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Casey, Meghan, Harvey, John, Eime, Rochelle and Payne, Warren (2012) Examining changes in the organisational capacity and sport-related health promotion policies and practices of State Sporting Organizations. Annals of Leisure Research, 15 (3). pp. 261-276. ISSN 1174-5398

Examining changes in the organisational capacity and sport-related health promotion polices and practices of State Sporting Organisations

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ACKNOWLEDGEMENTS

VicHealth staff are thanked for their contribution to this research. We are also very thankful for the contribution of participating SSOs and their representatives.

FUNDING

This work was partly supported by the Victorian Health Promotion Foundation (VicHealth).

ABSTRACT

The aim of this paper is to evaluate changes in organisational capacity and sport-related health promotion policies and practices among State Sporting Organisations (SSOs) who participated in the Partnership for Health (PfH) scheme. The PfH scheme aimed to support the development and implementation of sport-related health promotion policies and practices at SSO-organised events and within their affiliated sports clubs. SSO representatives (n=25) completed the Health Promotion and Sport Assessment Tool (HP-SAT) twice. Respondents reported capacities, policies and practices prior to the scheme (retrospective pre-scheme survey), and current capacities, policies and practices (post-scheme survey). The mean scores (on standardised scales: 0-100) for all components of organisational capacity for health promotion increased significantly between pre-scheme (range: 39.1 – 61.5) and post-scheme (56.9 – 78.2; $p<0.05$). Similarly, compliance scores for most sport-related health promotion policies and practices for SSO-organised events and support to clubs increased significantly. However, post-scheme strategic planning for health promotion remained low (56.9) and scores for policies and practices for clubs (range: 46.3 – 88.5) were generally lower than for SSO-organised events (range: 67.8 – 90.6). No significant differences were found between small and large SSOs regarding capacities, policies or practices. The PfH scheme had a positive impact on most aspects of health promotion capacities, policies and practices. However, there was room for further improvement in strategic planning and in support for affiliated clubs. Low levels of strategic planning should be addressed by SSOs, and a more extensive engagement between SSOs and affiliated clubs is required to operationalise health promotion strategies at club level.

Keywords: sports, health promotion policy, capacity building, sports organisations

INTRODUCTION

Contemporary health promotion adopts a settings-based approach which acknowledges that social, cultural, political and economic environments influence individual health (WHO, 1986, 2005). This approach requires health promotion policy makers and practitioners to target multiple levels of influence on individual behaviour by modifying the context within which individuals live, and is opposed to victim-blaming approaches that focus solely on individuals (McLeroy, Bibeau, Steckler, and Glanz, 1988).

A sport setting is defined as a combination of three aspects of sport participation: 1) the physical location/venue where sport is delivered and played; 2) the organisational/social context - typically through sports clubs, state sporting organisations (SSOs) and national sporting organisations (NSOs); and 3) the level of engagement, ranging from local, regional, state, national to international.

Sport settings are well placed to facilitate population-focused health promotion activities that are designed to encourage healthy behaviours. The perception that this can be accomplished through the creation of healthy sporting environments, increasing physical activity levels and improving social cohesion has been widely reported (Bormann and Stone, 2001, Townsend, Moore, and Mahoney, 2002, Dobbinson, Hayman, and Livingston, 2006; Eime, Payne, and Harvey, 2008, 2009; Kokko, Kannas, and Villberg, 2006), although the authors of a recent review concluded that there were "no rigorous studies evaluating the effectiveness of policy interventions organised through sporting organisations to increase healthy behaviours, attitudes, knowledge or the inclusion of health-oriented policies within the organisations." (Priest, Armstrong, Doyle, and Waters, 2008). It is also acknowledged

that there are potential negative aspects of sport participation, including injury, risky levels of alcohol consumption and violence (Duff and Munro, 2007).

Notwithstanding concerns about the paucity of objective evidence, in light of the perceived benefits and in order to counteract the potential negatives, health promotion strategies have been implemented with a view to encouraging healthy behaviours and ultimately improving population health (Bormann and Stone, 2001; Corti et al., 1995; Dobbinson and Hayman, 2002; Dobbinson, et al., 2006; Giles-Corti et al., 2001; Kokko, et al., 2006). Internationally, this is in line with the focus of government sport policy on the achievement of health and social objectives (Hoye and Nicholson, 2008).

