A Retrospective Evaluation of a Community-Based Physical Activity Health Promotion Program

Dr. Catherine E Draper**
Dr. Tracy L. Kolbe-Alexander*
Prof. Estelle V. Lambert*

*UCT/MRC Research Unit for Exercise Science and Sports Medicine
Department of Human Biology, Faculty of Health Sciences
University of Cape Town, South Africa

**Corresponding author
Address: UCT/MRC Research Unit for Exercise Science and Sports Medicine, Sports Science Institute of South Africa, Boundary Road, Newlands, Cape Town, 7700, South Africa
Phone: +27 21 650 4567
Fax: +27 21 686 7530
Email: catherine.draper@uct.ac.za

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Abstract

Background: The Community Health Intervention Programmes (CHIPs) is a physical activity-based health promotion programme operating in disadvantaged communities in the Western Cape, South...
Africa with primary school learners, adults and senior adults. Programme growth, anecdotal evidence and experience of those involved suggest the programme has been positively received by communities. The aim of this study was to conduct a qualitative, retrospective process evaluation concerning both factors associated with successful implementation of the programmes, and implementation challenges. **Methods:** ‘Success’ was defined in consultation with CHIPS staff and stakeholders. Data were gathered through naturalistic observation, structured interviews and focus groups (n=104), and open-ended questionnaires (n=81). The sample included CHIPS staff and stakeholders, programme members and leaders. **Results:** Factors contributing to the programme’s success include: focus on combining social development and exercise science, community development model, scientifically sound programme content, appropriate activities, intrapersonal and interpersonal factors, programme leadership, encouraging staff, and various contextual factors. **Conclusions:** The findings confirm that CHIPS presents a model of sustainable implementation of physical activity in disadvantaged communities, and that it positively impacts the quality of life, perceptions of the role of physical activity in health, and personal responsibility for health of those involved in its programmes.

**Background**
Chronic diseases of lifestyle (CDLs) have become an increasing concern globally, including developing countries such as South Africa,\textsuperscript{1-3} and physical activity has been linked to the prevention and reduction of these diseases.\textsuperscript{4-6} Despite the apparent rise in burden of CDLs in the developing world,\textsuperscript{7-9} there is limited data on the role of physical activity in preventing and reducing chronic diseases of lifestyle in these settings.\textsuperscript{10-12} Indeed, in some developing countries such as South Africa, concern has been expressed regarding the high levels of physical inactivity, and it has been estimated that physical inactivity caused 3.3\% of all deaths in South Africa in 2000, and was ranked 9\textsuperscript{th} compared to other risk factors for attributable deaths.\textsuperscript{13}

School- and community-based physical activity interventions, including those targeting older adults, have been widely reported on in the literature.\textsuperscript{14-28} Research into these programmes tends to focus on the evaluation of programme outcomes, with the main outcome measure being an increase in individual physical activity behaviour.\textsuperscript{14-20} Evaluations of interventions for older adults have reported not only increases in physical activity,\textsuperscript{21-23} but have included other measures such as improvements in blood pressure,\textsuperscript{24-25} physical function,\textsuperscript{24,26-27} e.g. dynamic balance, and other more subjective measures of general health improvements.\textsuperscript{23-28}

Physical activity intervention process evaluations and those with a process component have concentrated largely on intervention fidelity, dose, extent and reach.\textsuperscript{29-33} Relatively few studies have directly addressed the social and behavioural (not including environmental) factors contributing to their success, but of those the following factors have been identified: stakeholder consultation in programme design, implementation and evaluation,\textsuperscript{34} community control of and ownership of the intervention,\textsuperscript{35} social support for programme involvement,\textsuperscript{36-37} social interaction and enjoyment through programme participation,\textsuperscript{37} institutional support and leader training.\textsuperscript{38-39}

In 1997, the Community Health Intervention Programmes (CHIPs) was developed and implemented in response to the increased prevalence of CDLs and the relative lack of fitness facilities within disadvantaged communities around Cape Town. CHIPs forms part of the Outreach Division of the
Sports Science Institute of South Africa (SSISA), and comprises five physical activity-based health promotion programmes based on a lifecourse approach which are outlined in Table 1. These programmes draw on principles of social cognitive theory by raising participants’ levels of self-efficacy through education and participation in the programmes.

