under five overarching themes: strategic management of volunteer network, sociocultural barriers, public space management, events and tournaments as incentives, and collaboration across local and national sports. In discussing these findings in context, we provide implications for managing culturally sensitive SFH projects in the Pacific region and beyond.

Health Interventions as Vehicles for Increased Sport Participation for Women and Girls: Socio-Managerial Insights from a Netball-for-Development Program in Tonga

The field of sport-for-development (SFD) has witnessed significant growth and diversification over the past 15 years. Around the world, sport-based development programs are staged to contribute to a range of positive social, cultural, educational, psychological, physical, and economic change,

especially in disadvantaged communities (Levermore & Beacom, 2009; Schulenkorf et al., 2016). Given the alarming prevalence of ever-growing non-communicable disease (NCD) rates on a global scale (Bennett et al., 2018), one area that has been receiving increased attention from academics and practitioners is sport-for-health (SFH). SFH projects attempt to contribute to the promotion and development of healthy lifestyles and a physically active society through specifically designed and targeted sport and sport-related interventions; as such, SFH is conceptualized as a distinct subsection of SFD work (see Schulenkorf & Siefken, 2019).

In a health promotion context, SFH interventions are also growing in popularity. Sport is recognized as a dynamic vehicle to promote public health messages, as well as to positively shape attitudes toward physical activity (PA: Eime et al., 2008; Garnham-Lee et al., 2016). Although the outcomes of targeted SFH projects have been documented in the past (e.g., Dalton et al., 2015; Richards et al., 2014; Siefken, Schofield, & Malcata, 2014), less is known about the setup and socio-managerial factors that underpin the strategic implementation of SFH initiatives. For instance, critical questions around project design, delivery and leverage, as well as the collaboration of program partners in culturally distinct contexts, deserve to be explored in much greater detail (Schulenkorf & Siefken, 2019; Welty Peachey et al., 2018).

Keywords: sport-for-development; health management; physical activity; sustained engagement; Pacific Islands

Against this background, the purpose of this paper was to explore the socio-managerial challenges and opportunities of a netball-based SFH program for physically inactive women and girls in the Kingdom of Tonga. The country has one of the highest rates of obesity and NCDs in the world (Kessaram et al., 2015; Watson & Teanor, 2016). Conservative estimates indicate that physical inactivity is responsible for 11.2% of all-cause mortality in Tonga and causes 6.9% of coronary heart disease, 8.6% of type 2 diabetes, 13.5% of breast cancer, and 12.4% of colon cancer (Lee et al., 2012). PA undertaken during leisure time, including sport, is particularly important in reducing the burden of NCDs, but the effectiveness of sport interventions will depend on the implementation of several strategies to increase their cultural relevance (Conn et al., 2013; Schulenkorf, 2017). By discussing the thematic findings of our qualitative investigation, we strive to contribute to a better understanding of culturally sensitive management approaches to SFH and highlight implications for the design and implementation of future interventions across the Pacific and beyond.

Literature Review

To establish the relevant theoretical background for our empirical SFH study, in this section we provide a brief overview of the areas of health, PA, sport, and SFD, which are inextricably bound. In other words, in SFH different actors from various fields of society are working together to contribute to a healthy and prosperous population (Edwards & Rowe, 2019; Schulenkorf & Siefken, 2019). They do so with the understanding that health is a multidimensional concept that combines three distinct but interrelated dimensions: (a) physical health, characterized by the absence of physical disease and having the energy to perform daily tasks (including activities of moderate to vigorous intensity); (b) mental health, characterized by the absence of mental disorders and having the ability to negotiate daily challenges and social interactions in life without major issues; and (c) social health, the ability to interact with other people in the social environment and to engage in satisfying personal relationships (WHO, 1948).

From a physical health perspective, regular PA is associated with benefits such as reduced risk of cardiovascular disease, diabetes, and osteoporosis (Haskell et al., 2007; Lee et al., 2012). Epidemiological research further suggests that regular PA can also positively influence individuals' mental and psychosocial status, including improvement of mood (Ströhle, 2009) and a reduction of symptoms related to depression, anxiety, and emotional distress (Schuch, Vancampfort, Richards, et al., 2016; Schuch, Vancampfort, Rosenbaum, et al., 2016). Finally, from a social perspective,

PA has been shown to foster the development of new networks; build local skills, knowledge, and resources; facilitate civic participation and social capital; and improve integration, inclusion and cohesion in community settings (Bailey, 2005; Edwards, 2015; Spaaij, 2012).

Although the use of sporting activities as vehicles for development is not a new phenomenon, the intentional implementation of sport for non-sporting outcomes has been a more recent but fast-growing area of focus, classified as SFD (Richards et al., 2013). In recent years, research across all thematic areas of SFD has experienced significant development (Schulenkorf et al., 2016); however, investigations in the health-focused subset of SFD—namely SFH—have yet to receive the scholarly attention they deserve. Specifically, aspects of health development, including the improvement of PA, have largely been taken for granted or seen as a welcome by-product of many sport-focused development programs. Instead, we argue that a specific emphasis on health, including its physical, social, and mental dimensions, is critical to design programs that are specific, targeted, and focused on delivering desired health benefits for those who are most at-risk (Lubans et al., 2011). If that can be achieved, sport has the potential to make an efficient and cost-effective contribution to the Sustainable Development Goal #3, that is to ensure healthy lives and wellbeing for all ages (Schulenkorf & Siefken, 2019).

