

7 April 2006

Te Puni Kōkiri  
PO Box 436  
Wanganui

Attention: Hayden Potaka (Kaiwhakarite – Relationships & Information)

Tena koe Hayden,

Please find enclosed the report commissioned by Te Puni Kōkiri to describe the health and physical activity status of Māori who affiliate with Ngāti Raukawa ki te Tonga, Muaūpoko, and Rangitaane iwi in the Manawatu region.

We would like to thank Te Puni Kōkiri for the opportunity to undertake this project, and we have learnt a lot in terms of the time and energy that is required in order to do a quality project. We want to apologise wholeheartedly for the delay in getting this report to you all, but hope that you can gain some insight into the health and physical activity status of Māori in this region, in order to develop effective strategies to achieve health and wellbeing through sport and physical activity in the Manawatu.

Should you require any further analysis, or wish to be provided with any additional information, please do not hesitate to contact us.

Yours sincerely

Pauline Chadwick and Dr Farah Palmer

**TAMA TŪ, TAMA ORA. TAMA NOHO, TAMA MATE - CENTRAL  
A REPORT ON THE HEALTH AND PHYSICAL ACTIVITY STATUS OF  
A SAMPLE OF NGĀTI RAUKAWA, MUAŪPOKO  
AND RANGITAANE IWI**

*7 APRIL, 2006*

For



**Te Puni Kōkiri**  
REALISING MĀORI POTENTIAL

Prepared by  
Sport Manawatu



**He Oranga  
Poutama**

and

Te Au Rangahau



## MIHI

Anei he taonga mō ngā iwi o Ngāti Raukawa ki te Tonga, Rangitaane me Muaūpoko. Ko te kaupapa o tēnei rangahau he kaupapa whakahirahira ki te hauora katoa o ēnei iwi, arā, kua mōhio rātou mō ngā āhuatanga hauora, āhuatanga tinana me āhuatanga whānau hoki i o rātou whānau, hapū and iwi.

Tuatahi, he mihi tēnei ki te Roopū Manaaki o Sport Manawatu. Nā koutou i takoto te wero i te kimi ngā āhuatanga hauora o ngā iwi, a, nā koutou i tautoko me ārahi i ngā huarahi o te rangahau nei. Mō ēnei mea, he mihi nunui mātou ki a koutou.

He mihi aroha he mihi miharo tēnei ki ngā tamariki, rangatahi, taiohi, pakeke, kaumātua, whānau, hapū, marae, tima takaaro, hauora roopū me ngā iwi o Ngāti Raukawa ki te Tonga, Rangitaane me Muaūpoko. Nā koutou i hoatu o koutou whakapono i te kōrero, i te wea tuhi o koutou whakaaro – whakaaro hātekēhi tae atu ki te whakaaro hōhonu – mō te rangahau nei. Ka nui te aroha!

*“Ehara taku toa i te toa takitahi, engari he toa takitini”*

On behalf of Sport Manawatu and our Roopu Manaaki, we would like to extend our greatest thanks to all the participants who made this research project a reality. Your trust to convey your thoughts and share your experiences has contributed immensely to allow iwi to understand the current health of their whānau and hapū.

Mauri Ora

Pauline Chadwick (Sport Manawatu) and Dr Farah Palmer (Massey University)

## **Executive Summary**

This report was commissioned by Te Puni Kōkiri in an attempt to determine what the health and physical activity levels of Māori from Ngāti Raukawa ki te Tonga, Muaūpoko, and Rangitaane were. Other objectives included determining a) the awareness of physical activity benefits, b) the enablers to physical activity, c) the barriers to physical activity, and d) types of health services being delivered and accessed by Māori from the 3 iwi groups.

A survey which incorporated questions about physical activity levels, type, motives, barriers, facilities, and services was distributed face-to-face, via health and community networks, and by mailing out to iwi databases, and 188 completed surveys were returned. These surveys were quantitatively analysed using the SPSS (statistical analysis) programme, and frequency tables and percentages were created. Responses to open-ended questions were qualitatively analysed by Dr Farah Palmer after researching themes and issues that have been addressed in previous research on leisure constraints, leisure motivation, Māori leisure and sport patterns, and health studies.

The main findings indicate that Māori, who identify with Ngāti Raukawa ki te Tonga, Muaūpoko, and Rangitaane are meeting recommended activity levels (59%), and only a small percentage are inactive (8%). Māori participate in a range of physical activities that are work, home, sport, exercise, outdoor, culture related. The most popular activities were carrying light loads, cleaning, playing with children, gardening, competitive team sports, kapa haka, food-gathering, walking, swimming, and cycling.

A large percentage of respondents are motivated to be active because of health or whānau reasons. Many are intrinsically motivated to accomplish objectives (e.g., get healthy, be competitive) and/or experience stimulation (enjoyment/socialising). Many are extrinsically motivated by identified regulation (e.g., the person values or 'identifies' with the activity in which

he/she engages). Some individuals were intrinsically motivated to know (performing the activity for satisfaction derived from learning, exploring or trying to understand new concepts). This was particularly relevant for activities and events where Māori knowledge was combined with physical activity (e.g., historical walks). A small number of respondents were extrinsically motivated by external regulation (e.g., monetary rewards, social recognition).

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Community facilities that were used by respondents the most were water-based facilities, parks, courts, historical walking tracks and cycle lanes. Social and competitive sport programmes were relatively similar in terms of awareness and use, and community halls, home exercise equipment and marae games were used to a certain extent by those surveyed. Māori health services and community health services, and whānau wellbeing services were used by 28% to 39% of respondents. Sport Manawatu was only used by 17% of respondents. More than half of the respondents were eating the recommended daily intake of fruit and vegetables and a small percentage were also taking dietary pills and supplements. However, half of the respondents would like nutritional advice for themselves, their whānau, and their marae.

When compared with national, Māori, and Manawatu statistics for physical activity patterns and motives, the spread of activity is not as extreme (i.e., not as active, but not as inactive either) and motives for physical activity are not as driven by 'others' as the Obstacles to Action survey (2003) would suggest.. There appeared to be potential to get Māori involved in one-off events, social sports, marae games, and physical activity programmes for Māori. Specific needs of mothers, caregivers, kaumatua, and Māori recently 'retired' from competitive sport were also discussed.

Recommendations were made in terms of applying this knowledge to current and potential initiatives within the He Oranga Poutama programme and/or Sport Manawatu in general in order to get more Māori more active more often.

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## 1. Introduction

This report was commissioned by Te Puni Kōkiri (CB/WG. 15846.11464). Its purpose is to present findings from the 188 physical activity and sport surveys that were distributed to members of the Ngāti Raukawa ki te Tonga, Muaūpoko, and Rangitaane iwi in the Manawatu region in 2005.

In 1994, Te Puni Kōkiri held the Māori Health Decade Hui, Te Ara Ahu Whakamua. This hui reflected a growing consensus of iwi and Māori health providers on the strategies that were required to improve the status of Māori health. A general consensus reached at the hui was the notion of promoting participation in sport and fitness as one of the immediate priority goals for achievement. Four years later, a taskforce for Māori Sport Fitness and Leisure was established by Honourable Tau Henare (the then Associate Minister for Sport, Fitness and Leisure), and the Hillary Commission for Sport, Fitness and Leisure. Both parties agreed that it was timely for the Hillary Commission to review Māori participation in sport, fitness and leisure and to follow up the work of the original taskforce in this area.

*Some major issues that arose out of the Taskforce review (1998) were:*

- Validation of activities that were ‘tuturu Māori’ was sought from the Hillary Commission (e.g., events such as the Tuhoe festival, the Koroneihana or the kapa haka/waiata festivals),
- Lack of understanding by organisations of the definition of Māori sport and leisure. The taskforce saw it necessary to define this from a Māori perspective,
- The taskforce heard a strong call for two nations representing Aotearoa/New Zealand on the international stage,
- Facts suggested that while most Māori are into sport and physical activity, there are many who are not active enough for their health to benefit. There was, therefore, a need to get ‘More Māori More Active, More Often’.



A recommendation from the 1998 Māori Taskforce was that the Hillary Commission acknowledges the definition of sport, fitness and leisure as all physical activity that enhances whānau/wairua/hinengaro and respects tikanga Māori (Hillary Commission, 1998).

A specific programme which attempted to assist in achieving quality outcomes for Māori is the He Oranga Poutama or HOP programme. This programme was initiated by the Omangia te Oma Roa inter-sectoral group and was advanced to the next level by the Hillary Commission before being adopted as one of the Sport and Recreation New Zealand (SPARC) programmes. This programme relied heavily on Kaiwhakahaere situated in Regional Sport Trusts and Iwi Organisations for planning and implementation.

He Oranga Poutama is currently contracted in 17 organisations (11 Regional Sports Trusts, and 6 iwi organisations) by 26 Kaiwhakahaere. Traditionally, HOP has operated off a broad direction at the national level which enabled HOP to address anything and everything deemed part of Te Ao Māori. This proved difficult to administer and monitor.

Recently SPARC reviewed its investment in the He Oranga Poutama programme as a vehicle through which specific regional resources can enhance sport and physical activity outcomes for Māori. An evaluation framework was developed by independent consultants (Kahui Tautoko Ltd) in 2005 to evaluate the programme and is currently being implemented at the national (impact/outcome evaluation), regional (process evaluation), and Kaiwhakahaere level (process evaluation).

This research project is an opportunity for iwi and Regional Sports Trusts in the Manawatu to develop direction specifically for this area. The intention of this research is for HOP, Sport Manawatu, and iwi to establish and facilitate programmes that the community see as priorities or where the gaps appear once the analysis of the research has been completed.

This report describes the health, sport and physical activity levels of 3 major iwi groups in the Manawatu region. This report also offers insight into some of the attitudes and values that act as 'barriers' or 'enablers' for Māori to be physically active. A summary of the major trends are outlined, and recommendations are made with regards to programmes, services and facilities that could be offered in the region to enhance and sustain the health and physical activity levels of Māori in the Manawatu region.

The Terms of Reference for the report, as well as background information on the iwi who were involved in the project will now be discussed, followed by a section on the methods used for gathering data.

## **1.1 Terms of Reference for Project**

Please refer to **Appendix A** for a copy of the agreement between Sport Manawatu and Te Puni Kōkiri.

The overall objective of the project was to produce guidelines specifically for the named iwi in order to develop effective strategies to achieve health and wellbeing within their respective groups through physical activity and sport generally, and through the He Oranga Poutama programme specifically.

The role of the researcher(s) was to explore the many facets that contribute to the make-up of a Māori community and identify key areas that impact on an individual's desire to be physically active.

Specific objectives of the project were to:

- a) Provide baseline information around the health and physical activity levels of Māori affiliating to the 3 iwi in this region, and compare these to national guidelines.
- b) Provide a Māori slant on the 'Obstacles to Action' results in the Manawatu/Wanganui/Taranaki region conducted in 2003 but released in 2005.
- c) Provide evidence-based information around types of services being delivered in and accessed by the community.
- d) Gain an indication of the awareness of the benefits of physical activity.
- e) Determine what enables and what constrains iwi members with regards to their level and type of physical activity involvement.

## **1.2 Background Iwi Information**

In 1996, the Māori population in the Manawatu/Wanganui region was approximately 40,000, which made it the sixth largest Māori region in New Zealand. This was expected to increase by 18,900 by 2021 (Source: [www.tpk.govt.nz/publications/docs/MRD\\_full.pdf](http://www.tpk.govt.nz/publications/docs/MRD_full.pdf)).

In 1996 17% of the region's total population identified as Māori, which makes up 8% of the National Māori population. The make-up of the region by iwi affiliation is diverse which reflects the central location of the region. Rather than survey all Māori in the Manawatu region, this project aimed to survey 3 major iwi in the Manawatu rohe. These iwi were Ngāti Raukawa ki te Tonga, Rangitaane, and Muaūpoko. A brief description and explanation of these iwi will be outlined in order to contextualise the circumstances within which the survey was administered.

### **1.2.1 Ngāti Raukawa ki te Tonga (Ngāti Raukawa of the South)**

This iwi stretches from the Rangitikei River, west of Manawatu, to Kukutauaki Stream just north of Waikanae. A large group of Ngāti Raukawa migrated there from the first region in the early decades of the 19th century. Represented by a large number of marae and a range of institutions, notably Te Wananga-o-Raukawa, Rangiatea Church and Raukawa Marae itself, all in Otaki. Other organisations include the Raukawa Trust Board in Tokoroa, Otaki Māori Racing Club and Te Runanga o Raukawa (tribal council) in Otaki (Source: [http://www.taoni.maori.nz/Our\\_Area/maori.asp](http://www.taoni.maori.nz/Our_Area/maori.asp)). There are 20 marae in this iwi and 21 hapū (see **Appendix B** for further details of hapū and marae names).

**Te Rūnanga O Raukawa Inc.** is an Iwi authority based in Otaki and has premises in Levin and Palmerston North. Te Runanga is mandated by whānau, hapū and iwi members of Ngāti Raukawa ki te Tonga and acts on

their behalf. Ngāti Raukawa acknowledges other iwi with Tainui Waka connections living in the region, together with Muaūpoko and Rangitaane.

Te Rūnanga O Raukawa Inc have been offering health, social service and education initiatives since its inception, all of which the iwi believe are critical components that contribute to the well being of their whānau, hapū and iwi. These services are well known in the Horowhenua community and are available for all and are utilised by many. The Rūnanga Health Services continue to have expanding numbers of contracts, the education link to other iwi initiatives ensures that the Rūnanga is constantly looking at the education of its people and the social service arm while small is reputed to offer an excellent model or working at the social service interface in that it deals effectively with mainstream agencies, and with whānau, hapū and iwi.