**Table 1: Outline of CHIPs in the Western Cape**

CHIPs communities can be described as geographically defined suburbs. The boundaries of these suburbs are not physical, but exist largely for administrative purposes and are permeable. All communities fall within areas designated for non-Whites by the Group Areas Act of 1950 under the apartheid government of South Africa. This act was abolished in 1991 by South Africa’s new democratic government. However, these communities continue to experience social and economic disadvantage.

Through its programmes with primary school learners, adults and senior adults, CHIPs in the Western Cape currently has almost 4000 weekly participants, 140 trained community leaders, and 35 branches. Programme growth, anecdotal evidence and experience of those involved suggest that CHIPs has been received positively by communities and that it assists in promoting more active lifestyles in these communities. The aim of this study was to conduct a qualitative, retrospective evaluation concerning both factors associated with the successful implementation of the programmes, and challenges experienced during this implementation process.

**Methods**
Guidelines provided by the Centres for Disease Control and Prevention (CDC) on the evaluation of physical activity programmes were used in this project. These guidelines specify the following 6 steps for the evaluation process: 1) engage stakeholders, 2) describe or plan the programme, 3) focus the evaluation, 4) gather credible evidence, 5) justify conclusions, and 6) ensure use and share lessons learned.

**Step 1: Engage stakeholders**

The following were identified as stakeholders in CHIPS: CHIPS staff, both present and past (to include those involved in the development and initial implementation of CHIPS), leaders and members of the programmes, current programme funders, and regional government (Provincial Department of Education). These particular stakeholders were selected as it was believed that present CHIPS staff and funders of the programme would provide valuable insight into the development and implementation of CHIPS, and would make the most use of the evaluation findings. Other stakeholders identified would also help to clarify the process by which CHIPS was implemented as they were recipients of the programme’s dissemination.

A workshop was held with a small group of past (n=3) and present (n=3) staff, and one government representative. The purpose of the workshop was to develop a thorough understanding of CHIPS through the description of its programmes, their perceptions of how success and failure within these programmes was defined, and the ultimate purpose and use of the evaluation. This workshop was facilitated by the principal investigator, who had no previous involvement in CHIPS programmes or the inception of these programmes.

The outcome of the discussions was that the concepts of success and failure centre around the issue of sustainability. CHIPS branches that require very little follow-up and support from the CHIPS management team were regarded as more sustainable, whereas those branches that require much time and attention from CHIPS management were considered to be less sustainable. A list of
indicators of the successful implementation of CHIPs was generated (see Figure 1), and these were considered factors associated with programmes being sustainable or not sustainable. These indicators were used as the starting point for a more formal evaluation of factors contributing to success or failure of these programmes.

It was anticipated that this evaluation would contribute to the continued success of the programme and would provide guidelines for the future expansion of the programme elsewhere in South Africa. Thus a decision was made to evaluate Healthnutz (school), Optifit (adults) and Live it Up (older adults), as these formed the largest component of CHIPs.

**Figure 1: Indicators of success**

**Step 2: Programme plan**

As CHIPs had been operating for 9 years at the time of this evaluation, it is in the stage of programme maintenance. Of the programmes within CHIPs that were to be evaluated, no new branches or groups were in the process of being initiated while the data collection was underway. Combining input from the workshop mentioned above, along with further consultation with CHIPs staff, a logic model for CHIPs was developed:

**Figure 2: CHIPs Logic Model**

**Step 3: Focus the evaluation**

The logic model and indicators of success determined the purpose of the evaluation which was to gain a better understanding of the CHIPs programme. The primary aim was to identify factors contributing to the success of CHIPs in the Western Cape. Linked to this purpose was the identification of challenges facing the programme, and areas within the programme that needed improvement. The focus of the evaluation was therefore the quality of inputs and activities and the context influencing these in order to be able to answer the following question: ‘What has made CHIPs successful?’
Step 4: Gather credible evidence

Resources were not sufficient to fund a full process evaluation of CHIPs. A retrospective qualitative evaluation was feasible, and this was carried out using a qualitative approach. In order to triangulate data sources, the following qualitative methods were used to gather data in a cross-sectional study design: naturalistic observation of CHIPs branches, (which would be used to clarify the context of the programmes and how they operate) structured interviews and focus groups, and questionnaires with open ended questions. Table 2 specifies those groups that were identified as important and hence included in the evaluation. Informed consent was obtained in writing from all participants, and institutional approval was obtained for the protocol. Research participants were purposively selected in order to explore a range of CHIPs branches at various levels of sustainability, according to the definition mentioned earlier. A senior member of the CHIPs staff was asked to rank branches within each of the CHIPs programmes according to their need for support from CHIPs management.