While SFH initiatives have not yet received the attention that social or educational focused SFD programs have enjoyed, there are a number of projects and initiatives that deserve to be highlighted. For instance, different SFH programs have been implemented in the Pacific Islands, including the Basketball development project Hoops for Health (across Fiji, Vanuatu, Kiribati, and the Solomon Islands), which aims to encourage healthy lifestyle choices through strategic basketball sessions that are coupled with educational resources on (un)healthy lifestyle behavior (cf., FIBA Oceania, 2021). Another example is the Wokabaot Jalens in Vanuatu—a culturally-cantered, research-based health development intervention with the aim to reduce participants' NCD risk factors, specifically by raising PA levels and improving healthy eating behaviors in female civil servants (Siefken et al., 2015). Finally, the Volley4Change program has targeted Pacific adolescents with the aim of reducing their chances of developing NCDs by playing volleyball and engaging in nutritional awareness classes and health checks in clinical settings (Cohen et al., 2019).

On the macro and meso levels—and focused more specifically on a health promotion and awareness building -

some critical projects and campaigns should be acknowledged. Although not all of these are labelled specifically as SFH initiatives, they have the same purpose of making a distinct contribution to the Sustainable Development Goal #3. UNICEF, for example, has previously used sport and sport stars to raise awareness on the importance of immunizations for public health, including the use of organized sport events as a vehicle for advancing vaccination campaigns in Zambia against measles (UNICEF, 2003). More recently, during the COVID-19 pandemic, a number of large sporting organizations including FIFA engaged with UN-bodies such as the World Health Organization to collaboratively promote healthy lifestyles through football with the underlying message to be #HealthyAtHome (PAHO, 2020).

The abovementioned examples indicate that for SFH programs to be impactful, collaboration and managerial know-how present critical ingredients. In fact, without adequate planning, design or implementation SFH projects may not result in the desired health outcomes or risk having unintended negative impacts on the participants (Schulenkorf, 2017). For instance, an SFH initiative aimed at improving the mental health of adolescents in post-conflict Uganda ended up having a negative impact on the participants due to program components that lacked adaptation and effective planning and implementation (Richards et al., 2014; Richards & Foster, 2014). Taking such challenges into account, the guest editors of a recently published special issue on “Managing Sport for Health” in the journal *Sport Management Review* highlighted that sport needs to be aligned with community needs and should be empowering, sport should be adaptable and evolving to ensure it values health, and sport organizations should ensure partnerships for health to promote organizational sustainability (Edwards & Rowe, 2019).

Despite the abovementioned theoretical and conceptual advancements and a number of recent case study analyses on SFH outcomes, there remains a distinct lack of empirical research on the managerial challenges and opportunities, including critical questions around SFH project design, delivery, and leverage, as well as the collaboration of program partners in culturally distinct contexts (Schulenkorf, 2010, 2017). The lack of empirical research is particularly relevant for work in low- and middle-income settings, including the geographically remote and culturally diverse South Pacific region, where SFH programs have been implemented for years but where socio-managerial research on SFH projects remains scarce (for notable exceptions, see: Keane et al., 2020; Siefken, Schofield, & Schulenkorf, 2014; Seal & Sherry, 2018). With this study, we aim to contribute to filling this research gap by

providing empirical findings from a netball-based SFH initiative in the Kingdom of Tonga. As such, the present study explores the socio-managerial aspects that underpinned the initiative and it presents the lessons learnt that may well inform the design and delivery of future SFH programs in similar contexts. Here, our qualitative investigation builds on previously conducted research that has highlighted the success of the program in achieving desired health and participation outcomes (a snapshot of results is presented in the Findings section).

RESEARCH CONTEXT

Pacific Islands/Tongan Context

The Pacific Island countries comprise 23 nations and territories spread over more than 25,000 islands and islets in the Pacific Ocean (Schulenkorf & Siefken, 2018). The Pacific Island countries are home to 10 million people whose lifestyle was traditionally characterized by the consumption of seafood, fresh local food, and high levels of PA behavior (Coyne, 1984). Since the 1950s, however, the average lifestyle of Pacific islanders has changed dramatically. From a dietary perspective, fresh local produce was replaced by largely processed imported food (Snowdon et al., 2010; Thow et al., 2011). From an activity perspective, physical labor was replaced by electronic machines while sedentary occupations and the use of motorized transport contributed to a significant reduction of people’s habitual PA levels (Coyne, 1984; Englberger et al., 1999; WHO, 2008).

As a result of these changes, the levels of obesity and NCD prevalence have increased significantly. Tonga is performing particularly poorly from a public health perspective. Kessaram et al. (2015) highlighted that 60% of men and more than 70% of women in Tonga are obese, placing Tonga as one of the most obese nations in the world. In an attempt to address the issue, different health interventions including SFH initiatives have been implemented in Tonga. They form part of a wider movement aimed at improving community well-being and promoting healthier lifestyles in the region. In this study, we focus on a specific netball-based SFH intervention, the Netball Outreach Program (NOP), which was designed to increase sport participation in communities with traditionally low levels of engagement in PA, and to improve physical, social, and mental health outcomes for those involved.