The 2001 Census figures indicate that 5,166 males and 5,922 females (11,088) identified with Ngāti Raukawa (Horowhenua/Manawatu) which gives a total of 11,088 Census respondents of Ngāti Raukawa ki te Tonga descent (Statistics New Zealand, 2001). In addition, the median age in this iwi was 19.7 years for males and 24 years for females. The median age in total was 22.2 years (Statistics New Zealand, 2001). See **Table 1** for a summary of these details and for a comparison with the other iwi involved in the project.

### **1.2.2 Rangitaane**

The rohe (boundary) of Rangitaane O Manawatu commences at the southern bank at the mouth of the Rangitikei River at the Tasman Sea then up that river to Orangipango then eastwards in a straight line to Te Hekenga in the Ruahine Ranges then southwards along the summit of the Ruahine Range to continue along the summit of the Tararua Range to the peak of Taramea then westward in a straight line to the mouth of the Manawatu River at the Tasman Sea then northwards along the coast to the commencement point at the mouth of the Rangitikei River.

There are Manawatu/Horowhenua based marae which are Te Hotu Manawa o Rangitaane, Te Rangimarie, and Motuiti. The hapū in this area include Ngāti Hineaute, Te Rangitepaia, Te Rangiaranaki, Ngāti Mairehau, Te Rangitauira, and Ngāti Tauira. There are also Tararua based marae which are Te Ahu a Turanga, Kaitoke, Makirikiri, Owahanga, Papauma and Pongaroa. The hapū in this region are Ngāti Mutuahi, Ngāti Rangiwhakaewa, Ngāti Pakapaka, Te Hika a Papauma, Ngāti Te Koro, Ngāti Hamua, Ngāti Puatotara, Ngāti Pakaitore. See **Appendix B** for specific details about marae and hapū in this iwi.

***Tanenuiarangi o Manawatu Inc.*** is the iwi authority for Rangitaane. Their services are mainly provided through its subsidiaries; Best Care (Whakapai Hauora) Charitable Trust, Kia Ora FM 89.8 and Te Hotu Manawa O Rangitaane O Manawatu Marae Charitable Trust. However, as the iwi authority it is responsible for progressing matters relating to the wellbeing of its members. These include progressing Rangitaane O Manawatu Treaty of Waitangi claims, providing Educational Scholarships to its members and undertaking a range of consultation with local, regional and national organisations on issues that affect Rangitaane O Manawatu. Tanenuiarangi o Manawatu Inc's other main role is to provide management and administrative support to its subsidiaries (Source: [http://www.rangitaane.iwi.nz/page\\_1.htm](http://www.rangitaane.iwi.nz/page_1.htm)).

***Te Kaunihera Kaumātua Council o Rangitaane*** is mandated by whānau, hapū and iwi members of Rangitaane and also Te Rangimarie Marae. Te Kaunihera Kaumātua Council o Rangitaane acknowledges Ngāti Raukawa ki te Tonga and Muaūpoko and fully supports the iwi partnership with Sport Manawatu and the project to improve the lives of its people through greater participation in sport and physical activity.

According to the 2001 Census information, 371 males and 450 females identified with the Rangitaane (Manawatu) iwi, giving a total of 822 individuals of Rangitaane descent. The average age of males in this iwi was 20 years and for females was 22.7 years, giving a median age (overall) of 20.4 years (Statistics New Zealand, 2001). See **Table 1** for a summary of these statistical details.

### 1.2.3 Muaūpoko

Muaūpoko are the recognised tangata whenua in the Horowhenua district. Muaūpoko are the Māori people who traditionally occupy the lands on the west coast at the southern end of the North Island of New Zealand. Their name comes from mua (*in front of*) upoko (*the head*) of the fish of Maui.

The iwi has 27 recognised hapū, only seven of which are active today. The active hapū are Ngai Te Ao, Ngarue, Ngāti Hine, Ngāti Pariri, Ngāti Tamarangi, Ngāti Whanokirangi and Punahau. See **Appendix B** for more details.

These days the largest population of Muaūpoko is in the Horowhenua near the lake (Punahau) where their tupuna have lived for many hundreds of years. Other large groups live in Wellington, southern Hawke's Bay and Taranaki. (Source: [http://www.taoni.maori.nz/Our\\_Area/maori.asp](http://www.taoni.maori.nz/Our_Area/maori.asp)).

In 1998 the Kaunihera Kaumātua me ngā Kuia o Muaūpoko decided to establish the **Muaūpoko Tribal Authority Inc.** to manage the business affairs of the iwi, and to deliver the benefits to iwi members. It was set up as an incorporated society, with two Board Members elected to the board by each of the seven active hapū. (Source: <http://www.muaupoko.iwi.nz/mta.htm>).

The 2001 Census results identify 870 males and 966 females who identify as being of Muaūpoko descent. This gives a total of 1,836 members of the Muaūpoko iwi. The median age for men is 18 years and for women is 22.8 years. The overall median age is 19.8 years of age (Statistics New Zealand, 2001). See **Table 1** for a comparison with other iwi involved in this project.

**Table 1** provides a visual summary of the information discussed with regards to the three main iwi involved in this project. The complexity of consulting with various iwi authorities, hapū, and marae becomes apparent when the diversity of groups is highlighted, and as a result, this caused several delays in the research process. An important element of kaupapa Māori research is kahohi

kitea. The Research Manager (Dr Palmer) and Project Manager (Ms Chadwick) attempted to meet and greet as many of the iwi/hapū groups as possible. Eventually, a mail-out of the surveys was necessary in order to get a significant number of surveys returned.

**Appendix B** gives a summary of the marae listings and their associated hapū and iwi.



**Table 1: Summary of Iwi Information for Manawatu/Horowhenua region**

<b>IWI</b>	<b>HAPŪ</b>	<b>MARAE</b>	<b>IWI AUTHORITY</b>	<b>TĀNE (MEDIAN AGE)</b>	<b>WĀHINE (MEDIAN AGE)</b>	<b>TOTAL</b>
Ngāti Raukawa ki te Tonga	21	20	Te Rūnanga O Raukawa Inc	5,166 (19.7)	5,922 (24.0)	11,088 (22.2)
Rangitaane	13	9	Tanenuiarangi o Manawatu Inc  Te Kaunihera Kaumātua Council o Rangitaane	372 (20.0)	450 (22.7)	822 (20.4)
Muaūpoko	27 (7 active)	3	Muaūpoko Tribal Authority	870 (18.0)	966 (22.8)	1,836 (19.8)
<b>TOTAL</b>						<b>13,746</b>

## **2. Methodology**

Due to time and resource constraints, it was determined, that a survey tool would be the best means of meeting the objectives of this report which were to:

- a) Provide baseline information around the health and physical activity levels of Māori affiliating to the 3 iwi in this region, and compare these to national guidelines.
- b) Provide a Māori slant on the 'Obstacles to Action' results in the Manawatu/Wanganui/Taranaki region conducted in 2003 and released in 2005.
- c) Provide evidence-based information around types of services being delivered in and accessed by the community.
- d) Gain an indication of the awareness of the benefits of physical activity.
- e) Determine what enables and what constrains iwi members with regards to their level and type of physical activity involvement.

The make-up of the research team, and the various stages of the research process will be outlined in the methodology section of this report.

### **2.1 Research Team**

The research was Te Puni Kōkiri funded but iwi-driven. Sport Manawatu, through Te Roopu Manaaki, were asked to manage the research project, and the Kaiwhakahaere in 2005, Ms Pauline Chadwick, was asked to oversee the project specifically. Massey University, through Te Au Rangahau (Māori

Business Research Centre, College of Business) was asked to assist with the survey design, data collection, and data analysis. Dr Farah Palmer (Director of Te Au Rangahau) agreed to assist Ms Pauline Chadwick in the research process. Mr Apa Watene (Research Fellow), and various other members of the iwi community assisted with distributing and collecting surveys on several occasions.

The Manawatu Sports Foundation, trading as Sport Manawatu (and advised by Te Roopū Manaaki o Manawatu), were responsible for facilitating the project by managing the study in conjunction with the researcher (Dr Farah Palmer) and the named iwi groups.

## **2.2 Research Process**

It was decided that a survey would be an effective data collection tool if key individuals in iwi/hapū and marae groups were informed of the research objectives, and their support sought. Furthermore, the research group would endeavour to distribute surveys at events and in locations where Māori were predominantly involved in order to access members of the local iwi/hapū. The steps incorporated into the research process were:

- Design, testing, distribution, and collection of survey tool
- Appropriate completion of ethical requirements
- Several hui with stakeholders
- Collection of relevant national and regional survey results

### **2.2.1 Design, testing, distribution, and collection of survey tool**

SPARC and the Ministry of Health, with input from Statistics New Zealand, have developed two new physical activity survey instruments – the New Zealand Physical Activity Questionnaire Long and Short Forms (NZPAQ-LF, NZPAQ-SF) to improve the monitoring of population physical activity levels in New Zealand. While there are limitations in physical activity measurements

due to overestimation of physical activity levels with any self-report instrument, the validation study for the NZPAQ instruments are comparable to international survey instruments.

The research team attempted to incorporate aspects of these forms in the present project in order to compare and contrast the physical activity levels of Māori in the Manawatu with National statistics. The Long form (used by SPARC biennially) is administered face-to-face, and the Short form (used by the Ministry of Health two or three times a year) has been administered face-to-face and by phone. Unfortunately, it takes approximately 19 minutes (range 5-64 minutes) to complete the Long form, and approximately 4 minutes (range 1-20 minutes) to complete the Short form. For this project, the research team attempted to incorporate many of the questions used in the NZPAQ Short Form. Although this was the short version, many of the respondents expressed difficulty in completing the survey within a limited time. As the survey form was adjusted (i.e., shortened and simplified), the questions were no longer exactly the same as those in the NZPAQ validated surveys. The response rate from those individuals approached, however, improved. Therefore, the research team felt an adjustment to the questions was justified.

Eventually, the survey incorporated a range of questions including likert scale questions, tick-box questions, close-ended questions, and open-ended questions. These questions were selected based on their appropriateness for gaining information on:

- Demographic details
- Baseline information about physical activity levels and health
- Enablers and barriers to physical activity involvement
- Level of awareness of physical activity benefits
- Types of services being delivered and accessed by the community
- Some insight into nutritional habits of community members

Researchers felt that we wanted to access iwi members at tuturu Māori events. An opportunity to do this arose at Te Matatini Festival, hosted at the

Arena grounds in Palmerston North early 2005. A pilot survey (see **Appendix C**) was distributed at the Festival but Researchers and Volunteers found it difficult to encourage spectators to complete the surveys, and it was virtually impossible to identify individuals from the 3 targeted iwi. Furthermore, feedback from respondents who did complete the survey was that it was too long and complicated to complete in enough detail.

A second (and much shorter) version (see **Appendix D**) was tested by smaller community groups with more success in terms of being completed, but there still appeared to be problems interpreting some of the questions. As a result, the survey tool was refined a third time and distributed to local iwi/hapū groups (see **Appendix E**).

It was becoming more and more difficult to distribute the survey face-to-face, and time was becoming an issue. It was decided that a few minor changes would be made before the final version (Version 4) was distributed by database and at larger hui to members of the 3 iwi groups (see **Appendix F**).

For a summary of where, when and how many surveys were distributed, please see **Table 2**.

**Table 2: Summary of Survey Distribution Strategy**

Survey version	Context	Date	Number distributed	Number returned
Version 1 (Appendix C)	Te Matatini Festival	25-26 February, 2005	100	21
Version 2 (Appendix D)	Rangitaane Marae Health Hui (Kaitoke Marae, Dannevirke)	19 May, 2005	20	11
Version 3 (Appendix E)	Muaūpoko Kaumātua group (Levin)	7 June, 2005	10	6
Version 4 (Appendix F)	Database mail-out for Rangitaane	July, 2005	500	150
	Database mail-out for Ngāti Raukawa ki te Tonga	July, 2005	500	
	Database mail-out for Muaūpoko	July, 2005	500	
	Poupatate Marae (Ngāti Pīkahu) visit for Te Runanga o Raukawa staff meeting	18 August, 2005	500	
<b>TOTAL</b>				<b>188</b>

## **2.2.2 Ethical Procedures**

See **Appendix G** for a copy of the letter confirming that a Low Risk Notification form had been completed in order to adhere to the Massey University policies with regards to undertaking research with human participants.

## **2.2.3 Hui with Stakeholders**

The survey was implemented at the request of Roopū Manaaki who represent rural and urban Māori who identify and affiliate to the following iwi groups: Rangitāne, Ngāti Raukawa ki te Tonga and Muaūpoko. The members of Te Roopu Manaaki o Manawatu, at the time of the project, were:

Te Runanga o Raukawa Inc	Dennis Emery
Ngāti Raukawa ki te Tonga representative	Dennis Emery
Muaūpoko iwi representative	Danny Hancock

Rangitāne iwi representative	Wiremu & Trieste Te Awe Awe
Urban representative	Stacey Lambert
Raukawa Iwi Sports Advisory Committee	Sam Kereama

Meetings between members of Te Roopu Manaaki, between the Research Manager and Researcher, and between the Research Manager and other iwi/hapū and community groups occurred throughout the year. The objective of these meetings were to determine the objectives of the project, to determine how the project was progressing, to encourage community involvement in and support of the project, and to distribute/collect surveys.

Refer to **Table 3** for a summary of the meetings and hui that were associated with the project.