Table 2: Evaluation sample

Procedure

Naturalistic observation was conducted on a convenience sample of CHIPs branches, prior to other data collection. The purpose of this observation was for the principal investigator to become familiar with CHIPs and how it functions. These observations were participatory, and very often the researcher would become involved with the activities of the branch being visited. Questionnaires for CHIPs leaders and members were distributed to participants by CHIPs staff on behalf of the research team. Interviews and focus groups were facilitated by the principal investigator, and notes were taken as opposed to audio recordings. CHIPs members and leaders’ focus groups were conducted at CHIPs meeting venues staff and stakeholders’ interviews were conducted at the participants’ place of work. The questionnaire contained the following questions:

- How would you describe your experience of being involved in CHIPs?
• What have been some of the highlights and some of the challenges?
• What do you consider to be the strengths of CHIPs?
• What areas of CHIPs could be improved, and do you have any suggestions for improvement?
• Why do you think CHIPs has worked better in some communities than in others?
• What do you think CHIPs members enjoy most about being involved?

These questions were used as guides for the interviews and focus groups.

Data analysis

Qualitative content analysis was performed on the data from interviews, focus groups and open-ended responses from questionnaires. Responses within each sub-group were collated, summarised and grouped according to the questions mentioned earlier. These data were validated through the naturalistic observation as well as consultation with those involved in the programmes and the evaluation so as to ensure the plausibility of comments and responses. From these groupings, factors contributing to success or failure of CHIPs were identified and responses within this main theme were grouped according to content into the following sub-themes:

• Programme focus and goals
• Community development model
• Programme content
• Intrapersonal factors
• Interpersonal factors
• Leadership within programmes
• CHIPs staff
• Context: communities, schools and education structure

Results: Factors contributing to CHIPs’ success
CHIPs’ focus on the combination of social development and sports science

CHIPs’ focus on combining social development and sports science was identified as a factor contributing to its sustainability. CHIPs was correctly perceived as an outreach programme of the SSISA, a well-reputed not-for-profit institution, which has provided scientific support and is perceived to have scientific credibility. The programme was also seen to address important health issues and putting physical activity into the context of health in general. In addition, participants appreciated the need for physical activity and learned the importance of incorporating regular exercise and healthy eating habits into their lifestyle.

CHIPs was seen to offer a unique programme in the communities in which it has been implemented, which has increased access to physical activity in these communities. Within the Healthnutz programme specifically, both learners and teachers have been involved. Teachers reported that it provides a consistency and regularity that learners do not get in other areas of their lives, and creates opportunities for them to get out of the classroom, receive additional attention from their teachers, and engage in positive movement experiences.

Using a community development model

The use of a community development model within CHIPs forms an integral part of its focus and deserves special mention. Three key principles of this community development model are clearly evident in CHIPs: accessibility, empowerment and sustainability.

CHIPs has remained accessible to the communities in which it has been implemented, as it requires little equipment, and branches were provided.
with basic “start-up” equipment by the programme. Despite CHIPs being an affordable programme, the lack of resources is still a challenge faced by the programme by virtue of its position within disadvantaged communities. Only the Optifit programme involves a membership fee which is equivalent to approximately $2 per month. This amount, determined by the CHIPs management, was considered affordable for community members, and the funds gathered are managed by individual Optifit branches. Meeting venues for Optifit and Live it Up are geographically accessible to members, making it convenient for them. Since Optifit sessions cater mostly to working adults, the meeting times (generally around 5pm - 6pm) were seen to be convenient for members who come after work.

CHIPs staff spoke of how communities were empowered through the thorough consultation process in which their needs were identified. In addition, community participation was strengthened as community members have had an opportunity to participate in and lead physical activity and health programmes. This involvement has motivated CHIPs branches, thereby contributing to their sustainability. The process of appointing community-based members as leaders was viewed as empowering, and important for maintaining continuity within the programmes.