Since the 1990s, Australian sport and recreation settings have been increasingly identified as a vehicle to encourage healthier behaviours through legislative and policy approaches. This development has occurred via the replacement of tobacco industry sponsorship with health-focused funding to promote good health and prevent disease. For example, in Australia, the Victorian Health Promotion Foundation (VicHealth) have targeted investments through multi-facet approaches to address health inequalities and improve the determinants of health through sport and active recreation including (but not limited to): facilitating sports participation, developing sporting organisations and environments which foster and promote good health; and advocating for healthy sport policy regulation, such as smoke-free settings, responsible alcohol management practices and sun protection measures, amongst others (Corti, et al., 1995; Swerissen and Crisp, 2004). Indeed "the way in which sport has been touted to improve health has progressed from a passive and symbolic settings approach to one that is more ambitious, active and programmatic; particularly in Australia" (Casey, Payne, and Eime, 2012, p. 110).

Research examining the implementation of health promotion policies and practices in sport has been limited, and standard and rigorous evaluation tools have not been used (Kokko et al., 2009). Kokko et al. (2009) have suggested that a close examination of health promotion policies and practices in sport is required. Dobbinson et al. (2006) examined the level of policy development and practice implementation in community-based sports clubs for five key health areas (i.e. smoke-free facilities, sun protection, healthy catering, responsible serving of alcohol and sports injury prevention) in a structured telephone interview. They reported that written policies for the five health areas varied widely; although the establishment of healthy policy did appear to translate into reported club practices for at least three of the five health behaviours (i.e. smoking, sun protection and responsible serving of alcohol). In a study of health-related policies and practices developed by SSOs for their organised events and for their community-based sport clubs (i.e. smoke-free, sun protection, injury prevention, healthy eating, responsible serving of alcohol), Eime et al. (2008) found that they were not fully developed or implemented in this setting. More recently, a selected number of NSO and SSO health policies that were freely available on peak sporting organisations' websites were analysed including healthy nutrition, sun safety, smoke-free, safety and injury prevention, fair play, participation by children with disabilities, participation by Indigenous children, and anti-discrimination (Kelly et al., 2010). The authors found that the availability of policies on NSO or SSO websites for some health-related areas were high, especially for social inclusion; however the availability of other policies such as healthy eating and sun protection were lower.

Despite suggestions to enhance the capacity of sports organisation to develop health-related policies (Kelly, et al., 2010), few studies have examined the capacity of

sport and recreation organisations to participate in health promotion and to specifically implement health-related policies and practices (Casey, Payne, Brown, and Eime, 2009; Casey, Payne, and Eime, 2009a; Casey, et al., 2012). Again, organisational capacity to engage in health promotion varied among sport and recreation organisations. Community-based sports clubs lacked human resource capacity (Casey, Payne, Brown, et al., 2009); whilst SSOs capacity to engage in health promotion was dependent upon their organisational climate (i.e. leadership and direction) and capacity (i.e. registered members and clubs and funding arrangements with government bodies and commercial sponsors) (Casey, et al., 2012).

The development of indicators to monitor the implementation of sport-related health promotion policies and practices was advocated to help understand the contexts and processes which are likely to reduce harmful behaviours (Priest, Armstrong, et al., 2008). Furthermore, examining organisational capacity is important in determining an organisation's readiness to develop and implement health promotion strategies (Casey, Payne, et al., 2009a). The authors of this paper previously developed the Health Promotion and Sport Assessment Tool (HP-SAT) which has demonstrated moderate to strong reliability among SSO representatives and is useful for capturing detailed and meaningful information about health promotion capacities and a wide range of health promotion policies and practices in a sport setting (i.e. smoke-free, responsible serving of alcohol, healthy eating, sun protection, injury prevention, club management, and a miscellaneous "other" category) (Casey, Harvey, Eime, and Payne, 2011). Monitoring organisational capacity for health promotion and the implementation of health promotion policies and practices is important for developing sector-wide capacity in health promotion; thereby creating supportive environments

for health that were advocated for in the Ottawa and Bangkok Charters for Health Promotion (WHO, 1986, 2005).

This study identifies organisational changes within SSOs as a result of participation in an extensive system-wide health promotion program. In particular, we examined the impact of the program on the capacity of SSOs to implement sport-related health promotion policies and practices, and on the implementation of these policies and practices, both in the context of SSOs-organised events and in terms of the support provided by SSOs to their affiliated clubs. The findings of this study are relevant internationally, particularly in countries where organised sport is governed by peak sporting organisations and sport is delivered through community club settings such as those in the UK, Finland, Germany, South Africa, and New Zealand (Nicholson, Hoye, and Houlihan, 2010).