**Table 3:** Summary of meeting dates and participants involved

Meeting date	Participants
20 <sup>th</sup> Jan	Initial meeting with Te Roopu Manaaki
15 <sup>th</sup> Feb	(meeting between Pauline Chadwick and Farah Palmer)
17 March	iwi/hapū invited to attend a hui at Sport Manawatu
4 May	Iwi Sports Advisory Committee hui (Levin)
2 June	Survey presentation to Roopu Manaaki
7 June	Muaūpoko Kaumātua Group
	Te Runanga o Raukawa offices
	Survey promoted to Rangitane Kaumātua and Marae – Kaitoki Marae, Dannevirke
11 June	Meeting with Farah Palmer and Apa Watene (research assistant)
15 June	Public speech on 'whānau engagement in sport' (Massey University, Palmerston North)
17 June	Muaūpoko Tamariki roopu (Levin)
8 July	Pae Tamariki Kapa Haka Festival
25 July	Presentation of interim findings to Māori Sport Symposium participants
5 August	Meeting with Pauline Chadwick and Farah Palmer
18 August	Te Runanga o Raukawa full staff meeting – promotion of survey to staff; requesting their assistance
21 August	Surveys disseminated at Raukawa Sports event
31 August	Survey promoted at Raukawa Iwi Sports Advisory Committee meeting

#### **2.2.4 Collection of National/Regional Survey Results**

Over the years, there have been several national surveys aiming to describe Māori physical activity levels and barriers/opportunities toward increasing the level of Māori involvement in sport and physical activity. This section will address the main findings and recommendations pertinent to Māori from the following surveys:

- Life in New Zealand Survey (1990)
  - Russell & Wilson (1991)
  - Reid (1992)
- Tainui Survey (1991)
  - Rewi (1992)
- Omangia Te Oma Roa (1995)
  - Te Puni Kōkiri (1995)
- SPARC Facts, Māori (2001)
  - Available on-line at [www.sparc.org.nz/research-policy/ethnicity-profiles](http://www.sparc.org.nz/research-policy/ethnicity-profiles)

##### **i) Life in New Zealand Survey (1990)**

The Life in New Zealand (LINZ) survey was initiated by the Hillary Commission in 1990 (Russell & Wilson, 1991) and helped to describe the sporting patterns of Māori by sampling 1000 Māori over the age of 15 years. The findings in this survey that related to Māori were discussed by Reid (1992). Major conclusions are summarised in **Tables 7a and 7b**.

##### **ii) Tainui Survey (1991)**

In order to compare and complement the LINZ Māori data, a similar project involving a strongly Māori community was also initiated and involved 400 Māori adults in the Tainui region (Rewi, 1992). This survey was administered face-to-face which may have resulted in slightly higher rates of completion,



and different responses to questions. Major conclusions are summarised in **Tables 7a and 7b**.

**iii) Omangia Te Oma Roa (1995)**

A booklet titled 'Omangia Te Oma Roa: Māori participation in physical leisure' was produced by Te Puni Kōkiri to advise purchasers and providers of health and physical leisure services on innovative ways of encouraging inactive and/or at-risk Māori to participate in physical leisure activities (Te Puni Kōkiri, 1995). Major findings are summarised in **Tables 7a and 7b**.

**iv) SPARC Facts, Māori (2001)**

The latest information from SPARC Facts, Māori (2001) provides the following statistics on Māori participation in sport and physical activity:

- 71% of young Māori (5-17 years) and 67% of adult Māori (18+ years) were considered active,
- 22% of Māori males and 21% of Māori females are not active on any days (see **Table 4**),
- 56% of Māori adults want to be more active,
- Over the course of a year, almost all Māori adults (97%) will participate in some form of sport or active leisure,
- The top sport for Māori men is Touch Rugby and for Māori women the top sport is netball (see **Table 5**),
- The top leisure activity for Māori men and Māori women is walking (see **Table 6**),
- 40% of Māori are active members of a gym or sports club. For Māori men the figure is 47% and for Māori women it is 34%,
- Māori adults are more likely to participate in sports in an official or helping role such as refereeing, coaching or a parent helper.

**Table 4: The Couch Potato Index (CPI) for Māori Adults**

	Māori Adults (%)		All Adults (%)	
	Men	Women	Men	Women
Not active on any days	22	21	19	18
Active 1-4 days	34	39	43	41
Active 5+ days	43	40	38	40

Source: SPARC Facts Māori 2001

**Table 5: Top five sports for Māori adults (compared to all adults)**

	Men (%)		Women (%)		
	Māori	All NZ	Sport	Māori	All NZ
Touch Rugby	33	14	Netball	23	10
Golf	28	28	Touch Rugby	16	6
Rugby Union	26	11	Basketball	9	4
Rugby League	17	4	Golf	7	10
Basketball	17	8	Tennis	7	10

Source: SPARC Facts Māori 2001

**Table 6: Top 5 leisure activities for Māori adults (compared to all adults)**

	Men (%)		Women (%)		
	Māori	All NZ	<b>Leisure activity</b>	Māori	All NZ
Walking	51	61	Walking	75	81
Fishing	47	36	Gardening	56	67
Gardening	40	52	Swimming	39	38
Swimming	34	34	Home Exercise	37	35
Home Exercise	33	27	Aerobics	23	17

Source: SPARC Facts Māori 2001

## **v) Barriers and enablers identified in surveys**

**Barriers** to Māori participation in physical activity, identified in these surveys (Reid, 1992; Rewi, 1992; Te Puni Kōkiri, 1995) included:

- cost,
- transport difficulties,
- lack of whānau support,
- lack of suitable childcare,
- lack of self-motivation,
- communication and location difficulties,
- work commitments,
- inappropriate programmes,
- ill health,
- low self-esteem,
- low awareness of consequences,
- facilities, and opportunities,
- and whakamaa.

Young Māori female respondents in Tainui, for instance, mentioned that the feeling of whakamaa prevented them from participating in some sporting events, especially events where there was little Māori involvement or tradition (Reid, 1992).

Respondents of these surveys suggested that to **enable** Māori participation in physical activity there needed to be:

- greater encouragement and support from a young age which should be maintained after secondary school,
- reduced costs,
- greater Māori presence and input at organisational level, and
- more advertising and publicity of Māori sporting events,
- a social aspect of 'Māori-based events run by Māori for Māori',

- perceptions of a comfortable and safe environment,
- accessibility,
- achievable levels of activity,
- an emphasis on 'participation and fun'.

For an overview of the main findings regarding Māori involvement in physical activity and sport in the LINZ survey (1991), Tainui survey (1992), Omangia te Oma Roa report (1995), and SPARC Facts, Māori (2001) see **Tables 7a and 7b**

**TABLE 7a: Overview of survey results for Māori involvement in physical activity and sport**

Details	LINZ survey 1990 (analysed by Reid, 1992)	Tainui survey 1992 (analysed by Rewi, 1992)	SPARC Facts Māori 2001
Participate in physical activity	63% (cf. 48% other)	86%	71% young (cf. 68% other) 67% adult (cf. 68% other) = active (2.5 hours+/week)
High-intensity activity	45% (cf. 27% other)		48-58% highly active
Low intensity activity	56% (cf. 73% other)		11-17 % relatively active
Involved more than once a week		47%	
Over a year, participate in some form of sport?			97%
inactive		12%	12% sedentary 18-23% relatively inactive
Want to be more active		64% male 51% female	56%
Club membership	50 (cf. 49% other)		47% men + 34% women (cf. 40% other)
Took part in an organised activity			40% men + 23% women (cf. 31% other)
Received coaching			36% men + 26% women (cf. 31% other)
Volunteerism	27% (cf. 30% other)	12.5% coaches 8.5% admin 4% supporters	16% (cf. 11% other) coach/instructor 12% (cf. 8% other) ref/official 9% (cf. 8% other) admin 20% (cf. 13% other) parent helper

**TABLE 7b: Overview of survey results for Māori involvement in physical activity and sport**

Details	LINZ survey 1990 (analysed by Reid, 1992)	Tainui survey 1992 (analysed by Rewi, 1992)	SPARC Māori Facts 2001	
Most popular activities	swimming snooker/pool cycling aerobics tennis netball weight lifting rugby union	Rugby league Touch Rugby Netball Softball B/ball Tennis Indoor netball Golf Kapa haka	MEN	WOMEN
			Touch Golf Rugby League Basketball Walking Fishing Gardening Swimming Home exercise	Netball Touch B/ball Golf Tennis Walking Gardening Swimming Home exercise Aerobics
Reasons for participating		Team Physical/contact Competition Enjoyment Fitness/health	Health/fitness 39% men, 35% women	
		<b>Omangia Te Oma Roa (1995)</b>	<b>SPARC Māori Facts 2001</b>	
Barriers		cost, transport difficulties, lack of whānau support, lack of suitable childcare, lack of self-motivation, communication and location difficulties, work commitments, inappropriate programmes, ill health, low self-esteem, low awareness of consequences, facilities, and opportunities, whakamaa	Increased workload/longer hours 47% for men, 26% for women  Limited with a young family (35% women)	

## **vi) Obstacles to Action Survey (2003)**

SPARC in partnership with the Cancer Society of New Zealand recently conducted a survey called the 'Obstacles to Action' Survey (2003). The research objectives of this survey were to:

- Understand attitudes towards and behaviours regarding physical activity and nutrition,
- Identify and describe useful segments,
- Understand how to create behaviour change in those segments.

Questions in the survey related to attitudes and opinions, physical activity, health, health behaviour, nutrition, getting health and physical activity information, and demographics. Individuals of Māori descent and Under 25 year olds were oversampled to counter the typically lower response from these groups. Approximately 14,000 New Zealanders were surveyed (16 years and over) and there was a 61% return rate.

The total sample was divided into three broad groups, based on their current level of physical activity and intentions. These groups were 'inactive', 'active', and 'target' groups. The target group were those respondents who were not already regularly active, but they did have some intention of becoming regularly active in the next 6 months. The target group made up 45% of the total sample.

Analysis of the survey data also helped to place the target group into six segments. These segments were known as:

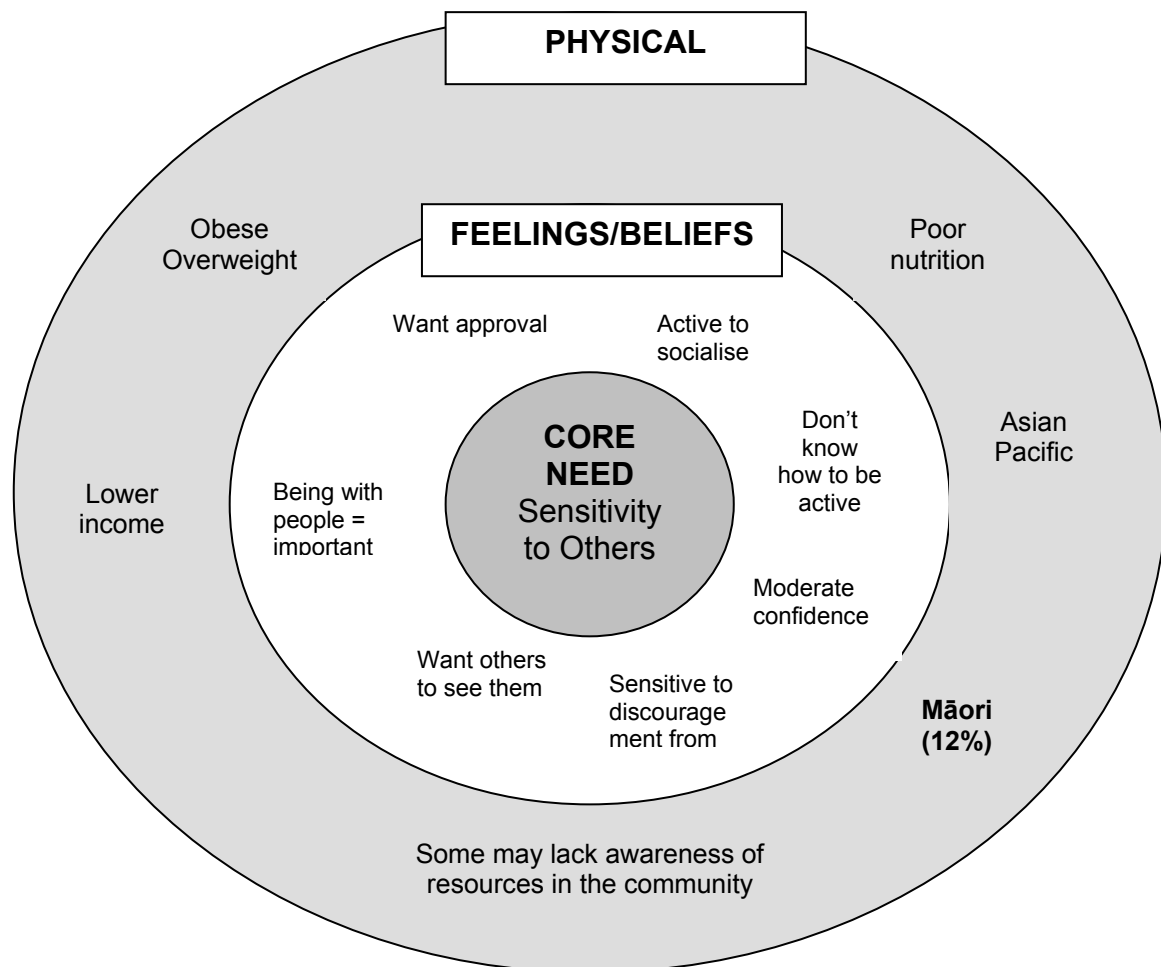
1. Others oriented (6% of the population)
2. Okay for now (10% of the population)
3. Other priorities (6% of the population)
4. Busy and stressed (9% of the population)
5. Support seekers (6% of the population)
6. Almost there (9% of the population)

The wider project team, an independent advertising consultant and an applied psychologist selected two priority segments from the six identified segments of the target group. These two priority segments were ‘others oriented’ and ‘support seekers’.