The SFH Initiative: Design, Implementation, and Delivery

Between 2012 and 2015, netball had been utilized as a method of health promotion and NCD prevention in Tonga via the Kau Mai Tonga (KMT) initiative, an annual 6-week mass media campaign that focused on delivering messages to increase women's and girls' knowledge about the health risk of being physically inactive, and improve attitudes toward women engaging in PA (Sherry et al., 2017). In a country where sport and PA opportunities are traditionally designed for and dominated by men (Turk et al. 2013), the KMT initiative aimed to promote both small-scale community programs but also larger netball tournaments for women across the country.

For a number of reasons, netball was purposefully chosen by the Tongan Government via the KMT initiative: (a) it had sufficient similarities with the traditional game of basketbola, (b) it could readily utilize the established community infrastructure of courts or open spaces, and (c) the sport had a level of visibility via the professional netball competitions in Australia and New Zealand that were broadcast on Tongan television. Apart from the similarities, netball was also sufficiently different to generate a level of excitement and novelty for community members. Previous research on the KMT initiative had demonstrated the utility of netball as a vehicle to improve the health of women and girls and over the years women's involvement in sport became increasingly accepted within Tongan culture (Sherry et al., 2017; Turk et al., 2013). However, initiatives had largely been concentrated in the urban areas of the main island of Tonga'tapu. In an attempt to broaden the scope and impact of the original program, TNA, in partnership with the research team, identified a number of remote villages as locations for the NOP as a targeted netball-based SFH initiative. The specific rationale for targeting these villages was to motivate physically inactive women and girls to participate in a new and different form of PA, and to leverage the earlier success of KMT. The rural focus of this study was also informed by international evidence that indicates the level and type of PA varies according to urbanicity and the level of socio-economic development. Specifically, in low- and middle-income countries such as Tonga, leisure-time PA makes a relatively small contribution to overall PA levels (Strain et al. 2020). This is thought to be further accentuated in rural settings, where organized recreational PA opportunities are typically more limited. Overall, given the emerging evidence on the distinct importance of leisure time PA for both physical and mental health (Teychenne et al., 2020), this study focused on intervening in the rural Tongan population with the lowest previous exposure to organized recreational physical activity

opportunities.

Selection of Netball Outreach Program Sites

At the outset, the research team worked with the TNA staff to identify appropriate intervention villages using selection criteria that were developed by local TNA staff: remote villages, low in current sporting uptake, and likely to respond to a netball intervention which included developing local "champions" (i.e., expected early adopters). Low-uptake villages were identified specifically as those villages with (a) no established contact person coordinating netball activities in village, (b) no trained netball coaches/umpires in village, (c) no functioning netball infrastructure/equipment available in village, (d) no netball teams from village currently participating in regular adult tournaments, and (e) any netball players playing on teams from neighboring villages or towns. Across Tonga'tapu, 10 low-uptake villages were selected and subsequently resourced by TNA to participate in the NOP. Importantly, at the initial formative consultations, members of target communities expressed a genuine interest in participating in netball—something that had been previously thwarted by limited resources and capacity.

Planning and Preparation

One member of the research team provided expert advice and assistance with program design, helping to formulate a specific netball-based SFH intervention that complemented existing initiatives being delivered in Tonga. Specifically, to facilitate the implementation of the NOP program, a number of integrated management processes were undertaken across a 6-month period in 2016. First, in line with Tongan protocol, TNA contacted the Ministry of Internal Affairs to identify and facilitate contact with the town officers for each of the 10 intervention villages. The town officers are the key point of contact for each village, similar to mayors in other contexts. Concurrent with this process, initial planning meetings were conducted with TNA staff and other local stakeholders to identify sport management challenges, cultural peculiarities and facilitators/barriers to netball participation.

Following liaison with and approval from the town officers, the TNA program manager identified a volunteer village champion (VVC) for each of the targeted intervention villages. The VVCs were selected and recruited primarily through their involvement with TNA as volunteers. All of them were female, aged between 18 and 45. It is important to note that all VVCs were not formally employed; some lived in their own intervention villages, while others lived in Nuku'alofa (Tonga's capital city) and had to travel to their

project site to promote netball and the NOP program. Finally, the creation and maintenance of netball courts—some of which were far away from the village center—was undertaken by TNA staff with the assistance from the relevant VVCs and volunteer netball leaders in each village.

Netball Program Intervention Delivery

Once the NOP program was designed and all preparatory work was completed, program promotion commenced in the 10 intervention villages. This promotion was primarily led by VVCs with direct support from the TNA program manager. It was conducted in an informal way and the recruitment of players was supported by word-of-mouth processes and an open-door policy during regular netball trainings at each newly created netball court. NOP sessions comprised of one to two hours of continuous netball activity in the villages, with each participant playing for approximately 20 to 30 minutes. There were two organized training sessions per week—one for children, one for adults—and most villages had 20 to 30 people attending each session after approximately six months' time.