METHODS

This research was based on a longitudinal and retrospective study design that involved a convenience sample of organisations engaged in the Victorian Health Promotion Foundation's (VicHealth) Partnership for Health (PfH) scheme undertaken in Victoria, Australia. VicHealth initially funded 51 Victorian SSOs through the Partnerships for Health (PfH) scheme (VicHealth, 2003b), which provided a 4-year grant of between AUD $10,000 and AUD $670,000 per annum, implemented between July 2003 and June 2007 (*M*=$65,497; *Mdn*=$35,000). Over AUD $13 million was invested in this extensive scheme (VicHealth, 2004, 2007). The funding level per SSO was based on the number of clubs and club members affiliated with the SSO. Health agencies were also funded to support SSOs in developing policies and practices; these

included QUIT, SunSmart, Sports Medicine Australia, International Diabetes Australia, VicSport, and the Australian Drug Foundation. One of the objectives of the PfH scheme was to establish health promoting environments in sporting clubs including: smoke-free environments, responsible serving of alcohol, healthy eating, sun protection and injury prevention. Welcoming club environments was also an identified target area; however this area was not clearly defined during the funding period.

Procedure

All SSOs funded through the PfH scheme were invited to participate in a web-based survey that used the Health Promotion and Sport Assessment Tool (HP-SAT)(Casey, et al., 2011). Participating SSO representatives (informants) were invited via email invitation to complete the HP-SAT twice during the period February-May 2007. Participation was voluntary, and potential i received a plain language statement, instructions and a link to complete the survey on a secure web site using SurveyMonkey (SurveyMonkey, Copyright 1999-2012). The survey account was protected by password and all survey data were kept confidential and secure by the account holder – the first author. Any identifying information was de-identified by the first author. In addition, SurveyMonkey ensures that data are secure and private as stated in their privacy policy. Ethics approval for this study was obtained from the University Human Research Ethics Committee.

The first administration of the HP-SAT required participants to report on the current policies, practices and organisational capacity of their SSOs to promote health (post-scheme survey). The second administration required participants to report

retrospectively on their SSOs' policies, practices and organisational capacity to promote health prior to the PfH scheme (2003) (pre-scheme survey). Each participant was given access to the retrospective pre-scheme survey as soon as they had completed the post-scheme survey. Participants were instructed that they could obtain information from their administration archives in order to answer questions, thereby ensuring validity of the retrospective data. It was also considered appropriate to ask participants about the organisation's current policies, practices, and capacity prior to the retrospective study as the current situation provided an anchor or point of comparison (Pearson, Ross, and Dawes, 1994). Ethics approval for this study was obtained from the University Human Research Ethics Committee.

Measure

The HP-SAT was designed to investigate the ways in which SSOs promote health through their organised events and affiliated clubs and associations, and the capacity of SSOs to plan and implement health promotion within their sector and is described in detail elsewhere (Casey, et al., 2011). Briefly, the development of the HP-SAT included sourcing items from a number of existing health promotion tools (Hawe, King, Noort, Jordens, and Lloyd, 2000; VicHealth, 2003a) and health promotion Sport Club Standards (Kokko, et al., 2006). These items were expanded and/or modified to ensure that they were relevant to i) the sport context and ii) the health promotion domains investigated (smoke-free, responsible serving of alcohol, etc.).

The HP-SAT measures health promotion policies and practices regarding smoke-free environments, responsible serving of alcohol, healthy eating, sun

protection, injury prevention, club management, welcoming and inclusive sport, violence in sport, and a miscellaneous "other" category. For this study, only changes in smoke-free environments, responsible serving of alcohol, healthy eating, sun protection, injury prevention, club management and a miscellaneous "other" category were investigated. At the time of this study the welcoming and inclusive sport domain was not well developed within the industry, hence there was no welcoming and inclusive sport domain per se. However, some items subsequently included in the welcoming and inclusive sport category were included in the miscellaneous category.

Information on health-related policies and practices was sought cross two organisational settings – i) SSO-organised events and ii) support provided by SSOs to their affiliated clubs/associations. The HP-SAT also measured SSO organisational planning and capacity for health promotion (i.e. the strength of a coalition, capacity of an organisation to tackle health issues, and quality of program planning). Test-retest reliability of the HP-SAT was assessed previously with participants from SSOs. Test-retest intraclass correlations (ICCs) were reported as moderate to excellent (0.41-0.99)(Casey, et al., 2011). The HP-SAT also captured background information about respondents, such as position and length of time within the SSO (voluntary or paid), and educational level.