**Others oriented** (see **Figure 1**) tended to be:

- Discouraged by others (97%)
- Have the strongest extrinsic motivation (family want me to, want approval of others)
- High in Asian and Pacific peoples
- Obese (27%)
- Put off by environmental barriers (cost, no access to facilities, etc)
- **12% were of Māori descent (cf. 12% in Target Group)**

**Figure 1: Summary of ‘others-oriented’ segment group**

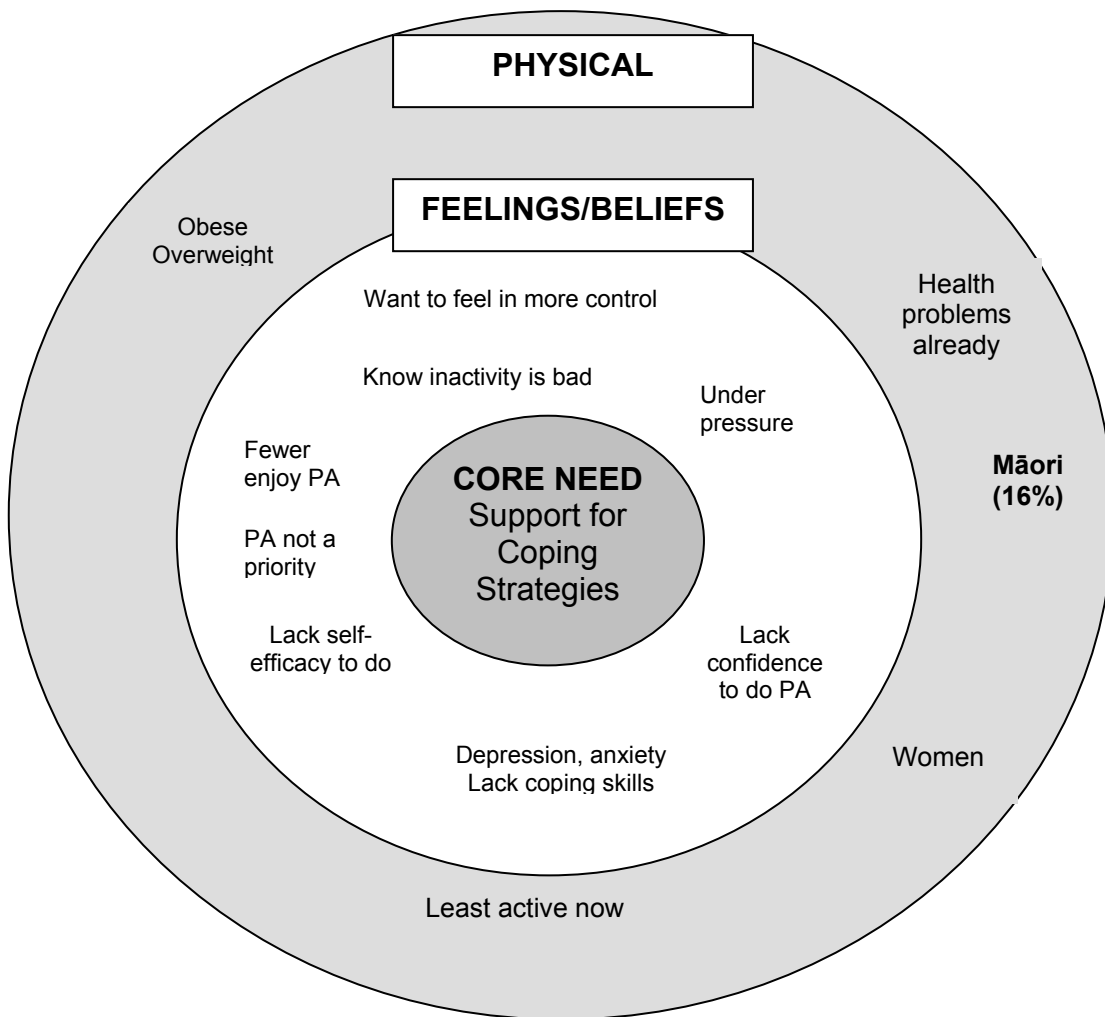




**Support seekers** (see **Figure 2**) tended to

- Feel they did not get enough encouragement (99%)
- Be less physically active
- Have more health problems (mental and physical)
- Know that their inactivity was bad for health, but being active not a priority
- **16% were of Māori descent (cf. 12% in Target Group)**

**Figure 2: Summary of 'support-seekers' segment group**



As part of this national survey, 313 Manawatu residents were also surveyed. Levels of activity in Manawatu were similar to the national level, with 44% active, 10% inactive, and 46% falling within the target group category. Manawatu also had similar proportions of each segment as the national

findings, although fewer Manawatu residents (6%) were considered part of the 'busy and stressed' segment compared to national figures (9%), and slightly more Manawatu residents (9%) were 'others oriented' compared to national statistics (6%).

Gender, age, and marital status demographics were similar between Manawatu and National findings, but there were differences in the employment, education, and ethnicity categories. The Manawatu population surveyed was over represented in the European ethnic group (84% cf. 77% nationally). It appears that despite attempts to over-sample the Māori population, few Māori responded to the survey in the Manawatu region.

## **vii) Summary**

The national surveys in the early 1990s (LINZ survey and Tainui survey attempted to describe Māori physical activity and sport involvement in New Zealand. The report by Te Puni Kōkiri called 'Omangia te Oma Roa' in 1998 highlighted some significant barriers and enablers to physical activity and sport, identified by at-risk Māori involved in several health and physical activity programmes. The SPARC Facts for Māori (2001) provide the latest statistics for Māori on a national scale, and indicate that Māori are highly involved in sport as participants in grassroots and organised sport and as volunteers at grassroots sport level (e.g., parent helpers, referees, and coaches). The SPARC facts, however, also highlight that 12% of Māori respondents would be considered sedentary, and 18-23% were relatively inactive in 2001. A large proportion of Māori respondents would also like to be more active (56%). The Obstacles to Action survey (2003) attempted to focus on specific groups of the population who could be targeted to become more active. The national and regional data does not reveal a lot about where Māori are situated in these segments, but 12% of Others-oriented were Māori, and 16% of Support-seekers were Māori. A survey, which provides a picture of Māori health, physical activity levels, and sport involvement is needed in the Manawatu region, and this report aims to illustrate some aspects of that picture.

### 3. Results

Information from the surveys was entered into an analytical computer package known as SPSS. Each respondent was given a code, and their responses coded to allow for frequency data, comparisons, and factor analysis (if necessary). Due to the changes made in each version of the survey, some questions were asked in some surveys, and not in others. For the majority of questions, statistics have been based on the total number of surveys returned (n = 188). If the question does not allow for comparison across survey versions, this is noted in the total in each frequency table.

As mentioned earlier, questions tended to be tick-box, or likert scale questions, with some information gathered on demographics, and a few opportunities to write down responses in open-ended questions. Respondents sometimes responded to a question by ticking the 'not at all' option, but some respondents did not respond at all. No response was noted as 'missing' data. This has resulted in two different percentage figures. The valid percent column is calculated based on the total number of valid responses. The percent column, includes missing data (i.e., no responses), and therefore the statistics tend not to be as high.

The objective of this report was to **describe** the health, sport and physical activity levels *and offer insight* into the attitudes/values toward physical activity and health of 3 major iwi groups in the Manawatu region. The frequency of responses in each of the questions is therefore provided in table format, with a written and visual summary of each section to further elaborate on these findings.

The majority of questions in the survey can be quantifiably analysed using the SPSS programme, but there were several questions that were qualitatively analysed by identifying common themes and patterns and relating these to previous surveys (e.g., Obstacles to Action survey, 2003).

### 3.1 Quantitative Analysis of Survey Results

#### 3.1.1 Demographics

##### a) Iwi and Hapū Affiliations

There were 188 surveys returned, and approximately 43% of these were from Ngāti Raukawa ki te Tonga, 28% from Muaūpoko, and 11% from Rangitaane. According to the 2001 Census information, 11,088 people identified with Ngāti Raukawa ki te Tonga, 822 with Rangitaane, and 1,836 with Muaūpoko. The percentage of respondents from each of the iwi therefore is 0.7% Raukawa ki te Tonga, 2.6% Rangitaane, and 2.8% Muaūpoko.

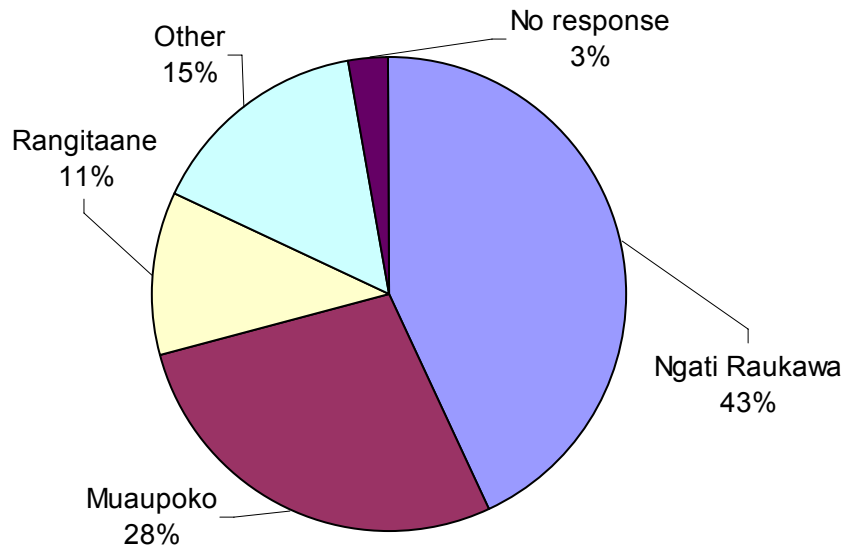
Fifteen percent stated another iwi that they were affiliated to, but may have had connections with one of the three main iwi in the region being surveyed through extended whānau, partners, whangai situations, or along with affiliations to other iwi that they more strongly identify with. In addition, respondents may not have realised that the survey was only for people from the 3 iwi targeted. Five percent of the respondents declined to offer any iwi affiliations. Refer to **Table 8** for a specific breakdown of iwi affiliations.

**Table 8: Iwi affiliation of respondents**

Iwi?		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Ngāti Raukawa	81	43.1	44.3	44.3
	Muaūpoko	52	27.7	28.4	72.7
	Rangitaane	21	11.2	11.5	84.2
	Other	29	15.4	15.8	100.0
	Total	183	97.3	100.0	
Missing	System	5	2.7		
Total		188	100.0		

The breakdown of iwi affiliations of respondents is also presented in **Figure 3**.

**Figure 3: Iwi affiliation of respondents**



A list of the respondents' hapū affiliations is also presented in **Table 9**. A more complete list of hapū and marae affiliated to Ngāti Raukawa ki te Tonga, Muaūpoko, and Rangitaane is provided in **Appendix B**.

**Table 9: Hapū affiliation of respondents**

Hapū?	Frequency	Percent	Valid Percent	Cumulative Percent
Ngāti Maiotaki	13	6.9	8.3	8.3
Ngāti Pareraukawa	16	8.5	10.3	18.6
Ngāti Tamarangi	6	3.2	3.8	22.4
Ngāti Manomano	5	2.7	3.2	25.6
Whanokirangi	7	3.7	4.5	30.1
Ngāti Wehiwehi	8	4.3	5.1	35.3
Ngāti	5	2.7	3.2	38.5
Kapumanawawhiti				
Pikiahuaewae	12	6.4	7.7	46.2
Ngāti	5	2.7	3.2	49.4
Parewahawaha				
Ngāti Pariri	17	9.0	10.9	60.3
Ngāti Hine	5	2.7	3.2	63.5
Ngāti Takahiku	2	1.1	1.3	64.7
Punahau	5	2.7	3.2	67.9
Tahuriwakanui	3	1.6	1.9	69.9
Ngāti Hineaute	5	2.7	3.2	73.1
Te Rangi te paia	2	1.1	1.3	74.4
Ngāti Ao	2	1.1	1.3	75.6
Ngāti Rakau	4	2.1	2.6	78.2
Paewai				
Ngāti Pakapaka	4	2.1	2.6	80.8
Ngāti Ngarongo	1	.5	.6	81.4
Ngāti Tukorehe	1	.5	.6	82.1
Ngāti	1	.5	.6	82.7
Rangiwhakaewa				
Ngāti Whakatere	1	.5	.6	83.3
Other	26	13.8	16.7	100.0
Total	156	83.0	100.0	
Missing System	32	17.0		
Total	188	100.0		

**b) Residency**

By focusing on Territorial Local Authorities, it can be determined that approximately 23.2% of the Palmerston North City ratepayers, 14.2% of Horowhenua ratepayers, 9.7% Rangitikei ratepayers, and 8.6% Manawatu District ratepayers identified as Māori (Source: [www.tpk.govt.nz/publications/docs/MRD\\_full.pdf](http://www.tpk.govt.nz/publications/docs/MRD_full.pdf)).

When respondents were asked to indicate where they lived, the majority of respondents lived in Levin (approximately 30%), followed by Otaki (19%), Palmerston North (18%) and Feilding (16%). See **Table 10** for a more complete summary of place of residence for respondents.

**Table 10: Place of residency of respondents**

Where do you live?		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Otaki	34	18.1	19.1	19.1
	Feilding	29	15.4	16.3	35.4
	Levin	55	29.3	30.9	66.3
	Palmerston North	33	17.6	18.5	84.8
	Shannon	2	1.1	1.1	86.0
	Bulls	3	1.6	1.7	87.6
	Foxton	6	3.2	3.4	91.0
	Other	16	8.5	9.0	100.0
	Total	178	94.7	100.0	
Missing	System	10	5.3		
Total		188	100.0		

### c) Gender

In 1996, 14% of all women in New Zealand identified as Māori, and this percentage is expected to rise in 2046 to 21% (Source: <http://www.tpk.govt.nz/maori/population/maoriwomen.pdf>). Furthermore, Māori women (like non-Māori women) tend to outnumber men (for Māori - by approximately 7,500). It is not surprising, therefore, that a higher proportion of wāhine (59%) completed the surveys compared to tāne (39%). This may also be due to the higher tendency for women to complete surveys, and women were also predominantly involved in the health sector where surveys were distributed. The specific gender breakdown of respondents is displayed in **Table 11**.