As the program developed, VVCs also worked with their local community health services, such as community nurses, to offer regular health checks and Body Mass Index measures. After the first six months, a progress meeting was held with the VVCs at the TNA office to follow up on village progress and challenges. Dates and requirements for upcoming events were discussed, such as a sport carnival for women's teams was organized as a 1-day social competition in a central location. TNA provided fundraising support to generate sufficient money for the transportation of village teams in an attempt to overcome financial barriers to participation. As a subsequent initiative, a round-robin series of mini-competitions was developed with teams travelling to three different locations: Houma in the east, Ha'asini in the west, and Atele in the central region.

RESEARCH APPROACH AND PROCESSES

For this 18 month research project, we employed a case study methodology that featured a mixed-method approach with three phases of quantitative data collection and one phase of qualitative data collection. Although the quantitative studies focused on personal, social and environmental mediators as well as the link between program participation and increased PA levels (Keane et al., 2020; Richards et al., 2016), the qualitative investigation presented in this paper thematically explored the socio-managerial challenges and opportunities of the NOP program. Our qualitative research was underpinned by an interpretive mode of inquiry, which suggests that access to

reality can be socially constructed through language, consciousness and shared meanings (Glesne, 1999; Neuman, 2013). Interpretive research acknowledges that data are analyzed through a process of induction, which means that meaning is constructed and reconstructed based on the realities of participants. In other words, interpretive studies aim to understand the context of a phenomenon through the meanings that people assign to it (Denzin & Lincoln, 2018).

As noted earlier, the present study is supported by literature from health, physical activity and SFD and although no formal theoretical framework was adopted, both the focus group and interview questions were informed by research on socio-managerial aspects of SFD (i.e., mechanisms for change using sport as a development tool), and SFH (i.e., physical activity and behavior change) literature. A total of 14 focus groups were conducted in nine out of the 10 Tongan villages during a two-week in-country research visit in April 2017, around four months after the commencement of the program. The focus groups lasted an average of 60 minutes and took place in a location in their village that was convenient to the participants (e.g., church hall). The village that missed out on our research was involved in a mourning process and sociocultural etiquette suggested that it was not appropriate to interact with village members during this time. In the other villages, focus groups included a balanced number of participants and those tasked with the delivery and management of the program, either TNA staff or VVCs. The combination of participants and those in charge of the delivery or management of the program served the purpose of undertaking a 360-degree reflection on people's experiences, including a reflection on the program's successes, failures, and identification of opportunities for improvement. In total, 57 females were involved in the focus groups, aged between 16 and 55 years old. The women were from rural settings with lower sociodemographic profiles and their lives comprised primarily of caring for their families, subsistence farming, and limited access to recreational physical activity opportunities.

Focus groups were chosen because they can help achieve a greater understanding of a previously vague phenomenon, as participants are likely to express opinions and ideas more openly in a group setting (Veal, 2006). This is particularly relevant in societies where socializing in groups plays a significant role in everyday life, including in sporting contexts (Siefken, Schofield, & Schülenkorf, 2014). Our focus group questions centered on the managerial opportunities and challenges for program implementation and growth; the perceived benefits of netball engagement; barriers and facilitators to individual participation; peer and

community perception of PA and netball; support provided by the TNA and program partners; and opportunities for the future delivery of the program. It should be noted that the present study draws primarily on the reflections on the setup, management and implementation of the program, including opportunities and challenges for collaboration, engagement and support. Finally, nine individual interviews were conducted with village-level volunteers and TNA staff to further explain and contextualize focus group findings with those specifically involved in managerial positions. Again, interviews were conducted in a community setting that was convenient to the participants and the intention was to gain a deeper understanding of all aspects of program delivery and organization.

The qualitative data analysis undertaken followed the descriptive, interpretive and pattern coding as set out by Miles et al. (2014). In other words, as researchers we were mainly focused on eliciting emerging themes from the data that were relevant to the NOP program. From a process perspective, systematic inductive coding was employed which included a broad read-through, a search for recurring concepts and patterns, and the grouping of recurring concepts and patterns into themes. Here, two members of the research team coded the complete data set before the team engaged in a process of cross-checking information to ensure consistency and credibility of our thematic findings. This process further assisted in making sure that key messages and themes were indeed representative of the data transcripts (Patton, 2015). Overall, our analysis resulted in numerous codes which were collapsed into five key themes which are highlighted in our Findings and Discussion section. We wish to acknowledge that the research team included four international scholars and one local member; importantly, all those involved with the data collection and analysis have had many years of engagement with the SFD and SFH sectors in the Pacific Islands region, both in practice and in research. As such, we were confident that our combined expertise was a supporting factor during the inductive data analysis process.

At the same time, we need to also acknowledge the “outsider status” of the international research team members as a limitation of our empirical study. We aimed to mitigate this challenge as much as possible, especially through close engagement with the local management team and their social and cultural support during community meetings and research sessions. This also included the collaboration with a local translator who provided assistance during interviews and focus groups with a handful of individuals who preferred to engage in discussions in their local Tongan language. Finally, our study was approved by the La Trobe University Human Research Ethics Committee (13-073)

and the Tonga National Health Ethics and Research Committee (190315.5). Approval was also granted by the Tonga Netball Association and community leaders in the participating villages. All participants were provided with information about the research and they provided informed consent prior to data collection.