Analysis

Responses were downloaded from a secure web site into a spreadsheet and transferred into SPSS Version 14.0 for data analysis. For each substantive area (such as "current practices regarding smoke-free environments in SSO-organised events") a composite score was calculated by summing the numerically coded responses to each

item pertaining to the particular area (Casey, et al., 2011). Informative responses (i.e. all responses except "don't know" and "not applicable") to the various questions were either dichotomous or 5-point ordinal scales. These scales were extended to include non-informative responses ("don't know" and "not applicable") in the analysis. Three different types of composite scores were calculated. Knowledge scores expressed the number of informative responses as a percentage of the total number of responses within the set of relevant items, and represented the extent of knowledge of respondents about each aspect. Compliance scores represented the existence and implementation of health promotion policies and practices in the organisation, and capacity scores represented the organisational capacity for health promotion. Compliance and capacity scores were based on informative responses only, and were expressed on a scale from 0-100, with 100 representing existence and implementation of all sport-related health promotion policies and practices, or full capacity for health promotion. Means (*M*) and standard deviations (*SD*) were calculated for all composite scores. Paired samples t-tests were used to test for significant changes in the scores between the pre-scheme and post-scheme surveys. Group differences were also examined between "large" and "small" SSOs. SSOs were categorised as large if their annual income for the 2006/07 financial year was greater than AU $1,000,000 and/or reported more than 15,000 registered members; and had at least five equivalent full-time staff. Independent samples t-tests were used to test for significant differences between large and small SSOs on their pre-scheme survey and repeated measures ANOVA to test for group-time interactions, i.e. differences between large and small SSOs in the change from pre-scheme to post-scheme.

RESULTS

Survey sample characteristics

Respondents representing *N*=25 SSOs in the Victorian state of Australia completed both the pre- and post-scheme surveys (50.0% response rate). These SSOs included sports that were: individual (*n* = 14) and team (*n* = 11); mixed gender (*n* = 17), predominantly male (*n* = 5) or female (*n* = 3); non-contact (*n* = 16), limited-contact (*n* = 6) and contact (*n* = 3); outdoor (*n*=15) or indoor (*n*=10); and were non-seasonal (*n*=14), summer (n=7) or winter sports (*n*=4). The annual income of these SSOs ranged from AUD $51,173 – $4,189,709 during the 2002/03 financial year (*M*=$882,868); and AUD $42,000 – $9,500,000 during the 2006/07 financial year (*M*=$1,759,101).

Most respondents were SSO Executive Officers (44.0% pre- and post-scheme surveys) followed by managers (24.0%), project staff (24.0%) and board members (8.0%). Many respondents reported having university or higher university degrees (72.0% pre- and 76.0% post-scheme surveys). Many respondents also reported having worked for more than eight years within the sports industry as a paid professional (50.0% pre- and 43.5% post-scheme surveys) and/or a volunteer (58.3% pre- and 52.4% post-scheme survey). Most of these had spent more than eight years working in their current SSO (40.0% pre- and 32.0% post-scheme surveys).

Organisational capacity for health promotion

Table 1 outlines the organisational capacity of SSOs to promote health through sport. It summarises the respondents' knowledge regarding organisational capacity, and the corresponding capacity scores. SSO respondent responses regarding capacity items were informative for the pre-scheme survey (range: 72.4 – 91.7) and

this increased slightly for the post-scheme survey (range: 84.8 – 98.2). However, the only significant change in knowledge was for operational planning for health promotion (p=0.013).

The mean organisational health promotion capacity scores ranged from 39.1 – 61.5 at the pre-scheme survey, and significantly increased in every case, to 56.9 – 78.2 at the post-scheme survey (Table 1). Scores for operational planning for health promotion and SSO collaboration activities increased the most, by 27.9 and 19.4 points respectively.

Existence and implementation of sport-related health promotion policies and practices

Table 2 presents the knowledge of, and existence and implementation of, sport-related health promotion policies and practices by SSOs at their SSO-organised events. SSO respondent responses relating to sport-related health promotion policies and practices were informative at the pre-scheme survey (range: 62.7 – 93.5), although more so at the post-scheme survey (range 80.0 – 100). Significant increases occurred for smoke-free environment – policies and practices, sun protection practices and injury prevention policies.