**Table 11: Gender identity of respondents**

What is your gender?		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Tāne	72	38.3	39.6	39.6
	Wāhine	110	58.5	60.4	100.0
	Total	182	96.8	100.0	
Missing	System	6	3.2		
Total		188	100.0		

#### **d) Age**

Youth aged 15-24 years made up 19% of the Māori population in 1996 (source: <http://www.tpk.govt.nz/maori/population/youth.asp>). At that time, 14% of the non-Māori population was in this age group. The percentage of young people that are Māori is continuing to increase. By the year 2006 it is projected that 21% of all youth aged 15-24 years (approximately 120,000) will identify as Māori, and by the year 2040 the proportion is projected to rise to 28% (145,000) (source: <http://www.tpk.govt.nz/maori/population/youth.asp>).

In 1996, 58% of the Māori population in the Manawatu/Wanganui region were under 25 years of age. Outside of Auckland, Wellington, Christchurch and Otago, the proportion of Māori living in Manawatu/Wanganui that were youth (13%) was the highest in New Zealand (Source: [www.tpk.govt.nz/publications/docs/mRD\\_full.pdf](http://www.tpk.govt.nz/publications/docs/mRD_full.pdf)).

In 1996, the median age for the Manawatu/Wanganui region was 20.9 years of age which was slightly less than the National Māori median age of 21.6 years.

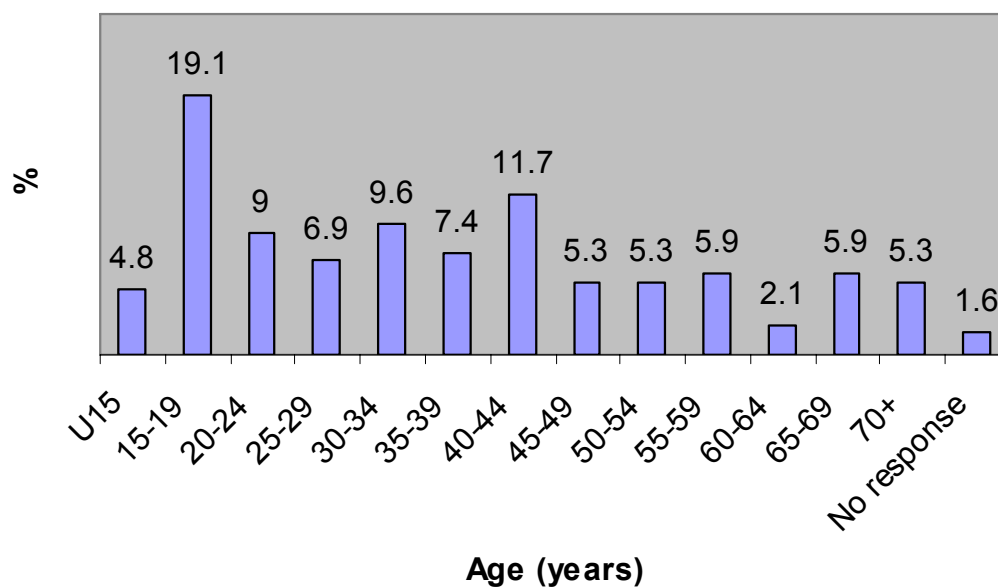
For this survey, approximately 33% of the respondents were 24 years or younger. The biggest age group of respondents was 15-19 years of age (approximately 19%), and the next biggest group of respondents were 40-44 years of age (11%). There were respondents in all of the age brackets, including approximately 11% in the 65 years and older categories (see **Table 12 and Figure 4**).



**Table 12: Age of respondents**

What is your age group?		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 15 years	9	4.8	4.9	4.9
	15-19 years	36	19.1	19.5	24.3
	20-24 years	17	9.0	9.2	33.5
	25-29 years	13	6.9	7.0	40.5
	30-34 years	18	9.6	9.7	50.3
	35-39 years	14	7.4	7.6	57.8
	40-44 years	22	11.7	11.9	69.7
	45-49 years	10	5.3	5.4	75.1
	50-54 years	10	5.3	5.4	80.5
	55-59 years	11	5.9	5.9	86.5
	60-64 years	4	2.1	2.2	88.6
	65-69 years	11	5.9	5.9	94.6
	70+ years	10	5.3	5.4	100.0
	Total	185	98.4	100.0	
Missing	System	3	1.6		
Total		188	100.0		

**Figure 4: Age of respondents (%)**



### 3.1.2 General Physical Activity Levels

According to the US Surgeon General's recommendations just 30 minutes of physical activity taken regularly will benefit the health of everyone (Tudor-Locke & Bassett, 2004). This is the message promoted by SPARC through the Push Play nationwide campaign. This survey attempted to determine if Māori in the Manawatu were meeting these recommended physical activity levels.

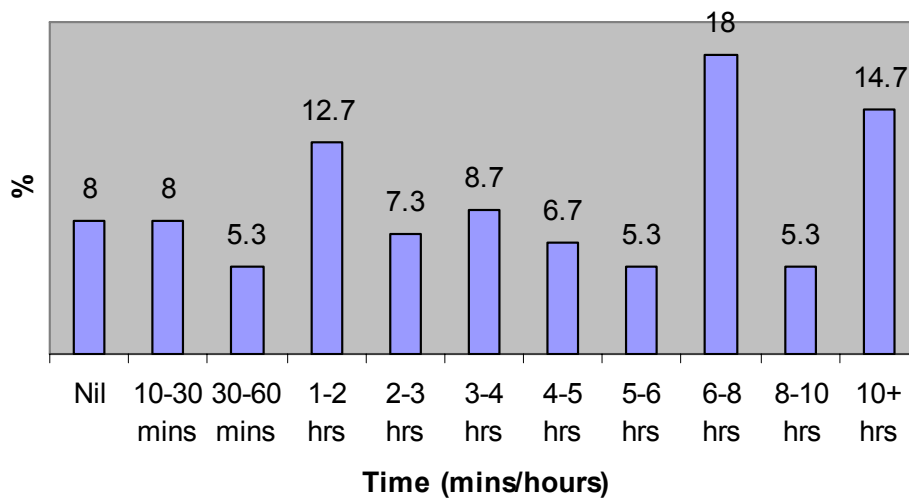
#### a) *General population*

According to the self-reported surveys, approximately 9% of the respondents are meeting the recommended amount of physical activity. Eighteen percent claim to be active for 6-8 hours per week, and approximately 15% stated they were physically active for 10 hours a week (see **Table 13** and **Figure 5**).

**Table 13: Average time exercising per week (general group)?**

	Frequency	Percent	Cumulative Percent
Valid 0	11	8.0	8.0
10-30 minutes	12	8.0	16.0
30-60 minutes	8	5.3	21.3
1-2 hours	19	12.7	34.0
2-3 hours	11	7.3	41.3
3-4 hours	13	8.7	50.0
4-5 hours	10	6.7	56.7
5-6 hours	8	5.3	62.0
6-8 hours	27	18.0	80.0
8-10 hours	8	5.3	85.3
10+ hours	22	14.7	100.0
Total	150	100.0	

**Figure 5: Average time being active/week  
(% of total)**



**b) *Kaumātua group***

The benefits for elderly individuals of regular participation in both cardiovascular and resistance-training programmes are great (Mazzeo & Tanaka, 2001). Health benefits include a significant reduction in risk of coronary heart disease, diabetes and insulin resistance, hypertension and obesity as well as improvements in bone density, muscle mass, arterial compliance and energy metabolism (Mazzeo & Tanaka, 2001). Increases in cardiovascular fitness, muscle strength and overall functional capacity also allow kaumātua to maintain their independence, increase levels of spontaneous physical activity and freely participate in activities associated with daily living. Together, these benefits can significantly improve the quality of life for kaumātua. It was considered important, therefore, to determine how active a small group of kaumātua involved in a physical activity programme specifically for kaumātua were.

Six kaumātua were surveyed, and it appears that for most of them, regular physical activity is a part of their weekly routine. One kaumātua respondent was physically active for 10 minutes or more at least 3 times a week, and 2 of the respondents were physically active for 10 minutes or more at least 5 times

a week. The remaining 2 kaumātua respondents claimed they were active for 10 minutes or more every day of the week. The level of activity for kaumātua per day seemed spread, and included kaumātua who were active for less than 2 hours/week, to kaumātua who were active 8-10 hours a week. For a breakdown of the statistics, see **Tables 14** and **Table 15**.

**Table 14: Average days/week of 10 minutes physical activity**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3 days	1	16.7	20.0	20.0
	5 days	2	33.3	40.0	60.0
	7 days	2	33.3	40.0	100.0
	Total	5	83.3	100.0	
Missing	System	1	16.7		
Total		6	100.0		

**Table 15: Average time exercising per week**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-2 hours	2	33.3	33.3	33.3
	2-3 hours	1	16.7	16.7	50.0
	4-5 hours	1	16.7	16.7	66.7
	5-6 hours	1	16.7	16.7	83.3
	8-10 hours	1	16.7	16.7	100.0
	Total	6	100.0	100.0	

Further discussion of some of the constraints and enablers with regards to physical activity for kaumātua will be discussed in the qualitative analysis of survey responses.

### **c) Walking**

According to the SPARC Facts – Māori (2001), walking is the most popular leisure activity for Māori men (51%) and women (75%). In an attempt to adhere to the NZPAQ – Short form, 21 respondents (those who were administered Version 1 of the survey – see **Appendix C**) were asked the question ‘how many days a week did you walk at a brisk pace?’ The questions appeared to cause many of the respondents difficulty and was subsequently removed from versions of the survey that followed. For the respondents who did complete this question, however, the majority (33.3%)

stated that they had walked at a brisk pace on four days, and approximately 17% of respondents had walked at a brisk pace every day of the week. At the other end of the scale, however, 22% stated that they had not walked at a brisk pace in the last week.

The median time spent brisk walking was 25-30 minutes per day (31.3%), but approximately 19% of respondents did not walk at a brisk pace at all in the last seven days. Refer to **Table 16** and **Table 17** for a summary of these frequencies.

**Table 16: How many days did you walk at a brisk pace?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	19.0	22.2	22.2
	1	1	4.8	5.6	27.8
	3	3	14.3	16.7	44.4
	4	6	28.6	33.3	77.8
	5	1	4.8	5.6	83.3
	7	3	14.3	16.7	100.0
	Total	18	85.7	100.0	
Missing	System	3	14.3		
Total		21	100.0		

**Table 17: How much time did you brisk walk each day?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 Minutes	3	14.3	18.8	18.8
	5-10 Minutes	2	9.5	12.5	31.3
	10-15 Minutes	2	9.5	12.5	43.8
	25-30 Minutes	5	23.8	31.3	75.0
	30-40 Minutes	2	9.5	12.5	87.5
	40-50 Minutes	1	4.8	6.3	93.8
	60+ Minutes	1	4.8	6.3	100.0
	Total	16	76.2	100.0	
Missing	System	5	23.8		
Total		21	100.0		

Respondents were also asked to indicate how often they walked as part of the exercise-related section of the survey. Seventy four percent of respondents said that walking was an activity they did. Approximately 40% walked often, approximately 30% walked sometimes, and 4% walked rarely. These

frequencies are displayed in **Table 18**, and are also included in the *exercise-related activity* results section of this report.

**Table 18: do you walk?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	75	39.9	52.8	52.8
	Sometimes	54	28.7	38.0	90.8
	Rarely	8	4.3	5.6	96.4
	Yes	2	1.1	1.4	97.9
	Sub-total	139	74.0	97.9	
	Not at all	3	1.6	2.1	100.0
	Total	142	75.5	100.0	
Missing	System	46	24.5		
Total		188	100.0		

### 3.1.3 Work-related activity

Respondents were asked to indicate whether they were involved in activities that could be considered 'work-related' activities. The survey directly asked questions about carrying loads, cleaning, electrical work, building, forestry, and shearing/wool handling (as these were referred to in the NZPAQ forms). Respondents also had the opportunity to list other 'work-related' activities not listed in the survey. Responses are represented in **Tables 19 to 26**.

**Table 19: do you carry light loads?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	104	55.3	64.2	64.2
	Sometimes	39	20.7	24.1	88.3
	Rarely	10	5.3	6.2	94.4
	<b>Sub-total</b>	<b>153</b>	<b>81.3</b>		
	Not at all	9	4.8	5.6	100.0
	Total	162	86.2	100.0	
Missing	System	26	13.8		
Total		188	100.0		

**Table 20: do you undertake heavy cleaning?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	79	42.0	50.3	50.3
	Sometimes	50	26.6	31.8	82.2
	Rarely	15	8.0	9.6	91.7
	<b>Sub-total</b>	<b>72</b>	<b>76.6</b>		
	Not at all	13	6.9	8.3	100.0
	Total	157	83.5	100.0	
Missing	System	31	16.5		
Total		188	100.0		

**Table 21: do you carry heavy loads?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	36	19.1	23.7	23.7
	Sometimes	62	33.0	40.8	64.5
	Rarely	30	16.0	19.7	84.2
	<b>Sub-total</b>	<b>128</b>	<b>68.1</b>		
	Not at all	24	12.8	15.8	100.0
	Total	152	80.9	100.0	
Missing	System	36	19.1		
Total		188	100.0		

**Table 22: do you carry out electrical work?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	6	3.2	4.7	4.7
	Sometimes	34	18.1	26.6	31.3
	Rarely	30	16.0	23.4	54.7
	Sub-total	70	37.3		
	Not at all	58	30.9	45.3	100.0
	Total	128	68.1	100.0	
Missing	System	60	31.9		
Total		188	100.0		

**Table 23: do you participate in building?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	7	3.7	4.9	4.9
	Sometimes	31	16.5	21.8	26.8
	Rarely	21	11.2	14.8	41.5
	Sub-total	59	31.4		
	Not at all	83	44.1	58.5	100.0
	Total	142	75.5	100.0	
Missing	System	46	24.5		
Total		188	100.0		

**Table 24: do you participate in forestry?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	2	1.1	1.5	1.5
	Sometimes	22	11.7	16.2	17.6
	Rarely	15	8.0	11.0	28.7
	Sub-total	39	20.8		
	Not at all	97	51.6	71.3	100.0
	Total	136	72.3	100.0	
Missing	System	52	27.7		
Total		188	100.0		

**Table 25: do you participate in shearing/wool handling?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	1	.5	.7	.7
	Sometimes	21	11.2	15.6	16.3
	Rarely	9	4.8	6.7	23.0
	Sub-total	31	16.5		
	Not at all	104	55.3	77.0	100.0
	Total	135	71.8	100.0	
Missing	System	53	28.2		
Total		188	100.0		



Other work-related activities that were mentioned in the open-ended questions are listed in **Table 26**.