It was the perception of members, leaders and CHIPs staff that CHIPs communities have been uplifted by their involvement in CHIPs through this participation. Unity within communities has been created as members and leaders work together towards the common goal of establishing healthy lifestyles. Joint events and activities were believed to facilitate the building of bridges between different communities, and cross-cultural integration has been encouraged. Through its accessibility in communities and the empowerment of individual members and leaders, and communities as a whole, CHIPs remained to be viewed as a sustainable intervention in these communities where it is actively implemented.

Programme content - translating evidence and theory into practice
The scientific foundation of CHIPS - its “academic muscle” - was seen to be well thought through and evidence-based from the beginning. The programme content has been an example of the successful translation of research evidence and theory into practice, allowing the programmes to be modified where necessary. Some branches may for example, have lacked certain equipment for a particular exercise, but improvised with materials that were accessible to them and could perform a similar function.

Initial training was provided for the programme, which focused on all components of an exercise session: warm-up, stretching, cardiorespiratory exercise, strengthening, co-ordination, balance, and cool-down. Members and leaders expressed appreciation for the combination of education and exercise activities, which enhanced their learning experience. The exercises within each CHIPS programme were perceived by members and leaders as age-appropriate, adaptable to members’ abilities, simple and achievable. This reduced a barrier for those for whom exercise is more of a challenge. Furthermore, it was possible to perform the exercises at home, thereby contributing to increased weekly physical activity. The variety within the exercises was seen to prevent boredom and keep participants interested and challenged.

**Intrapersonal benefits**

Members and leaders reported on personal improvements that they can see and/or feel as a result of their involvement with CHIPS. Improvements in well-being were mentioned, and this included the fun and enjoyment they experience with CHIPS, having a more positive attitude towards a healthy lifestyle, and improved self-esteem. These relate to other positive effects on well-being mentioned: the relaxing and stress-relieving nature of the exercise sessions, promoting feelings of youthfulness (relevant for Optifit and Live it Up), and increasing participants’ motivation to prioritise these sessions. Sessions are perceived by members as a place for participants to “be themselves”, and to engage in an activity that was beneficial for their own well-being, an important consideration for busy, working mothers.
Linked to improvements in well-being, members’ and leaders’ self-efficacy were also reported to have increased as a result of their involvement with CHIPs. This involvement led them to experience a sense of achievement and fulfilment regarding living more healthily as they found the will power and discipline to maintain these lifestyle changes. One Optifit member regarded her transition from being inactive to active as “life changing.” Apart from these more psychological benefits, many members and leaders also testified to improvements relating to their health. Awareness around their health status has increased, helping to remind them of the importance of regular physical activity. Within Optifit and Live it Up this is especially encouraged by regular weight and blood pressure checks.

Other more subjective measures of improvements in health and quality of life mentioned by members included simply feeling good after a class, and feeling and/or seeing physical improvements and health benefits (especially women), such as decreases in stress and weight, and increases in fitness, muscle strength, flexibility, muscle tone and energy levels. Changes specifically for Live it Up members included improved ability in aspects of self-care, such as being able to tie shoes or wash dishes, subsequent to joining CHIPs, which are activities that they were unable to do or that were performed with difficulty prior to participating in the physical activity sessions.

CHIPs members did mention personal challenges to their own participation, and these included other competing stresses, commitments and priorities, which came out strongly, and to a lesser degree, laziness, apathy and demotivation, which could be linked to their poor social situation. One previous CHIPs staff member raised an important challenge that links to these, and that was that developing and establishing a healthy lifestyle may be too difficult for some people because of the implications for change that this has for the individual, particularly if there are low levels of self-efficacy at play.

I feel much better, have more energy and feel happier within and about myself. (Optifit member)
Interpersonal benefits - Optifit and Live it Up

The interpersonal benefits of CHIPs were most germane to the Optifit programme, but were also relevant for Live it Up. Almost all respondents who were members of these programmes consistently reported a sense of belonging in their branch, feeling that they are “part of something”, which would be the CHIPs “family”, as it was often referred to, and the greater “exercising community”, knowing that they will be missed if they are not there. This family atmosphere is further evidenced by a show of concern and support for each other, and also by the encouraging of one another through both physical activity and life-related challenges. In some of the branches that were visited, the closeness of members was quite evident in their interactions with one another, and these branches are reportedly still growing as others in the community saw CHIPs as something that they also wanted to join.