The mean existence and implementation scores for sport-related health promotion policies and practices for SSO-organised events ranged from 42.9 to 77.6 at the pre-scheme survey, with smoke-free environments scoring the lowest, and injury prevention items scoring the highest. The mean scores increased at the post-scheme survey (range: 67.8 – 90.6) with statistically significant changes in all composite scores except sun protection policies and injury prevention policies.

The knowledge of, and existence and implementation of, sport-related health promotion policies and practices to encourage the development of healthy and welcoming environments amongst SSOs' affiliated clubs is shown in Table 3. SSO respondent responses were somewhat informative at the pre-scheme survey (range: 66.5 – 80.5). Again, SSO respondents were able to provide a greater number of informative responses in the post-scheme survey (range: 86.6 – 90.6), with significantly more informative responses for ten of the 14 areas.

The mean existence and implementation score for sport-related health promotion policies and practices for SSO affiliated clubs ranged from 20.8 to 64.7 at the pre-scheme survey and 46.3 to 88.5 at the post-scheme survey. The existence and implementation of items relating to healthy eating were lowest for both pre- and post-scheme surveys; whilst responses for club management and injury prevention were highest for both pre- and post-scheme surveys. Statistically significant increases were found for all composite scores except sun protection and injury prevention.

Differences between SSO groups

The sample of SSO respondents was representative of the overall group of SSOs. Eighteen SSOs were considered small (51.4% response rate from small SSOs), whilst seven were considered large (>15,000 members, and/or annual income > $1,000,000, and having at least five equivalent full-time staff) (46.7% response rate from large SSOs). There were no significant differences between large and small SSOs in their responses to the pre-scheme survey. Further, of the 32 substantive areas (6 for capacity, 12 for compliance at SSO-organised events, 14 for compliance regarding SSO-affiliated clubs) there was only one significant difference between

small and large SSOs in the change from pre-scheme to post-scheme — smoke-free environment policies for SSO-organised events ($p = 0.030$). It is noted that one in 32 is less than the chance rate of a Type 1 error (false positive), and so this is not strong evidence of an underlying difference. The possibility of type 2 errors (false negatives) due to the small sample size and the wide variability among SSOs on some measures is also acknowledged. However, with respect to the immediate finite population of SSOs participating in the PfH scheme, the significance test results are conservative, because the sample constituted a large proportion of the population.

DISCUSSION

From a population health perspective there are opportunities for sporting organisations to promote healthy behaviours through settings-based health promotion. This opportunity has been identified in physical activity public policy (Bull, Bellew, Schoppe, and Bauman, 2004; WHO, 2004) and government sport policy (Hoye and Nicholson, 2008). As a result, there is an increasing emphasis on sports organisations to participate in health promotion (Eime, et al., 2008; Kelly, Chapman, King, Hardy, and Farrell, 2008; Kelly et al., 2011) (Kokko, et al., 2006, 2009).

The capacity of sporting organisations to participate in health promotion has not been well studied, nor have standard and rigorous evaluation tools been used to examine the implementation of health promotion policies and practices. Kelly et al. (2010, p. 567) identified "a need to build the capacity of peak organisations to develop health-related policies" and Kokko et al. (2009, p. 34) identified that a "more close examination of health promotion policies and practices" was required. This study addresses these gaps in the research by examining the capacity of SSOs to

participate in health-related programs. In addition, this study provides a close examination of sport-related health promotion policies and practices in the context of SSOs-organised events, and the extent that SSOs administer, regulate or guide the implementation of sport-related health promotion policies and practices within their affiliated clubs.

In Victoria, Australia, SSOs were engaged in the PfH scheme, a large health promotion program designed to encourage the development of healthier settings at their organised events and within their affiliated clubs. Six organisational capacity building scores derived from the HP-SAT showed that the mean SSO health promotion capacity score increased significantly over the funding period (pre-scheme range: 39.1 – 61.5; post-scheme range: 56.9 – 78.2; $p<0.05$). Similar findings have been reported by Kokko et al. (2009) who found that youth sports clubs that held a certification (Seal) of the Young Finland Association were two and half times more likely to recognise health promotion compared to non-certified clubs. Accordingly, they suggested accreditation systems as one way to improve health promotion activities in sport settings. Whilst the PfH scheme was not an accreditation system per se, some SSOs used PfH scheme funding to introduce club development programs, which were a recognition and reward system to encourage and support sporting clubs to implement sport-related health promotion policies and practices (Casey, et al., 2012). The club development programs were a sustainable strategy to support health promotion activities as part of the organisation's core business, especially when sports delivery was a more immediate responsibility than health promotion activities (Casey, et al., 2012). The implementation of club development programs might be a useful future strategy for building organisational capacity for health promotion. Further

research could explore whether these changes have occurred independent of changes in the policy and environmental context.