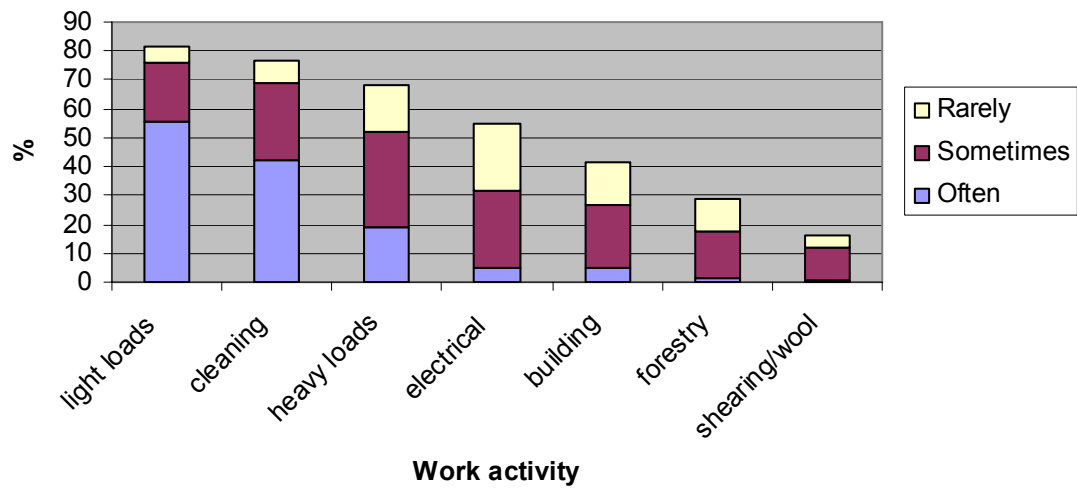
**Table 26: Other work-related activities mentioned in survey**

<b>Other 'work-related' activities</b>	<b>Frequency</b>
Meatworks	3
Therapy with residents/ handling patients	2
Cleaning vehicles/dive equipment	2
Non-specified physical job	2
Dig ditches	1
Timber mill	1
Paper run	1
Fencing	1
Mechanics	1
Bakery	1
Plucking birds	1
<b>TOTAL</b>	<b>14</b>

### **Summary of work-related activity responses**

It seems that a high proportion of respondents carry light loads (81% in total, with 55% doing this often), undertake heavy cleaning (77% in total, with 42% doing this often), and carry heavy loads (68% in total, with 19% doing this often). To a lesser degree, respondents are involved with electrical work (37%), building (31%), forestry (21%), and shearing/wool handling (16.5%). Respondents also had the opportunity to list other 'work-related' activities not listed in the survey. For a summary of the work-related activities respondents were involved in, see **Figure 6**.

**Figure 6: Summary of work-related activities**



### 3.1.4 Home-related activity

Respondents were asked to indicate whether they were involved in activities that could be considered 'home-related' activities. This included playing with children, gardening, renovating the house, and mowing the lawns. Respondents also had the opportunity to list other 'home-related' activities not listed in the survey. Responses are represented in **Tables 27 to 30**, and a summary is provided at the end of this section on home-related activities among respondents.

**Table 27: do you actively play with children?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	85	45.2	52.5	52.5
	Sometimes	53	28.2	32.7	85.2
	Rarely	11	5.9	6.8	92.0
	Sub-total	149	79.3		
	Not at all	13	6.9	8.0	100.0
	Total	162	86.2	100.0	
Missing	System	26	13.8		
Total		188	100.0		

**Table 28: do you participate in heavy gardening?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	38	20.2	23.9	23.9
	Sometimes	56	29.8	35.2	59.1
	Rarely	38	20.2	23.9	83.0
	Subtotal	132	70		
	Not at all	27	14.4	17.0	100.0
	Total	159	84.6	100.0	
Missing	System	29	15.4		
Total		188	100.0		

**Table 29: do you mow your lawns?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	44	23.4	27.8	27.8
	Sometimes	64	34.0	40.5	68.4
	Rarely	21	11.2	13.3	81.6
	<b>Subtotal</b>	<b>129</b>	<b>68.6</b>		
	Not at all	29	15.4	18.4	100.0
	Total	158	84.0	100.0	
Missing	System	30	16.0		
Total		188	100.0		

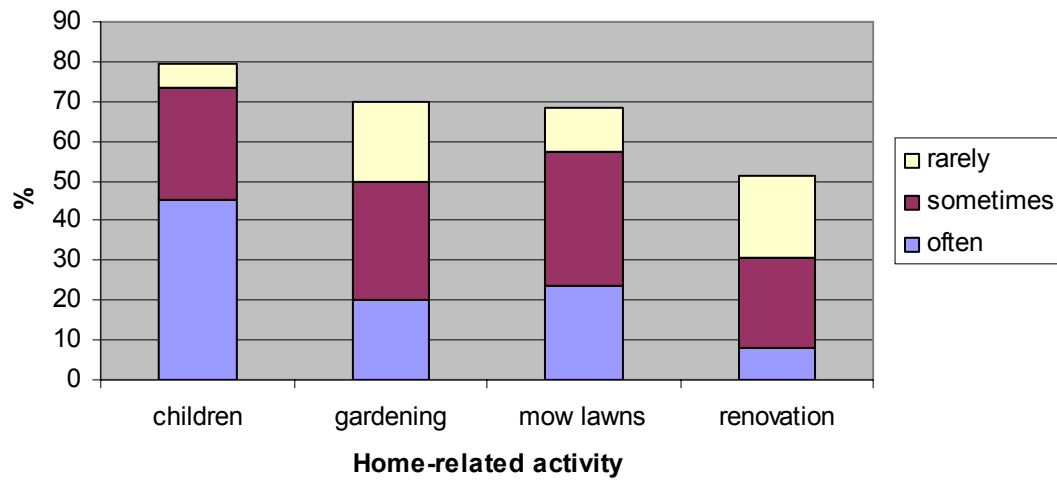
**Table 30: do you renovate your house?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	15	8.0	10.1	10.1
	Sometimes	43	22.9	28.9	38.9
	Rarely	38	20.2	25.5	64.4
	<b>Subtotal</b>	<b>96</b>	<b>51.1</b>		
	Not at all	53	28.2	35.6	100.0
	Total	149	79.3	100.0	
Missing	System	39	20.7		
Total		188	100.0		

### Summary of home-related activity responses

Approximately 79.3% (45% often) of respondents play with children while 70% (20% often) are involved in heavy gardening activities. Mowing the lawn was an activity that 68.6% (23.4% often) of respondents took part in, and 51% (8%) were involved in house renovations of some sort. A summary of the home-related activities (and their frequencies) is provided in **Figure 7**.

**Figure 7: Summary of home-related activity frequencies**



### 3.1.5 Sport-related activity

#### a) Sport in General

Respondents were asked to identify the sports and sport-related activities they were involved in on a weekly basis.

In Version 4 of the survey (see **Appendix F**), respondents were asked to indicate whether they were involved in competitive team sports, competitive individual sports, and/or social sports. From **Tables 31, 32, and 33**, an overview of the involvement of respondents in these activities can be observed.

**Table 31: Involvement in Competitive Team Sports**

Version 4		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	49	32.7	43.4	43.4
	Sometimes	18	12.0	15.9	59.3
	Rarely	7	4.7	6.2	65.5
	Sub-total	104	69.3	65.5	
	Not at all	39	26.0	34.5	100.0
	Total	113	75.3	100.0	
Missing	System	37	24.7		
Total		150	100.0		

**Table 32: Involvement in Competitive Individual Sports**

Version 4		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	11	7.3	12.8	12.8
	Sometimes	13	8.7	15.1	27.9
	Rarely	9	6.0	10.5	38.4
	Sub-total	33	22.0	38.4	
	Not at all	53	35.3	61.6	100.0
	Total	86	57.3	100.0	
Missing	System	64	42.7		
Total		150	100.0		

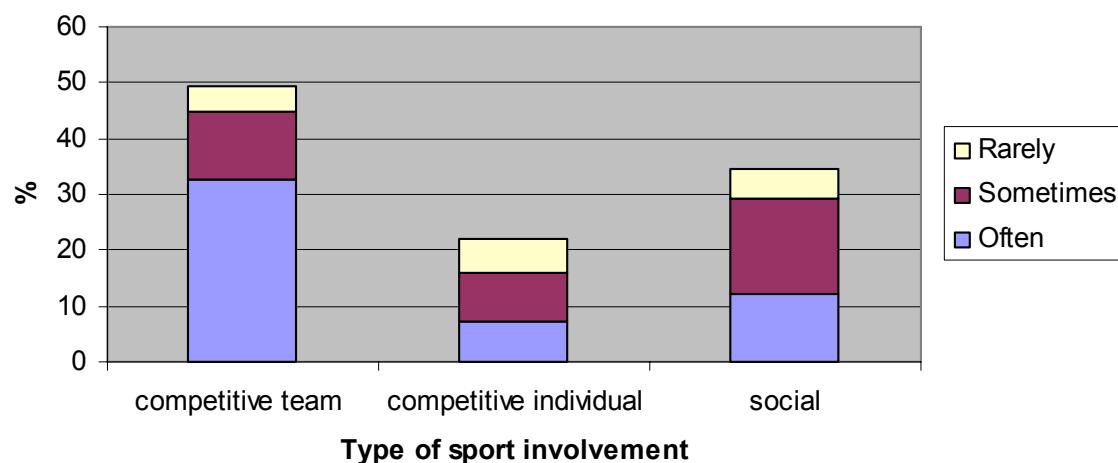
**Table 33: Involvement in Social Sports**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	18	12.0	18.6	18.6
	Sometimes	26	17.3	26.8	45.4
	Rarely	8	5.3	8.2	53.6
	Sub-total	52	34.6		
	Not at all	45	30.0	46.4	100.0
	Total	97	64.7	100.0	
Missing	System	53	35.3		
Total		150	100.0		

### Summary of sport-related activity (general) responses

Approximately 69% of respondents were involved in competitive team sports, and 22% were involved in competitive individual sports. Approximately 35% of respondents mentioned that they were involved in social sport. See **Figure 8** for a visual summary of the types of sport iwi members in the Manawatu tend to be involved in.

**Figure 8: Summary of type and frequency of sport activity (general)**



### ***b) Specific sport-related activities***

According to SPARC Facts – Māori (2001), The most popular sports for Māori men was touch rugby (35%) and netball was the most popular sport for women (23%). How do Māori in the 3 iwi surveyed in this instance compare?

When information from the 4 survey versions were collated, the following tables were created, which indicate the frequency and percentages of respondents involved in specific sports. Some of these sports were included in the survey directly, and respondents had the opportunity to indicate 'other' sports they were involved in as well. This may have influenced levels of self-reporting for some sports more than others. In some cases, the respondents also identified whether they were involved in these sports competitively or socially. When applicable, these frequencies have been included in the tables.

The sports mentioned, in order of popularity were golf, tennis doubles, badminton, cricket, netball, touch, bowls, basketball, rugby, rugby league, tennis singles, softball, soccer, and volleyball. The percentage breakdown of level of involvement in these sports is presented in **Tables 34 to 48**.