This sense of belonging has been facilitated by the relative homogeneity of the groups, since members are all from the same community, meaning that they are able to relate to one another and share common goals. However, where there are differences, members commented specifically on how everyone is welcome and that there is no discrimination of race, religion, gender, size or body shape.

Within disadvantaged communities in the Western Cape, participants mentioned that staying at home can be very stressful for the elderly. Many felt that there was an expectation that they must care for grandchildren, which results in the older adult being largely housebound and feeling neglected and secluded. Attending a seniors’ club was therefore a welcome break from home, and provides an opportunity to socialise with their peers. The Live it Up programme, through its...
integration within seniors’ clubs existing activities, enhanced this experience by adding something enjoyable and beneficial to their usual routine.

**Interpersonal benefits of programmes in general**

From comments by CHIPS staff, members and leaders, it was clear that CHIPS sessions provided members and leaders with opportunities for positive social experiences through social contact and interaction with people with a positive attitude who have chosen to be part of the programme. The dominant topics in discussions with members and leaders of Optifit and Live it Up groups were the camaraderie, unity, and fellowship they have experienced through CHIPS, the friendships they have made, and the fun and enjoyment of exercising together. Within Healthnutz, it was evident that both learners and educators have enjoyed being involved in the programme.

Combined CHIPS events and activities days have evidently provided further opportunities for members and leaders to meet new people from other communities and branches. According to members and leaders, this has given branches and schools a chance to show what they’re capable of and to be role models within their communities. Teachers specifically commented that combined Healthnutz events have helped them to “de-stress”, learn new and interesting ideas, approaches and strategies, and feel an increased sense of connectedness to others involved in the programme.

**Influence of CHIPS leaders**

CHIPS leaders were widely acknowledged by respondents as playing a key role in the success of CHIPS. Characteristics of CHIPS leaders that were mentioned in relation to the programme’s success, included them being well trained, wanting to be involved, feeling empowered in their role, and enjoying and feeling the benefits of exercise themselves. Good leaders were also described by members as being dedicated, motivated, passionate and committed (to the programme and to healthy lifestyles), reliable, disciplined, open, helpful, patient, friendly, enthusiastic and confident as a result of affirmation and support they have received from CHIPS staff and the SSISA.
Challenges relating to the leadership of CHIPs were raised by staff and leaders. The process of finding committed leaders who are able to lead without CHIPs staff present remains a challenge. Many leaders are reluctant to take ownership due to a lack of confidence in their leadership ability, or because of laziness and a lack of commitment. From the perspective of Live it Up and Optifit leaders, they found starting a branch a challenge, as well as making members aware of health risks they are facing and how to cope with them, and inspiring members to be committed and achieve their goals.

The role of leaders in making CHIPs a success was seen to involve good management of the programme, which called for good leadership and organisation skills, taking initiative by coming up with new ideas and empowering themselves with new techniques and movements to help bring variety to the programme. It was also stressed by members and leaders that leaders also needed to communicate effectively with members, which included education, asking the group what physical activity they would like to do, encouraging participants, giving individual attention when necessary, being aware of members’ capabilities and taking an interest in and showing concern for their members’ health.

I think it works well because of the instructors. They are so dedicated, friendly and always come up with new ideas. (Optifit member)

Our leader is a very committed person...I’m very thankful for having such a reliable and motivated leader. (Optifit member)
With regards to Healthnutz, teachers were aware that learners model their lifestyle behaviour, and this motivated them to lead a healthy lifestyle. They also spoke of their love of working with kids, and one teacher commented that “doing with love makes the job continue”. However, some teachers found both the process of teaching children the importance of exercise and healthy eating and getting this through to their parents a challenge. Practically running the exercise sessions themselves whilst maintaining a level of discipline were also considered a challenge, as it involves working with big groups of excitable children that all need to be kept involved, active and concentrated on the task and their leader. Teachers are feeling drained, emotionally and physically, and pressurised by work and time constraints.

Influence of CHIPS staff

Both past and present CHIPS staff mentioned aspects of the organisational environment of CHIPS as contributing to the sustainability of the programme. The calibre of the pioneers of CHIPS, combined with credibility of the Sports Science Institute of South Africa, was seen to help boost the credibility of the programmes in the communities. A non-hierarchical working environment, in which there was a rich mix of skills and a good division of labour, and where people are valued, cared for and allowed to grow and develop, was also seen to contribute to CHIPS sustainability. This was further facilitated by sharing intellectual resources between a tertiary academic institution, the University of Cape Town (UCT) and the Sports Science Institute of South Africa.