The incorporation of club development programs might also help to focus health promotion activities, particularly considering that strategic planning for health promotion remained low at the post-scheme survey (56.9). Strategic planning for health promotion is important as it reflects an organisation's commitment to change and the management's shared resolve for successful implementation of health promotion activities (Weiner, Lewis, and Linnan, 2009). Weiner et al. (2009) emphasise shared resolve because implementing complex programs involves collective action by many people, each of whom contribute something to the implementation effort. They suggest that problems often arise when some targeted "implementers", such as SSO staff, board members or even SSO affiliated clubs are not committed to the change. This is a common problem of many change programs, whereby program planners often embark upon the implementation of change, without understanding or developing the organisation's readiness for change (Oakland and Tanner, 2007).

In addition to enhanced organisational capacity, the existence and implementation of sport-related health promotion policies and practices increased significantly over the funding period for SSO-organised events (pre-scheme range: 42.9 –77.6; post-scheme range: 67.8 – 90.6; $p<0.05$) and the support they provide their affiliated clubs (pre-scheme range: 20.8 – 64.7; post-scheme range: 46.3 – 88.5; $p<0.05$), with the exception of injury prevention and sun protection. It was likely that there were no statistically significant changes in relation to injury prevention policies because many SSOs reported implementing injury prevention policies prior to the PfH

scheme. Scores relating to sun protection were problematic which was influenced by factors such as indoor and outdoor sport settings, and winter and summer sports.

The funding via the PfH scheme appears to have driven the development and implementation of health promotion strategies at the operational level by SSOs; particularly at their organised events, however, less so for their affiliated clubs. For example, there was some discrepancy between the two organisational settings in the implementation of health promotion. Higher scores were found for SSO-organised events (range of mean of scores: 67.8 – 90.6) compared to the extent that SSOs provide sport-related health promotion policies and practices to their affiliated clubs (range of mean of scores: 46.3 – 88.5). Furthermore, if injury prevention and club management scores are excluded – one because there were already high levels of injury prevention policies and practices implemented, and the other because club management only related to support for affiliated clubs – the difference was even more pronounced between SSO-organised events (range of mean of scores: 67.8 – 90.6) and support for affiliated clubs (range of mean of scores: 46.3 – 65.8).

The survey items for the two organisational settings, however, differed because the environment in which sport was delivered during SSO-organised events was controlled by the SSO; whereas SSOs do not mandate policies or practices within their clubs, and so the items in this domain related more to the types of information, materials and resources SSOs could provide their clubs to create a healthy sports club environment. Nevertheless, on average, less than two-thirds of sport-related health promotion practices which were in the form of information, resources and materials (range of mean of scores: 52.5 – 65.8) were provided to clubs to create a healthy sports club environment. Furthermore, the standard deviation scores were wide indicating substantial variation between SSOs. This suggests that health promotion

activities may not be filtering down to the community level where the majority of sport is delivered to the population and is consistent with the findings of others (Dobbinson, et al., 2006; Eime, et al., 2008; Hanlon and Coleman, 2006; Kelly, et al., 2010; Kokko, et al., 2009). These findings indicate that future PfH schemes need definite strategies to support community-based sporting clubs implement health promotion activities, and the club development programs may be one way. The largely voluntary nature of community-based sport needs to be considered in any approach, especially since organisational capacity building within non-voluntary sectors has shown to take several years to achieve, and funding bodies often have difficulty withdrawing support (Crisp, Swerissen, and Duckett, 2000; Steckler and Goodman, 1989). Furthermore, community development approaches have been suggested as a more comprehensive approach to facilitating engagement between SSOs and clubs; however, investigation is required to determine their effectiveness (Casey, et al., 2012). Phased approaches to program development and implementation have been suggested to assist sport and recreation organisations build capacity to participate in partnership approaches to health promotion (Casey, Payne, and Eime, 2009b).