***Table 34: do you play golf?***

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	4	2.1	2.6	2.6
	Sometimes	30	16.0	19.6	22.2
	Rarely	27	14.4	17.6	39.8
	Yes	7	3.7	4.6	44.4
	Sub-total	68	36.2		
	Not at all	85	45.2	55.6	100.0
	Total	153	81.4	100.0	
Missing	System	35	18.6		
Total		188	100.0		



**Table 35: do you play tennis doubles?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.5	.7	.7
	Often	2	1.1	1.4	2.1
	Sometimes	33	17.6	23.4	25.5
	Rarely	20	10.6	14.2	39.7
	Sub-total	56	29.8		
	Not at all	85	45.2	60.3	100.0
	Total	141	75.0	100.0	
Missing	System	47	25.0		
Total		188	100.0		

**Table 36: do you play badminton?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	4	2.1	2.8	2.8
	Sometimes	28	14.9	19.6	22.4
	Rarely	17	9.0	11.9	34.3
	Sub-total	49	26.0		
	Not at all	94	50.0	65.7	100.0
	Total	143	76.1	100.0	
Missing	System	45	23.9		
Total		188	100.0		

**Table 37: do you play cricket?**

		Frequency	Percent	Cumulative Percent
Valid	Sometimes	19	10.1	10.1
	Rarely	23	12.2	22.3
	Yes (V4)	2	1.1	23.4
	Yes (V1)	1	0.5	23.9
	Social	3	1.6	25.5
	Sub-total	48	25.5	
	Not at all	140	74.5	100.0
Total		188	100.0	

**Table 38: do you play netball?**

		Frequency	Percent	Cumulative Percent
Valid	Yes (V1)	2	1.1	1.1
	Yes (V2)	1	0.5	1.6
	Yes (V3)	2	1.1	2.7
	Yes (V4)	27	14.4	17.1
	Social	15	7.9	25.0
	Sub-total	47	25.0	
	No	141	75.0	100.0
Total		188	100.0	

**Table 39: do you play touch?**

		Frequency	Percent	Cumulative Percent
Valid	yes	25	13.3	13.3
	Social	16	8.5	21.8
	Sub-total	41	21.8	
	No	147	78.2	100.0
Total		188	100.0	

**Table 40: do you play bowls?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Sometimes	23	12.2	16.2	16.2
	Rarely	17	9.0	12.0	28.2
	Sub-total	40	21.2		
	Not at all	102	54.3	71.8	100.0
	Total	142	75.5	100.0	
Missing	System	46	24.5		
Total		188	100.0		

**Table 41: do you play basketball?**

		Frequency	Percent	Cumulative Percent
Valid	Yes (V1)	3	1.6	1.6
	Yes (V2)	2	1.1	2.7
	Yes (V4)	18	9.6	12.3
	Social	4	2.1	14.4
	Sub-total	27	14.4	
	No	161	85.6	100.0
Total		188	100.0	

**Table 42: do you play rugby?**

		Frequency	Percent	Cumulative Percent
Valid	Yes (V2)	1	0.5	0.5
	Yes (V4)	25	13.3	13.8
	Sub-total	26	13.8	
	No	162	86.2	100.0
Total		188	100.0	

**Table 43: do you play rugby league?**

		Frequency	Percent	Cumulative Percent
Valid	Yes (V2)	1	0.5	0.5
	Yes (V4)	12	6.4	6.9
	Sub-total	13	6.9	
	No	175	93.1	100.0
Total		188	100.0	

**Table 44: do you play tennis (singles)?**

Version 2		Frequency	Percent	Cumulative Percent
Valid	yes	10	5.3	5.3
	Social	1	0.5	5.8
	Sub-total	11	5.8	
	No	177	94.2	100.0
	Total	188	100.0	

**Table 45: do you play softball?**

		Frequency	Percent	Cumulative Percent
Valid	Social	3	1.6	1.6
	Yes (V4)	6	3.2	4.8
	Sub-total	9	4.8	
	No	179	95.2	100.0
Total		188	100.0	

**Table 46: do you play soccer?**

		Frequency	Percent	Cumulative Percent
Valid	Yes (V4)	7	3.7	3.7
	Social	1	0.5	4.3
	Sub-total	8	4.3	
	No	180	95.7	100.0
Total		188	100.0	

**Table 47: do you play volleyball?**

		Frequency	Percent	Cumulative Percent
Valid	Yes (V1)	1	0.5	0.5
	Yes (V2)	1	0.5	1.0
	Yes (V4)	2	1.1	2.1
	Social	2	1.1	3.2
	Sub-total	6	3.2	
	No	182	96.8	100.0
Total		188	100.0	

Other sport-related activities that were mentioned in the open-ended questions are listed in **Table 48**.

**Table 48: Other sport-related activities mentioned by respondents**

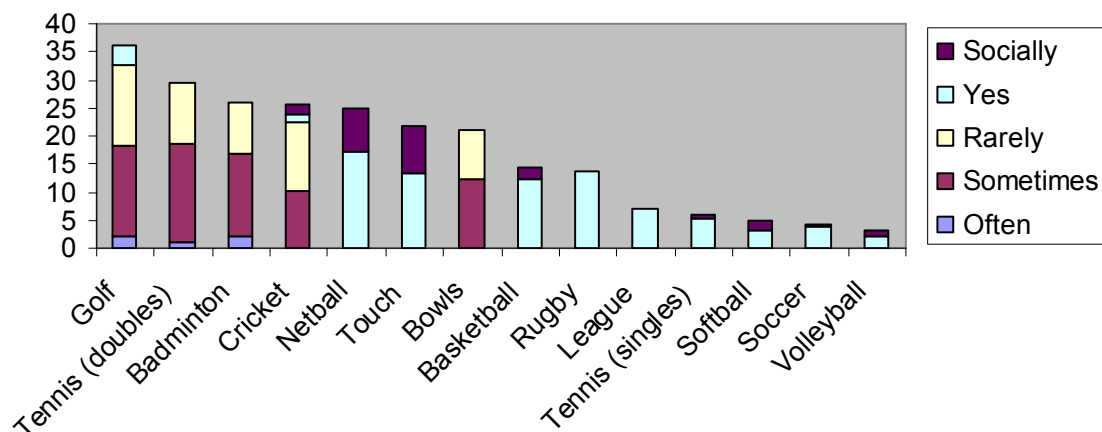
<b>Other 'sport-related' activities</b>	<b>Frequency</b>
Darts	5
Table tennis	4
Swimming (competitive)	4
Boxing	4
Pool 8 Ball	3
Athletics	3
Karate or judo	3
Hockey	2
Team training	2
Badminton	2
Squash	1
Running cross-country	1
Goal kicking	1
Triathlon	1
Snowboarding	1
Miniball	1
Paintball	1
Bat down	1

### **Summary of sport-related (specific) activity responses**

The response rates were higher for sports that were specifically mentioned in the survey even though all surveys provided opportunities for respondents to include 'other' sport-related activities they participated in. Sports that were included in the 'moderate physical activity' table for instance in Versions 1, 2 and 3 of the survey included badminton, bowls, cricket, cycling (recreational), and doubles tennis (see Appendices). These are the top four sport-related activities according to the survey responses, but are not publicly known as sports that Māori are predominantly involved with. Sports that were specifically included in the 'vigorous physical activity' table in Versions 1, 2 and 3 include soccer, boxing, cycling (competitive), hockey, rugby league, rugby union, basketball, netball, table tennis, triathlons, volleyball, waterpolo, judo/karate, squash, softball, waterpolo and gymnastics. The numbers recorded in these sport activities, however, was relatively low. Perhaps this

was due to the length of the survey, and respondents may have lost motivation to complete the survey when they saw the second table of activities they had to respond to. In Version 4 of the survey, badminton, bowls, cricket, doubles tennis, and golf were specifically referred to in the sport-specific activity section of the revised table. There was an option for respondents to include ‘other’ activities (competitive and social) that they were involved with in the final version of the survey which was more widely distributed, but this was very rarely completed. The ‘yes’ and ‘socially’ responses may reflect a more accurate idea of what sports the respondents were involved with. The qualitative analysis of surveys also provides an insight into the types of sports that would encourage more regular physical activity among respondents. Meanwhile, **Figure 9** provides a summary of the survey responses to the questions related to sport-related activities.

**Figure 9: Summary of sport-related activity (specific) and frequencies**



### 3.1.6 Culture-related activity

According to the surveys that have focused on Māori in the past, a greater Māori presence and input at the organisational level, and Māori-based events run by Māori for Māori will encourage Māori participation in physical activity and sport. Respondents of this survey, therefore, were asked to indicate whether they were involved in activities that could be considered ‘culture-related’ activities. These activities included kapa haka, dancing, waka ama, haka, and taiaha. Respondents could also identify other activities they considered ‘culture-related’ in the survey. Their responses to the culture-related questions are represented in **Tables 49 to 53**, and a summary is provided at the end of this section on culture-related activities among respondents.

**Table 49: do you practice kapa haka?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	28	14.9	19.0	19.0
	Sometimes	36	19.1	24.5	43.5
	Rarely	28	14.9	19.0	62.6
	Sub-total	92	48.9		
	Not at all	55	29.3	37.4	100.0
	Total	147	78.2	100.0	
Missing	System	41	21.8		
Total		188	100.0		

**Table 50: do you participate in dance?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	20	10.6	13.8	13.8
	Sometimes	51	27.1	35.2	49.0
	Rarely	21	11.2	14.5	63.4
	Sub-total	92	48.9		
	Not at all	53	28.2	36.6	100.0
	Total	145	77.1	100.0	
Missing	System	43	22.9		
Total		188	100.0		

**Table 51: do you participate in haka/taiaha?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	11	6.4	8.6	8.6
	Sometimes	12	7.0	9.4	18
	Rarely	23	13.5	18.0	36
	Yes	2	1.2	1.6	37.6
	Sub-total	48	28.1	37.6	
	Not at all	80	46.8	62.4	100.0
	Total	128	74.9	100.0	
Missing	System	43	25.1		
Total		171	100.0		

**Table 52: do you waka ama/row (slow+fast)?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	3	1.6	1.2	1.2
	Sometimes	9	4.8	6.8	8
	Rarely	19	10.1	14.4	22.4
	Yes	1	0.5	0.8	23.2
	Sub-total	32	17.0		
	Not at all	100	53.2	75.8	100.0
	Total	132	70.2	100.0	
Missing	System	56	29.8		
Total		188	100.0		

Other culture-related activities that were mentioned in the open-ended questions are listed in **Table 53**.

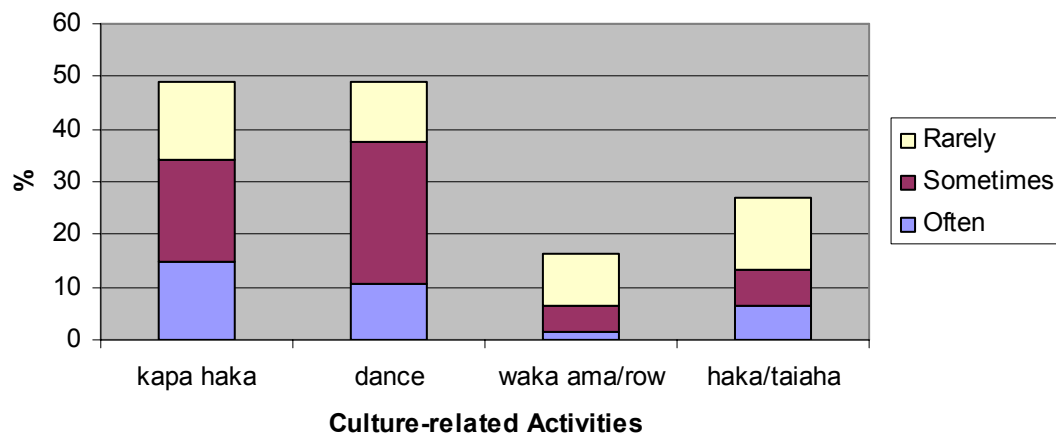
**Table 53: Other culture-related activities mentioned by respondents**

Other 'culture-related' activities	Frequency
Waiata/poi	1
Baking 70-80 rewana bread a week	1
Gathering harakeke	1
Diving	1
Whānau sports	1
Raukawa sports events	1

### Summary of culture-related activity

The most popular cultural activities among respondents were kapa haka and dancing with approximately 50% indicating some level of involvement. Twenty eight percent mentioned involvement in haka/taiaha, and 17% were involved in waka ama/rowing activities. A summary of these culture-related activities is portrayed visually in **Figure 10**.

**Figure 10: Summary of culture-related activities of respondents**





### 3.1.7 Food gathering activities

Gathering food from Papatuanuku (Mother Earth) or the land (whenua) can also be considered a cultural as well as physical experience for many Māori. Respondents, therefore, were asked to indicate their level of involvement in gathering kai. These activities included gathering puha or watercress, hunting for deer or pigs, collecting kaimoana (e.g., shellfish), fishing, and/or eeling. The responses are presented in **Tables 54 to 57** below.

**Table 54: do you gather kai?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	26	17.3	19.3	19.3
	Sometimes	38	25.3	28.1	47.4
	Rarely	20	13.3	14.8	62.2
	Sub-total	84	55.9		
	Not at all	51	34.0	37.8	100.0
	Total	135	90.0	100.0	
Missing	System	15	10.0		
Total		150	100.0		

**Table 55: Do you collect kaimoana/ go fishing or eeling?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	12	6.4	9.1	9.1
	Sometimes	14	7.4	10.6	19.7
	Yes	4	2.1	3.0	22.7
	Rarely	21	11.2	15.9	38.6
	Sub-total	51	27.1	38.6	
	Not at all	81	43.1	61.4	100.0
	Total	132	70.2	100.0	
Missing	System	56	29.8		
Total		188	100.0		

**Table 56: Do you gather puha or watercress?**

		Frequency	Percent	Cumulative Percent
Valid	Yes (V2)	1	5.9	5.9
	Yes (V3)	1	5.9	11.8
	Sub-total	2	11.8	
	No	15	88.2	100.0
Total		17	100.0	

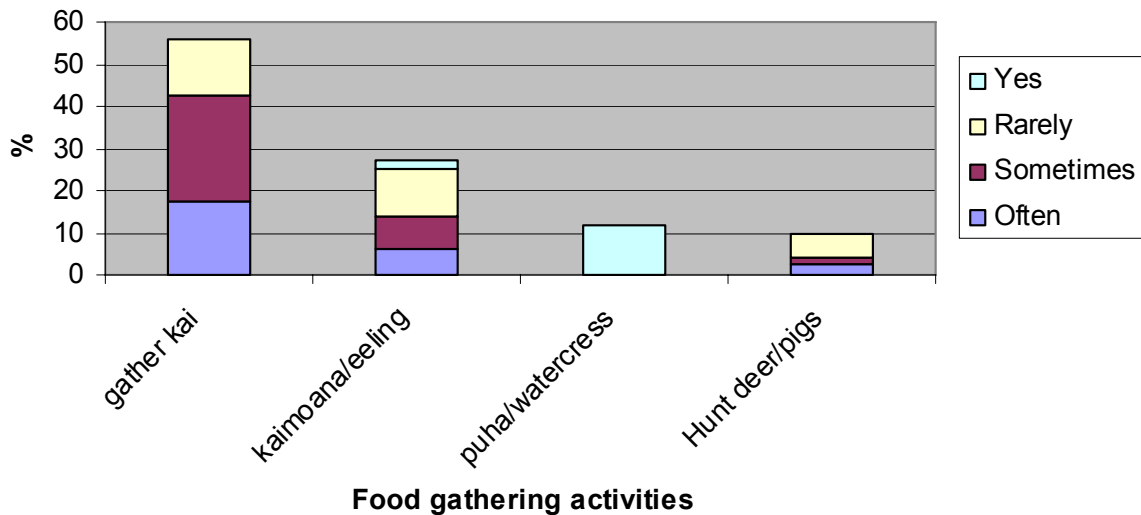
**Table 57: Do you hunt deer or pigs?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	4	2.7	3.2	3.2
	Sometimes	2	1.3	1.6	4.8
	Rarely	9	6.0	7.3	12.1
	Sub-total	15	10.0		
	Not at all	109	72.7	87.9	100.0
	Total	124	82.7	100.0	
Missing	System	26	17.3		
Total		150	100.0		

### Summary of food gathering activities

Generally, 56% of respondents are involved in some food-gathering activity. Specifically, this includes activities such as gathering kaimoana/fishing/eeling (27%), picking watercress or puha (12%) and hunting (10%). This is portrayed in **Figure 11**.