FINDINGS AND DISCUSSION

The purpose of our study was to explore the socio-managerial challenges and opportunities of a netball-based SFH program in low-uptake villages in Tonga. In this section, we outline and discuss key findings under the five themes identified: strategic management of volunteer network, sociocultural barriers, public space management, events and tournaments as incentives, and collaboration across local and national sports. We present our findings against the background of previously conducted health outcome evaluations of the initiative (Keane et al 2020). Although these do not present the main focus of our paper, the following snapshot of key quantitative results is important to highlight a number of encouraging outcomes that have started to emerge as a result of the positive uptake of netball activities.

Snapshot of Program Outcome Evaluations

The quantitative results demonstrated the impact of the program on netball participation and the volume of leisure-time PA. First, when reviewing netball participation, there was a large increase in the mean frequency of participation each week from baseline (0.2 time per week) to 6 months follow-up (4.1 times per week). Second, there was also a large increase in the mean duration of leisure-time PA from baseline (18 minutes) to the 6 months follow-up (421 minutes). These improvements were underpinned by positive changes in numerous personal, social and environmental mediating factors (for further detail, see: Keane et al 2020). This suggests that with appropriate resources and local support, it is possible to achieve desired program outcomes and although the sustainability of impacts remains to be assessed in follow-up studies, these encouraging results led us to investigate and understand some of the managerial aspects that led to—or underpinned—the program.

Strategic Management of Volunteer Network

A key emerging theme was the importance of developing a local volunteer network to foster local community engagement. Specifically, TNA had been able to establish a vital network of over 30 women across all areas of Tonga'tapu who regularly volunteered at TNA-organized

tournaments as umpires and referees, attempted to stimulate netball participation in their villages, participated in TNA netball activities, and attended TNA tournaments to assist paid staff with operational tasks. Rather than acting independently from one another, these individuals perceived themselves to be part of a wider “netball community” that created a shared sense of identity and belonging. In fact, this shared sense of belonging fostered their ongoing commitment and drive to improve netball participation in their villages, as one VVC stated, “It kind of makes me feel like a part of something—like a family, and you don’t want to lose it. I see the passion that everybody works with and it means that I work hard, too.”

Members of the volunteer network actively engaged in the development and fine-tuning of the NOP program across the 10 villages, as such—and under the leadership of local VCCs—volunteers enjoyed a level of freedom when working with the local community to achieve the best outcomes in culturally appropriate ways. In other words, through partnerships with village members VCCs and their supporters were able to increase opportunities for cooperation and support, which benefited the uptake of PA and improved netball capacity across villages. This was highlighted by one TNA staff member:

I think it all comes down to the volunteers. If you do more, then you know what that village needs and you can do what they want, and you can make sure that more people get involved and receive the training. If people don’t go out and engage people from the village, then teams won’t get together and opportunities are lost.

In all villages across the intervention, the VVCs were personally committed to the program and its goals. They were dedicated to trying to improve netball participation and get people in their communities active, particularly women and girls. This commitment and the growing volunteer network resulted in the development of a “social sport system” at the village and regional level, which was clearly targeted to those who would benefit most from a dedicated SFH initiative. In fact, this strategic and committed focus on “for-health” proved to be a critical success factor—something that the organizers of many previous social sport initiatives have struggled to achieve, as they focused too much on traditional sport development outcomes or had an insufficiently engaged and/or appropriated skilled volunteer workforce (Chawansky, 2021; Clutterbuck & Doherty, 2019; Giulianotti et al., 2021). In other words, although previous SFD programs have at times struggled to avoid a “mission drift” by attracting already sports-minded or active sportspeople (e.g., Raw et al., 2021), the NOP program through its

locally embedded volunteer network managed to stay on path to secure participation from largely inactive members of Tongan society.

In rural Tonga, the VVCs acted as important local change agents; they were trusted by the community and had the ability to actively and meaningfully encourage others to participate—qualities that external change agents would not necessarily possess. In building on Schulenkorf’s (2010, 2012) argument that external change agents are significant initiators of many SFD projects, we contest that this netball program would not have been established or developed successfully without committed internal change agents working across all stages of the program. The initial design of the NOP initiative was externally supported by an expert member of the research team (bringing expertise in health and PA) and the Netball Australia program manager (bringing expertise in netball and funding). Still, local change agents played a central role in co-starting the program and contributing to its development and growth across villages. From a management perspective, the engagement between external and internal change agents followed the principles of Schulenkorf’s (2010) model for community empowerment. At the beginning of the initiative, external change agents did yet have a significant degree of control but the responsibility and ownership of the program progressively shifted towards the local TNA and VCCs who eventually managed the NOP without external influence. Success in transferring ownership to local organizers is an all-but-certain outcome in the world of SFD and international development more widely (Schulenkorf, Sugden, & Burdsey, 2014; Wallis & Lambert, 2014). In the case of the NOP, success was built on the local commitment of the national sporting body, the carefully and strategically selected VCCs, and the close network that was jointly formed with local communities.