Limitations

This study was the first to capture information about organisational capacity for health promotion and the implementation of health promotion activities by SSOs using a standard evaluation tool. A major limitation of the study was that the knowledge of respondents regarding pre-scheme capacities, policies and practices was limited by the retrospective nature of the pre-scheme survey. However, respondents

were given the option of responding that they were ‘not sure’ how to answer the question, and these responses were accounted for in the analysis. In addition, respondents were given the opportunity to obtain information from their administration archives in order to answer questions. In general, most respondents were able to provide an informative response to the items.

Another limitation was the fact that this study measured pre-defined health promotion policies and practices relating to smoke-free environments, responsible serving of alcohol, healthy eating, sun protection, injury prevention, club management, welcoming and inclusive sport, and a miscellaneous “other” category. Nevertheless, many of these health domains have been validated in a Delphi study that sought consensus on the aspects of community sports clubs that are necessary for developing healthy and supportive sporting environments for children (Cancer Council NSW, 2011). For example, the highest priority standards ranked by professionals in health promotion, nutrition, physical activity and sports management/delivery in Australia related to abiding by responsible alcohol practices, the availability of healthy food and drinks at sports canteens, and smoke-free club facilities. A limitation, however, is that these standards are yet to be validated with those responsible for the delivery of sport in the community.

The fact that both the response rates and the results were similar for small and large SSOs indicates that there was no “SSO size” bias in the sample. However, the possibility of other types of self-selection bias, such as a higher response rate among those SSOs whose representatives perceived the PfH scheme as being effective, is acknowledged. The authors have no further information to assess the likelihood/extent of self-selection bias.

The findings are also limited to the cohort of SSOs engaged in the PfH scheme. Due to the real-world nature of this study it was not possible to fully determine the effect of the PfH scheme on the outcomes achieved versus the potential influence of broader changes in the policy and environmental context. Future research would need to be conducted using a control population to better understand any external change-inducing factors. It would be useful to compare the findings of this study nationally and internationally. It is also suggested that future research explore the sustainability of change, the impact of SSOs on their affiliated clubs to implement healthy sports club environments, and the impact of healthy sports club environments on sports participation, health behaviours, and health and wellbeing. This is particularly important as the real 'test' of health promotion policies and interventions is on the long lasting effect on individual health and behaviour.

Conclusion

This study is the first to explore organisational capacity within SSOs to implement health promotion and provides an indication of the health promotion changes that have occurred in sport. This provides health promotion and sport management policy makers and practitioners with valuable information to further support the implementation of health promotion activities in sporting organisations. During the four year period, Victorian SSOs significantly increased their capacity to implement health promotion activities. This resulted in an increased number of health promotion activities at their SSO-organised events and SSOs increased their support to their affiliated clubs to develop healthy club environments. However, it appears the

way in which health promotion has been strategically planned and operationalised by SSOs requires attention and further refinement.

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Table 1: Knowledge of, and score for SSO capacity building to promote health through sport

Organisational capacity scale	Knowledge Score for Organisational Capacity							Organisational Capacity Building Score						
	Pre-PfH		*Post PfH*					*Pre-PfH*		*Post PfH*				
	M	*SD*	*M*	*SD*	t	df	*p*	*M*	*SD*	*M*	*SD*	t	df	*p*
Capacity to address health issues	91.7	27.6	96.6	8.0	0.9	24	ns	61.5	20.2	78.2	13.9	3.9	22	0.001
SSA connection with health promotion	88.7	28.2	97.7	7.4	1.6	24	ns	53.5	21.4	67.3	14.8	2.6	22	0.015
SSA ability to work in partnership	89.8	28.5	98.2	4.2	1.4	24	ns	52.7	22.2	71.0	14.0	3.8	22	0.001
SSA collaboration activities	88.0	30.2	97.3	13.3	1.7	24	ns	44.2	25.6	63.6	16.4	3.4	22	0.002
Strategic planning for health promotion	76.8	36.1	84.8	29.0	0.9	24	ns	39.6	43.5	56.9	35.3	2.4	19	0.025
Operational planning for health promotion	72.4	39.6	91.2	16.4	2.7	24	0.013	39.1	42.7	67.0	29.1	3.6	21	0.002

n=25 SSOs

Table 2: Knowledge and implementation of sport-related health promotion policies and practices by SSOs at their *SSO-organised events*