It was clear from a large number of responses that CHIPS staff are seen as integral to the success of CHIPS. Qualities of the CHIPS staff and the team as a whole were described as welcoming and creating a family atmosphere amongst staff. Staff were also said to be dedicated and committed, despite challenges faced within the programme, passionate about community development, and

We are working with kids who are getting little none stimulation at home. Most of them have social and emotional problems. Combine all these and blend it with an overcrowded classroom, no policy in place for teachers’ rights, and you have the right combination for stressed teachers who must spend more time solving social problems in class than to teach the children. (Healthnutz leader)
genuinely concerned for the communities. In terms of the nature of the interaction between CHIPs staff and CHIPs leaders and members, staff were depicted as friendly, encouraging, affirming, helpful, good with people, culture and language sensitive, and very active, thereby setting a good example for CHIPs members. They were seen to enjoy what they do and to show a genuine interest in the wellbeing of CHIPs members and leaders.

With particular reference to Healthnutz, teachers appreciated that CHIPs staff treated all teachers and schools the same, and communicated well with members and schools. They also described CHIPs staff as considerate, accommodating, cooperative, and understanding, relating specifically to the workload of teachers that made it difficult for them to be actively involved in the programme all the time.

CHIPs staff’s role in making the programme a success was seen by members and leaders as being well trained and organised, maintaining personal contact and providing good follow-up and regular feedback to branches, being available to offer consistent hands-on assistance and support, and conducting regular visits and check-ups to keep members and leaders accountable. Members also reported working harder when the CHIPs staff visit, and maintained that their “visibility is contagious”.

Community context of programmes

The role of community characteristics in making CHIPs a success was discussed. Existing community infrastructure was seen to facilitate the CHIPs implementation process, and this included primary healthcare facilities, churches, and groups that have already been established. Some of the CHIPs staff felt that the programmes have worked better in small, close knit communities, and in groups that were either already fit or had a similar level of fitness. An existing culture of working together, and the motivation and involvement of community members helped further facilitate the implementation process, which led to the programme and staff being well received by the
communities in which CHIPs was being implemented. Adding to this was communities' perceptions of CHIPs as a "hand-up rather than a hand-out", and positive experiences in the past with other community outreach projects.

Community issues that have posed a challenge to CHIPs staff were generally to do with the initial implementation of the programmes in communities. This first involved dealing with cultural barriers within these communities, such as women not wanting to be seen out in exercise clothes. Some staff felt that certain communities lacked a culture of physical activity and required more education on its benefits. These cultural challenges, combined with low levels of health awareness and other pressing social needs, such as poverty, made the process of getting community buy-in a challenging one. Community buy-in is threatened if communities want a "hand-out" instead of a "hand up" and have unrealistic expectations of what CHIPs can give them.

Community issues that remain a challenge include the safety and security of members walking to venues in the evenings, and the safety of equipment in schools and other venues. Finding suitable venues that have sufficient space and that are affordable and available was also raised as a difficulty for leaders. Some Live it Up members are not able to come if they have to stay at home to look after their grandchildren.

In most of the Optifit branches and many of the Live it Up branches, women far outnumber the men, and this lack of male involvement in CHIPs could be perceived as a challenge. Some of the explanations offered by members were that men preferred other types of exercises to the ones offered by CHIPs, or that after coming to a CHIPs branch, they felt insecure because they realised that they aren’t as fit as some of the women.

School and educational context of Healthnutz
The school environment as a whole, including learners, teachers, principals and the education structure, adds another dimension to the context in which CHIPS was implemented. Teachers described the learners as eager to learn and participate and were said to look forward to their Healthnutz lessons. They felt that learners have been happy to participate in Healthnutz because being located in disadvantaged areas, they have had limited exposure to and involvement in sport.

This links to other teachers’ comments about the social environment in which their schools are placed where children are dealing with “big people’s problems”. Teachers spoke about how these children have to carry burdens within their families and fight the evils in their communities - crime, poverty, unemployment, abuse to name a few. For these children, exercise through the Healthnutz programme, was seen to provide a relief and an outlet for any pent up aggression they may have as a result of their social circumstances. One teacher described learners as “greedy for exercise”.