Sociocultural Barriers

The island nation of Tonga provides a unique geographical and sociocultural context. On the main island Tonga’tapu, there are 36 towns and villages that have distinct value systems and community identities. The focus groups highlighted the importance of recognizing the facilitators and barriers to PA in each specific locality. These went beyond the well-established challenges of establishing and sustaining organized sport interventions in rural communities, particularly in low- and middle-income countries. For example, during the first phase of implementation, netball posts and courts were built in each village to ensure that the appropriate infrastructure was available. However, in one location, community members removed the netball posts from the field of play. TNA staff

members later revealed that this particular village identified as a “soccer village” and community members were simply not open to engaging with a new sport.

We previously described the efficacy of working with local volunteers to understand sociocultural nuances and tailor interventions. In this case, local knowledge was consulted and hence, the subsequent rejection from parts of the wider community came somewhat unexpected. As such, this example demonstrates that while listening to a range of local voices in each village community is important, the community engagement process is often incredibly complex and easier said than done. In this case, discussions with village members—and especially those with no interest in sport—may not have been detailed or varied enough. But perhaps this example speaks more to the imperfect nature of community engagement processes per se, which are bound to result in sociocultural challenges when questions of preference, identity and tradition are at play (Sugden, 2010). In our case, the varied reactions to netball highlight that even on a small island such as Tonga’tapu, there are distinct differences in beliefs and social norms across villages and regions, even if they are only a few kilometers apart.

Another socio-cultural challenge was identified around female participation in sport. In Tongan society, women are largely responsible for childcare and domestic duties—something that has previously been highlighted as a barrier to sport and PA in the Pacific region (Siefken, Schofield, & Schülenkorf, 2014; Turk et al., 2013). In the context of the NOP initiative, attending to household and childcare duties was frequently discussed as a challenge to netball participation, as one local player shared:

I started playing netball at school but I have a child now, so I stopped playing because there is no one to look after the children if I play. Sometimes I can play if I can bring my children along.

Another participant stated, “I choose to not play netball because I have many children, so there is no one to take care of them. . . . I want to play netball but the kids make it too difficult.”

Finding a solution to this cultural barrier seemed difficult but two suggestions were made. Firstly, volunteer-based community arrangements for child supervision could provide an effective means to allow mothers to participate. If funding for such an initiative cannot be provided, a “player community” may share the responsibility of child minding around the courts. And second, it was suggested that targeted promotions highlighting the need for mothers

to be physically active and healthy may assist in changing stereotypes, especially if they are directed at the women’s husbands. In fact, it was strongly emphasized that negative sociocultural attitudes towards women’s sport critically impacted netball engagement and here, support of husbands was perceived the most critical factor for positive change. One netball participant stated:

There are challenges to get women to play, as they have husbands and kids. It is so much easier for married ladies with supportive husbands. There is a lady in our netball [team] and the husband didn’t support her and every time we called her to come, she really wanted to join in, but the husband said no.

In line with previous sport management and SFD research (Hartmann & Kwauk, 2011; Sherry et al., 2017), this finding highlights the need for bespoke programming that is considerate of local realities. As a female-focused program, it is critical to set aside a safe and supportive space for women that facilitates opportunities for regular sport and activity (Spaaij & Schülenkorf, 2014). Including ‘significant others’ in this process is also critical, even though cultural norms are slow to change (Hayhurst, 2013). Overall, it is imperative to have a strong knowledge of the target group and consider local circumstances when developing and implementing tailored SFH programs.

Public Space Management

To foster participation in each village, netball courts were set up in open community spaces. These spaces were all grass-based and court line markings were made using petrol. During focus group sessions, it was apparent that the location of the netball court was an important factor for engagement. In the villages of Fatumu, Fua’amotu, Ha’alalo, and Kanokupolu the netball courts were centrally located, which assisted in showcasing the sport to the wider community. The importance of accessibility and visibility was highlighted by one VVC:

At the start, there were only a few people, but then it started to grow and more people came to play. It developed from the number of players each day and people could see others were getting involved. We started off with two teams and then it developed and we then had three teams because the court is visible in the village.

Another VVC stated:

If we train here on the court, the neighbors are all sitting around watching, which is good. I invited the next village team to training, so we had a game and they sit around the

court and watch. It gets the community involved and helps people to see netball.

Creating a netball court in the center of the community was critical in the context of creating an accessible, supportive environment and potentially challenging structural barriers and normative assumptions about female sport participation. The village of Liahona provides a strong case example, highlighting the challenges when the court location is less than ideal. In this village, the netball court was a 10-minute walk from the main community hub. Participants suggested that this distance was perceived as too far away. Although some women simply decided not to participate, other community members would wait to be driven to the court. One participant stated:

The court needs to move because the court was on the other side of the village and ... it is too far to walk there. We don't often go to the other part of the village... and so the location of the court makes a difference in how motivated people are to play.

Perceptions such as these must not be ignored. In fact, they are important considerations for sport managers, as they are reflective of wider sociocultural norms and realities in which extreme sedentary lifestyles prevail (Siefken, Schofield, & Schülenkorf, 2014). In other words, it remains a challenge for SFH programmers to find the right balance between providing suitable program locations and active transport on the one hand, and to encourage walking and the changing of norms around PA on the other. This is further complicated by the concept of providing a safe and inclusive space for women to play (Spaaij & Schülenkorf, 2014). Some women may feel shy and self-conscious in a highly visible space; others may feel that their participation could lead to their husband's discomfort with them being physically active in public (Siefken, Schofield, & Schülenkorf, 2014). Here, questions around space management and socio-cultural challenges come together and provide critical challenges for SFH managers.