Scale	Knowledge %							Implementation %						
	Pre-PfH		*Post PfH*					*Pre-PfH*		*Post PfH*				
	M	*SD*	*M*	*SD*	t	df	*p*	*M*	*SD*	*M*	*SD*	t	df	*p*
Smoke-free environments														
• policies	75.2	39.3	93.2	14.3	2.8	24	0.010	42.9	41.1	87.0	23.6	4.7	20	<0.001
• practices	77.4	37.0	97.4	7.2	2.8	24	0.011	49.0	34.6	82.5	17.3	5.2	21	<0.001
Responsible serving of alcohol														
• policies	73.5	35.6	89.6	18.7	2.1	22	ns	51.7	44.1	84.0	28.4	3.0	20	0.008
• practices	90.9	19.6	97.4	6.9	1.5	22	ns	71.9	16.8	90.6	8.4	5.4	22	<0.001
Sun protection														
• policies	62.7	36.9	80.0	32.1	1.5	14	ns	50.0	49.4	81.3	31.3	1.9	11	ns
• practices	86.3	25.0	100.0	0.0	2.2	15	0.044	65.9	23.6	84.7	14.9	3.3	14	0.005
Healthy eating														
• policies	82.3	32.9	85.7	26.3	0.7	24	ns	45.7	42.7	71.7	30.8	3.2	22	0.005
• practices	89.7	23.1	97.0	11.0	1.5	24	ns	57.5	25.0	70.4	14.8	2.8	23	0.010
Injury prevention														
• policies	83.0	30.0	95.0	14.5	2.1	24	0.043	72.0	33.0	82.4	26.0	1.9	23	ns
• practices	93.5	20.3	100.0	0.0	1.6	24	ns	77.6	14.3	89.0	9.8	3.3	23	0.003
Other														
• policies	86.2	28.8	96.6	8.0	1.7	24	ns	50.0	35.1	74.3	29.8	4.0	22	0.001
• practices	89.7	19.9	97.6	6.6	1.9	24	ns	47.3	20.6	67.8	20.1	3.1	24	0.005

n=25 SSOs

Table 3: Knowledge and implementation with sport-related health promotion policies and practices by SSOs for their *affiliated clubs*

Scale	Knowledge %							Implementation %						
	Pre-PfH		*Post PfH*					*Pre-PfH*		*Post PfH*				
	M	*SD*	*M*	*SD*	t	df	*p*	*M*	*SD*	*M*	*SD*	t	df	*p*
Smoke-free environments														
• policies	70.5	40.7	93.1	17.0	3.0	23	0.007	36.5	45.5	63.6	35.5	2.7	20	0.013
• practices	72.7	38.5	96.0	11.1	3.0	24	0.006	38.0	43.0	64.7	35.8	3.4	21	0.003
Responsible serving of alcohol														
• policies	72.9	40.3	92.4	14.3	2.5	22	0.019	24.5	33.4	58.1	30.5	4.8	18	<0.001
• practices	70.8	39.5	94.8	10.5	3.0	23	0.007	31.6	32.3	54.8	31.5	2.9	19	0.010
Sun protection														
• policies	66.5	39.2	86.6	25.1	1.9	15	ns	32.9	41.0	54.1	37.5	2.0	13	ns
• practices	68.8	37.6	91.8	13.7	2.3	15	0.034	56.0	30.9	55.5	33.0	-0.1	13	ns
Healthy eating														
• policies	76.0	42.7	87.5	27.6	1.5	23	ns	20.8	37.6	46.3	32.1	2.4	17	0.027
• practices	79.2	38.8	94.8	16.5	2.1	23	0.048	27.5	39.7	52.5	29.6	3.0	19	0.008
Injury prevention														
• policies	73.1	42.7	89.8	19.6	2.0	23	ns	52.6	34.4	64.1	36.0	1.4	18	ns
• practices	70.8	38.5	96.3	8.5	3.3	23	0.003	64.7	29.6	74.3	32.3	1.5	20	ns
Club Management														
• policies	76.8	35.6	93.5	14.0	2.3	24	0.031	51.0	41.6	78.4	25.8	3.4	22	0.003
• practices	80.5	33.3	96.5	7.7	2.3	24	0.033	59.8	37.3	88.5	16.7	3.7	22	0.001
Other														
• policies	78.0	36.3	88.8	20.6	1.5	24	ns	35.6	40.2	59.0	32.1	3.0	22	0.003
• practices	78.3	30.8	91.9	11.7	2.2	24	0.041	44.5	39.3	65.8	26.1	2.8	22	0.011

n=25 SSO