Also with regards to this social environment, teachers found the lack of parental interaction a challenge to promoting healthy lifestyles among the learners. They find that getting this message through to the parents proves difficult as either parents are lazy and allow their children to eat junk or give them money for the tuck-shop to buy junk food (which is cheap and available from vendors at schools), or they are too busy to explain healthy lifestyles to their children, or they can’t afford healthier food as unhealthy food remains the cheaper and more accessible option. Some teachers found parents to be overprotective because of the crime in some communities, therefore keeping their children inside and not encouraging outside physical activity.

CHIPS staff considered teachers and principals a key factor in the success of the programme. They felt that buy-in of teachers and principals was vital - they need to be convinced of the programmes benefits, and embrace and support Healthnutz within their school. Teachers’ willingness to learn
was believed to facilitate the success of Healthnutz at their respective schools, and unmotivated or unsupportive teachers and principals were regarded as a challenge to the success of Healthnutz. The integration of Healthnutz within the school curriculum for Grades 1-3, and the Life Orientation curriculum in particular, was seen as an important factor contributing to the Healthnutz’s success, and one of the challenges mentioned was time no being set aside within the curriculum to implement Healthnutz. Teachers did not feel that the programme is restrictive if it’s incorporated into the weekly planner, but it must be seen as attractive to the teachers. Teachers appreciated the lesson plans provided by CHIPs, as they described them as helpful and easy to follow. The training manual they received was seen to be clear and logical, which has helped to boost their confidence as leaders of the programme.

A stakeholder in the programme (from the Western Cape Education Department) believed that the programme has been successful because of its strong links to the learning outcomes and assessment standards of the Life Orientation curriculum. She stressed that teachers must perceive their involvement as worthwhile, not just an add-on, in order for the programme to continue as a success.

**CHIPs conceptual model**

Taking into consideration the indicators of success discussed earlier, along with the content of the themes presented, a conceptual model was developed (Figure 3). This figure indicates aspects of CHIPs that have positively reinforced the success of the programme, and includes specific programme activities and positive experiences of members, leaders and CHIPs staff.

**Figure 3: Conceptual model of factors contributing to CHIPs’ success**

**Discussion**
From the findings presented, it can be concluded that CHIPs is a culturally sensitive programme that upholds the principals of community and social development while maintaining scientific integrity. This confirms that CHIPs is operating as originally intended, which was to combine social development and exercise science. Although initiating these programmes would have involved a greater contribution from content experts at the outset, the programme still receives content support from staff at the SSISA in order to keep its activities evidence based and scientifically sound. The relationship between CHIPs and the SSISA has been maintained and strengthened as the programme is now fully funded by the SSISA.

Furthermore, CHIPs has remained an accessible and empowering set of programmes, and has proven sustainability by virtue of the time that has passed since their inception (since 1997). The community development model that has informed CHIPs' focus and goals forms a solid foundation on which the programmes are run in the Western Cape, and should be used to guide the future growth of the project.

From these findings it is also evident that CHIPs is having a positive impact on the disadvantaged communities in which it is operating through providing opportunities for health enhancing, enjoyable physical activity within these communities. CHIPs physical activity sessions provide valuable opportunities for social interaction within the Optifit programme, and enhance social interactions already taking place within the Healthnutz and Live it Up programmes. Related to this is the value of CHIPS' social capital to its functioning. This social capital encompasses the quality of human resources in the CHIPs staff, the motivation of leaders and the willingness of members and leaders to engage with and taking ownership of the programme, and taking responsibility for their own health. Social capital is recognized as a crucial factor in health promotion, both globally and in developing settings.\textsuperscript{44}
These conclusions therefore answer the main evaluation question mentioned earlier: ‘What has made CHIPs successful?’ The range of factors presented that contribute to CHIPs’ success should indicate that the success of CHIPs lies not only its focus as a health promotion intervention based on a community development model and the content of its programmes, but also in the people that make up the programme and the contexts in which programmes are implemented.

The findings of this evaluation are in support of research mentioned in the introduction, with regards to factors contributing to the success of physical activity interventions, particularly with regards to stakeholder consultation, community control and ownership, social support, social interaction and enjoyment through participation, and Institutional support and leader training. However, since this type of research is limited, these findings provide a meaningful contribution to the body of literature on the evaluation of physical activity-based health promotion programmes.