In addition to choosing the right location for netball courts, an associated managerial challenge relates to their ongoing maintenance. In Tonga, there are limited government resources dedicated to the management and maintenance of public spaces at the village level. The TNA—with its limited budget—was unable to cover the cost of cutting the grass and purchasing petrol to sustain line markings. For example, in the village of Fua'amotu, one VVC explained the process for maintaining a netball court:

We have to cut the grass. My husband is in the army and he is cutting the grass, so he is coming to do the grass and

then go[es] back to work. [Unfortunately], there is no one else to cut the grass and I am asking him to come and do it.

In an attempt to generate funding for court maintenance, local participants took matters in their own hands. A TNA staff member commented, “They [participants] go around houses and sweep the rubbish for people who give them money. So, the more engaged villages will be proactive in these ways to improve their netball resources.” This comment highlights the responsibility placed on villages and volunteers to support and maintain their playing spaces. This is particularly important given that inadequate spaces often constrain participation, as one VVC explained, “There is no netball at the moment because the grass is too long. It needs to be cut for people can play on it and so it is easier to run. We need money to do this.”

From a management perspective, it is essential to ensure there are resources and sustainable processes in place to maintain adequate and safe playing facilities (Schülenkorf & Siefken, 2019). In fact, these challenges represent a significant barrier for many small-scale SFH programs that are implemented in low-income settings such as Tonga. Moreover, the lack of court maintenance can have a negative impact on the perception of program quality, as well as subsequent participation rates and the image of sport organizations such as TNA (Cavnar et al, 2014). Hence, it is imperative for sport managers to not only look at the micro levels when planning SFH projects, but to also account for a wider service approach toward leisure and recreation at the meso and macro levels. In other words, to secure financial resources and leverage political support, strategic partnerships and long-term engagements with governmental department and offices are critical, including those responsible for sport, health, social services, community development, women and so on.

Events and Tournaments as Incentives

As part of its strategy to promote and increase overall participation in netball, the TNA had previously offered special events and tournaments for women teams. For this, villages selected, prepared, and entered teams and entered into training sessions over several weeks in the lead-up to special events. However, straight after events were completed, netball engagement in the local villages decreased and people did not continue to use the netball courts regularly. In other words, unless there was an event that served as an incentive for participation (e.g., upcoming tournament), local women did not engage with netball or other forms of PA. At the same time, once an event was completed, “the job seemed to be done”. This was reflected by one VVC:

They love playing in a tournament. But if we keep on training without aiming for a tournament, it's like nothing to them [the participants]. People aren't as bothered if there isn't a tournament, so to keep them training every day, we need more regular competitions.

Additionally, a local participant stated the following:

The one thing that would get people playing is donating free food and free drinks. That will get people there! That is a Tongan thing and if there were tournaments that had a prize, that would help to get people to play.

Previous research has identified the importance of including “highlight events” as part of regular SFD initiatives to keep up the excitement for participants (Schulenkorf, 2016; Schulenkorf & Adair, 2013). This was certainly the case in Tonga, where program participants were often motivated by extrinsic incentives, including an event or tournament but also the awarding of trophies or prize money. Considering the importance of regular PA in addressing health issues, the reliance on “events only” would not seem sufficient. Instead, we propose that the creation of an event portfolio or “mini leagues” could be advanced to foster regular competition at the village level, serving to sustain excitement and engagement in the SFH program. Ideally, such activities would also include adjacent health promotion campaigns and educational sessions in an attempt to leverage the projects under an SFH umbrella (Schulenkorf & Schlenker, 2017).

Collaboration across local and national sports

In Tonga, the traditional sport for women and girls is “basketbola” which is a well-established game played in villages across the country, albeit primarily limited to the month of December around inter-village tournaments. The game has many similarities to netball: it is played on a netball-sized court, with netball hoops and a netball—and the only key differences are that there are nine players per side, rather than seven in netball, and that full contact is allowed when contesting for the ball. As noted earlier, the Tongan Government purposefully chose to engage with netball rather than the traditional sport of basketbola to provide a sense of novelty, and to leverage the visibility of the game for women and girls on Tongan television. Evidently, there were a number of practical and opportunistic reasons that contributed to the choice of netball, including aspects of funding, support, and the opportunity for regular, ongoing engagement. In a way, the locally supported decision to opt for netball rather than basketbola reflects a reality of decision-making in many disadvantaged community contexts where sport programs

with national or international backing (e.g. basketball with Hoops for Life, volleyball with Volley4Change, or football with the Just Play program) provide intriguing alternatives for locals. In this context, we argue that the added focus on netball does not have to result in negative impacts or lower participation rates in basketbola. In fact, if community organizers and sport managers are working closely together, there may be opportunities for growth and leverage across the two sports which, in turn, could offer a more effective strategy towards achieving wider community health benefits.