Furthermore, it is hoped that this study will help to make the case for the inclusion of evaluation in more of these types of programmes so that the body of South African literature can contribute more substantially to the existing body of international literature. It would be important for further research to acknowledge the range of factors that impact on the success of physical activity-based health promotion programmes, as health promotion needs to be viewed within an ecological framework, taking into consideration the individual, physical and social environment that impact on health.

One of the main limitations of this study was that even though a range of branches were selected (both more and less sustainable), the sample of respondents were individuals who were participating in the programme, thereby providing a one-sided perspective. Had resources allowed, it would have been ideal to include individuals who were no longer participating in programmes in order to understand their reasons for non-participation. Furthermore, this evaluation provided only
a retrospective understanding of CHIPs, and was therefore not able to report on changes as a result of the implementation of these programmes.

Regarding the final step in the CDC guidelines (Share lessons learned), a number of outputs of this evaluation have been generated, including feedback to peers, stakeholders and presentation at an international conference.

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**References**


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<th>Sites</th>
<th>Leaders</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthnutz (since 1997)</td>
<td>5-12 yrs</td>
<td>Fun, non-competitive physical activity, and health education sessions</td>
<td>Part of the school curriculum at 14 primary schools</td>
<td>54 trained primary school teachers</td>
<td>Approximately 2900 learners</td>
</tr>
<tr>
<td>Optifit Outreach (since 1997)</td>
<td>18+ yrs</td>
<td>Walking, running, aerobics and circuit training</td>
<td>10 communities at community venues</td>
<td>30 trained community leaders</td>
<td>Approximately 400 adults</td>
</tr>
<tr>
<td>Live it Up (since 1997)</td>
<td>55+ yrs</td>
<td>Mainly seated exercises that aim to increase muscle strength and balance</td>
<td>14 seniors’ centres in 14 communities, as part of each centre’s activities</td>
<td>32 trained community leaders</td>
<td>Approximately 300 older adults</td>
</tr>
<tr>
<td>Fit for work (since 1997)</td>
<td>18+ yrs</td>
<td>Worksite based physical activity programme</td>
<td>2 workplace settings</td>
<td>15 trained leaders from the workplace</td>
<td>Approximately 50 members</td>
</tr>
<tr>
<td>Little Champs (since 2005)</td>
<td>3-6 years</td>
<td>Games and modified sport to address physical and lifestyle development</td>
<td>Central community sports venue in 1 community</td>
<td>2 trained leaders from the community</td>
<td>Approximately 220 kids from 6 pre-schools</td>
</tr>
</tbody>
</table>

**Table 1: Outline of CHIPs in the Western Cape**
<table>
<thead>
<tr>
<th>Subgroups</th>
<th>Total number</th>
<th>Questionnaire</th>
<th>Interviews / Focus groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHiPs staff (including both past and present staff members involved with</td>
<td>13</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>the implementation and management of CHiPs since its inception) and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>stakeholders (particularly with regard to design and implementation)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Members and leaders from the Optifit Outreach programme</td>
<td>87</td>
<td>49</td>
<td>38 (3 groups)</td>
</tr>
<tr>
<td>Members and leaders from the Live it Up programme</td>
<td>41</td>
<td>0</td>
<td>41 (5 groups)</td>
</tr>
<tr>
<td>Leaders from the Healthnutz programme</td>
<td>57</td>
<td>32</td>
<td>25 (6 groups)</td>
</tr>
<tr>
<td>Total</td>
<td>185</td>
<td>81</td>
<td>104 (14 groups)</td>
</tr>
</tbody>
</table>

Table 2: Evaluation sample
Figure 1: Indicators of success

Knowledge and attitudes
- Increased awareness of healthy lifestyles
- Increased understanding of the importance of physical activity
- Demystification of the science of health and physical activity

Behaviour
- Increased physical activity
- Implementation of programmes to facilitate physical activity
- Increased attendance at and adherence to programmes

Success

Adoption
- Increased individual ownership of and responsibility for health
- Increased community ownership of and responsibility for the programmes

Healthier communities

More active communities

Figure 1: Indicators of success
254x190mm (96 x 96 DPI)
Figure 2: CHIPS logic model
254x190mm (96 x 96 DPI)
Figure 3: Conceptual model of factors contributing to CHIPS' success

254x190mm (96 x 96 DPI)