Engaging in collaboration is not an easy task, however, even though the timing of events in Tonga would allow for netball and basketbola to co-exist. Tonga’s large-scale, village-based basketbola tournament runs every December and hence, a VCC suggested that “if netball speaks to basketbola and works out a good way to offer the sports at different times, so they are not competing against each other for the same women”. However, another VCC suggested there were cultural and sport-political barriers that impacted the game of netball to thrive in communities. He shared the following:

I do my best to get netball started here [in the village] and some of the women are changing their minds to support netball, but the village sport committee—they largely emphasize rugby and basketball, which makes it difficult to get people playing a new sport.

This statement suggests that although a strategic collaboration between a culturally embedded Indigenous sport and a newly introduced code such as netball could potentially lead to stronger and more sustained participation and health outcomes for the community, at times the reality on the ground presents a clash between culture and opportunity or tradition and innovation. A similar finding was previously shared by Khoo et al. (2014) regarding the engagement between cricket and kirikiti, the traditional form of cricket in the Pacific Island nation of Samoa. Here, sport-political and socio-managerial challenges needed to be addressed to allow for prosperous engagement between the two sports, which then allowed for growth and leverage of both the sport of cricket and its Indigenous version.

In the case of netball in Tonga, a further contributing barrier to people’s involvement was the lack of knowledge of formal netball rules and game strategies. Despite the many similarities across the two sports, one netball participant shared, “We need help. We need someone to come and to give more information about the rules and help us know how to play; that would make it more enjoyable.” Another one stated, “The number one sport in the village is

basketbola and the number two sport is volleyball. They [other village members] don't know the official rules of netball, so it isn't played as much as the other sports.”

Overall, given these structural and cultural challenges, it was difficult for VCCs to organize formal netball sessions and ensure people could play according to the official netball rules. To be more effective in the future, it will come down to community leaders and TNA engaging in a collaboration that builds on newly established trust and focuses on the opportunities and cultural considerations when combining netball and basketbola in a meaningful way.

CONCLUSION AND FUTURE RESEARCH

The use of targeted sport programs as vehicles for positive health outcomes has been an area of increasing focus for practitioners, researchers and policy developers. Our empirical investigation into TNA's NOP initiative provides a valuable case of a purposefully designed SFH intervention that uses the sport of netball for a largely inactive and disadvantaged group of people at risk of developing NCDs. Although the actual health benefits of the intervention have been reported elsewhere (Keane et al, 2020), in this study we elicited critical socio-managerial challenges and opportunities of the Tongan-based NOP program and provided implications for the design and delivery of future projects in the Pacific and beyond.

Overall, the NOP has demonstrated a strategic management focus in its purposeful design (i.e., intervention protocol designed via a partnership between locals and researchers experienced in both health and sport), implementation (e.g., selection of appropriate sites, provision of equipment), human resource management (e.g., engagement and training of volunteers; building capacity in program design and project management), and delivery (e.g., formation of local netball teams and newly introduced events) to facilitate sport and health outcomes. Here, the importance of a culturally appropriate program design cannot be understated, including genuine engagement with the community and awareness of the importance of providing safe and inclusive spaces to encourage participation.

Additionally, a clear focus on “what matters most” is critical to achieve desired SFH outcomes; in the Tongan context, this meant targeting low-engagement villages without established netball participation and a high risk of developing NCDs. In other words, if the aim of the program is to increase physical and social health for disadvantaged groups, then a catch-all sport program is likely to be less successful than an SFH initiative that is centered on those

who are least engaged and most at risk. In fact, the purposeful framing of a program as SFH instead of SFD or sport development more generally, clearly signals that aspects of health take center stage in all features of the initiative. This, in turn, leads to important practical implications and managerial considerations across SFH design, promotion, implementation and leverage – something we expect future SFH research to explore in further breadth and depth.

Finally, the proven significance of local volunteers as change agents not only benefited the NOP initiative, their involvement also has implications for both sport management theory and practice. Our study has shown that the success of the program was not only built on strong and purposeful collaboration between local and external change agents at the beginning of the program; more significantly, an all-important empowerment process underpinned the initiative, including a deliberate transfer of program ownership to local sporting bodies, volunteers and players, as well as local villages and their members.

From a sport management perspective, the strategic combination of technical knowledge (provided by sport and health development experts) and cultural knowledge (provided by local experts and local communities) proved to be a critical success factor for achieving relevant, meaningful, and sustainable SFH project outcomes (Schulenkorf & Schlenker, 2017; Siefken, Schofield, & Schulenkorf, 2014). Overall, this finding adds an important element to previous discussions on the relationship between external and local change agents, as it provides an argument for a shared engagement from the outset of an SFD program, rather than a reliance on external input as the driver of development (Schulenkorf, 2010; 2012). In the South Pacific region in particular, we conclude that strong partnerships between sport, health and development officials on the one hand, and local communities and their representatives (e.g., village chiefs, church leaders etc.) on the other, are of critical importance if lifestyle and behavior change initiatives are to reach individuals, families, and communities in a sustainable way.

Authors' contributions

Schulenkorf, Sherry and Richards contributed to conceptualising the study. Schulenkorf and Sherry led the qualitative study design, data collection and analysis while Richards led the quantitative study design, data collection and analysis. Tauhalaliku provided cultural guidance and critical input throughout all empirical work, including coordination of data collection and liaison with community leaders. All named authors contributed to the interpretation

of the findings. Schulenkorf and Siefken initially drafted the manuscript and all named authors provided editorial input to produce the submitted article.

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