**Figure 11: Food-gathering activities of respondents**



### 3.1.8 Exercise-related activity

Respondents were asked to indicate their involvement in activities that could be considered to be exercise-related. This included exercising at home, going to exercise classes (including Tai Chi/Yoga), and using exercise machines, walking, going to the gym and running. Their responses are represented in **Tables 58 to 64.**

**Table 58: do you walk?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	75	39.9	52.8	52.8
	Sometimes	54	28.7	38.0	90.8
	Rarely	8	4.3	5.6	96.4
	Yes	4	2.1	2.8	97.9
	Sub-total	141	75.0	97.9	
	Not at all	3	1.6	2.1	100.0
	Total	144	76.6	100.0	
Missing	System	44	23.4		
Total		188	100.0		

**Table 59: do you exercise at home?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	36	19.1	24.2	24.2
	Sometimes	67	35.6	45.0	69.1
	Rarely	16	8.5	10.7	79.9
	Sub-total	104	63.2		
	Not at all	30	16.0	20.1	100.0
	Total	149	79.3	100.0	
Missing	System	39	20.7		
Total		188	100.0		

**Table 60: do you run, jog or run cross country?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	12	57.1	83.3	83.3
	no	1	4.8	16.7	100.0
	Total	13	61.9	100.0	
Missing	System	8	38.1		
Total		21	100.0		

**Table 61: do you go to the gym?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	27	18.0	21.1	21.1
	Sometimes	14	9.3	10.9	32.0
	Rarely	21	14.0	16.4	48.4
	Sub-total	62	41.3		
	Not at all	66	44.0	51.6	100.0
	Total	128	85.3	100.0	
Missing	System	22	14.7		
Total		150	100.0		

**Table 62: do you use exercise machines at home?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	18	9.6	12.5	12.5
	Sometimes	42	22.3	29.2	41.7
	Rarely	14	7.4	9.7	51.4
	Sub-total	57	39.3		
	Not at all	70	37.2	48.6	100.0
	Total	144	76.6	100.0	
Missing	System	44	23.4		
Total		188	100.0		

**Table 63: do you attend Tai Chi or Yoga classes?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	13	8.7	10.8	10.8
	Sometimes	16	10.7	13.3	24.2
	Rarely	14	9.3	11.7	35.8
	Sub-total	43	28.7		
	Not at all	77	51.3	64.2	100.0
	Total	120	80.0	100.0	
Missing	System	30	20.0		
Total		150	100.0		

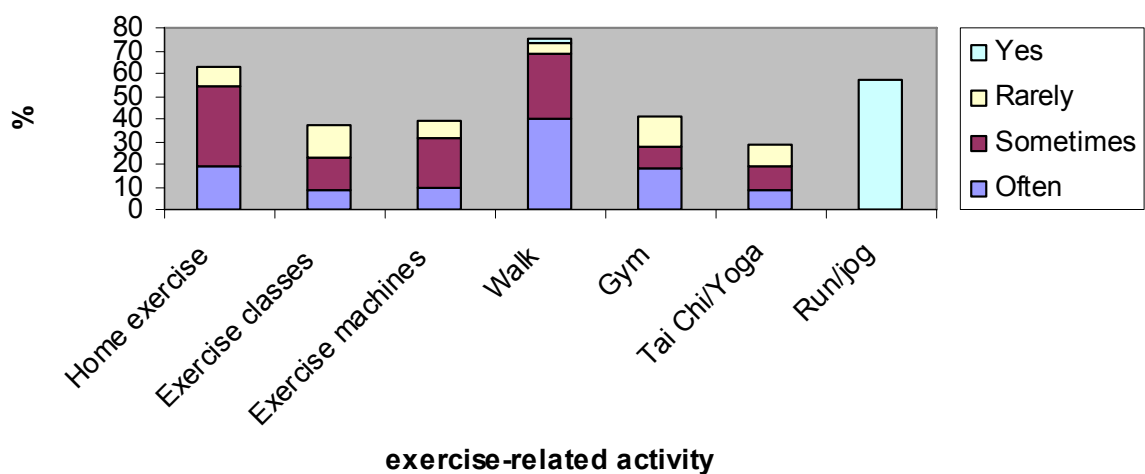
**Table 64: do you take exercise classes?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	16	8.5	11.1	11.1
	Sometimes	27	14.4	18.8	29.9
	Rarely	26	13.8	18.1	47.9
	Sub-total	69	24.7		
	Not at all	75	39.9	52.1	100.0
	Total	144	76.6	100.0	
Missing	System	44	23.4		
Total		188	100.0		

## Summary of exercise-related activity

Walking seems to be the most popular exercise-related activity with 75% of respondents indicating that they walk (2.1%) often (39.9%), sometimes (28.7%) and rarely (4.3%). Exercising at home was the next most popular exercise activity (63%), and of the small sample (n=21) asked the question of whether they run or jog, 57% responded yes. Respondents seemed to consider going the gym (41%) as slightly more preferable to using exercise machines at home (39%). Twenty eight percent of respondents took part in the moderate physical activity of Tai Chi or Yoga. A summary of the exercise-related activities of respondents is presented in **Figure 12**.

**Figure 12: Summary of exercise-related activities of respondents**



### 3.1.9 Outdoor-related activity

Activities that could be considered outdoor-related were clustered together and include swimming, yachting, horse-riding, skateboarding, surfing or body boarding, and cycling. These activities can be considered 'exercise-related' or 'sport-related' but were included in the outdoor-related cluster for the purposes of this report (see **Tables 65 to 70**).

**Table 65: do you swim?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	35	18.6	22.4	22.4
	Sometimes	68	36.2	43.6	66.0
	Rarely	20	10.6	12.8	78.8
	Sub-total	123	65.4	78.8	
	Not at all	33	17.6	21.2	100.0
	Total	156	83.0	100.0	
Missing	System	32	17.0		
Total		188	100.0		

**Table 66: do you cycle?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	22	11.7	15.5	15.5
	Sometimes	50	26.6	35.2	50.7
	Rarely	33	17.6	23.2	73.9
	Sub-total	105	55.9		
	Not at all	37	19.7	26.1	100.0
	Total	142	75.5	100.0	
Missing	System	46	24.5		
Total		188	100.0		

**Table 67: do you surf or body board?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	4	2.1	2.8	2.8
	Sometimes	28	14.9	19.4	22.2
	Rarely	20	10.6	13.9	36.1
	Sub-total	52	27.6		
	Not at all	92	48.9	63.9	100.0
	Total	144	76.6	100.0	
Missing	System	44	23.4		
Total		188	100.0		

**Table 68: do you skateboard?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	4	2.1	2.8	2.8
	Sometimes	23	12.2	16.0	18.8
	Rarely	19	10.1	13.2	31.9
	Sub-total	46	24.4		
	Not at all	98	52.1	68.1	100.0
	Total	144	76.6	100.0	
Missing	System	44	23.4		
Total		188	100.0		

**Table 69: do you horse ride?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	2	1.1	1.4	1.4
	Sometimes	20	10.6	14.0	15.4
	Rarely	19	10.1	13.3	28.7
	Sub-total	41	21.8		
	Not at all	102	54.3	71.3	100.0
	Total	143	76.1	100.0	
Missing	System	45	23.9		
Total		188	100.0		

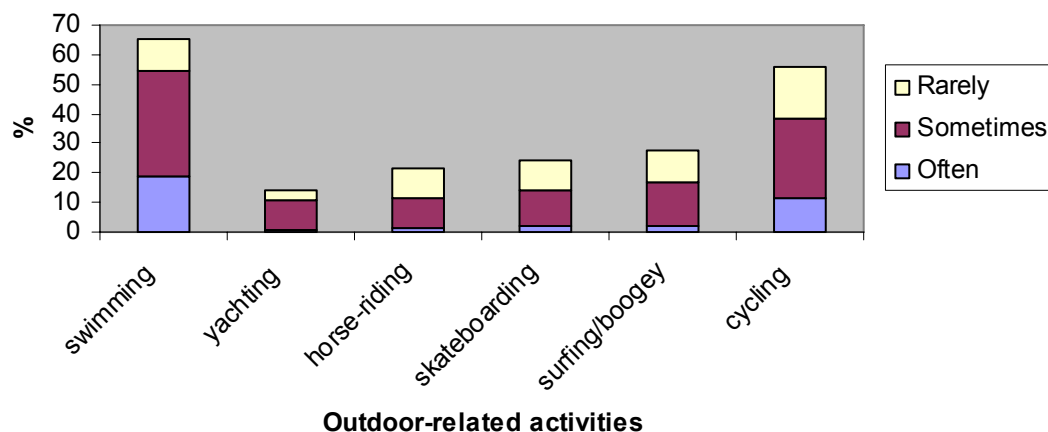
**Table 70: do you participate in yachting?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	1	.5	.7	.7
	Sometimes	20	10.6	14.5	15.2
	Rarely	5	2.7	3.6	18.8
	Sub-total	26	13.8	18.8	
	Not at all	112	59.6	81.2	100.0
	Total	138	73.4	100.0	
Missing	System	50	26.6		
Total		188	100.0		

### Summary of outdoor-related activity

Swimming (65.4%) and cycling (56%) were the most popular outdoor-related activities, followed by surfing/body boarding (27.6%) and skateboarding (24.4%). Approximately 22% of respondents participated in horse-riding to some degree, and a small percentage (13.8%) were involved in yachting. Yachting was one of the listed activities in the survey, and respondents were asked to indicate other activities they were involved in. Other activities that were mentioned in the surveys were rock climbing (n = 1) and skiing/snowboarding (n = 1). A summary of the level of involvement in outdoor-related activities of respondents is presented in **Figure 13**.

**Figure 13: Summary of outdoor-related activities of respondents**





### 3.1.10 Physical Activity Motives

In the Life in New Zealand Survey (1991), Tainui Survey (1992), Omangia te Oma Roa Report (1995), Māori Facts, SPARC (2001) and Obstacles to Action Surveys (2005), several motives for Māori to be physically active were identified.

These motives included being part of a team, the physical and contact aspects of certain sports, competition, enjoyment and fitness and health (Rewi, 1992). Health and fitness was also identified to be a motivating factor for 39% of the men and 35% of the women in the SPARC surveys (2001).

Other enablers or motives for physical activity included greater encouragement and support at a younger age and post secondary school, reduced costs, more advertising and publicity, a comfortable and safe environment, accessibility, achievable levels of activity, emphasis on participation and fun, as well as greater Māori presence and events run by Māori for Māori (Te Puni Kōkiri, 1995).

According to the Obstacles to Action survey (2003), 12% of Māori surveyed were 'others-oriented' and 16% were 'support-seekers'. Others-oriented tended to have the strongest extrinsic motivation for physical activity (e.g., because my family wants me to, because I want others to approve of me) and were discouraged by others or put off by environmental barriers (e.g., cost, access to facilities difficult, no one to do physical activity with). Support-seekers tended to know that inactivity was bad for their health, but becoming active was not a priority for many. In addition, 99% of support-seekers said they did not get enough encouragement.

**Tables 71 to 90** summarise the motives of respondents for physical activity. These can be broken into 4 general areas which are: a) health and family motives, b) intrinsic motives, c) avoidance and necessity motives, and d) others-oriented motives.

a) **Health and whānau/family motives**

Respondents agreed the most (from 86% to 79%) with statements that related to health and family/whānau (see **Tables 71 to 75**).

**Table 71: When I am physically active it is because it helps me to feel mentally and emotionally healthy**

Mental and emotional health		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	79	50.6	57.2	57.2
	Strongly agree	25	16.0	18.1	75.3
	Agree	15	9.6	10.9	<b>86.2</b>
	Neutral	16	10.2	11.6	97.8
	Very strongly disagree	3	1.9	2.2	100.0
	Total	138	88.5	100.0	
Missing	System	18	11.5		
Total		156	100.0		

**Table 72: When I am physically active it is because I like being active with friends/whānau**

Like being with friends and whānau		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	84	56.0	65.1	65.1
	Strongly agree	13	8.7	10.1	75.2
	Agree	11	7.3	8.5	<b>83.7</b>
	Neutral	11	7.3	8.5	92.2
	Disagree	6	4.0	4.7	96.9
	Strongly disagree	2	1.3	1.6	98.4
	Very strongly disagree	2	1.3	1.6	100.0
	Total	129	86.0	100.0	
Missing	System	21	14.0		
Total		150	100.0		

**Table 73: When I am physically active it is because it is good for my overall health**

<b>Good for my overall health</b>		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	103	54.8	62.8	62.8
	Strongly agree	17	9.0	10.4	73.2
	Agree	16	8.5	9.8	<b>82.9</b>
	Neutral	7	3.7	4.3	87.2
	Disagree	9	4.8	5.5	92.7
	Strongly disagree	2	1.1	1.2	93.9
	Very strongly disagree	10	5.3	6.1	100.0
	Total	164	87.2	100.0	
Missing	System	24	12.8		
Total		188	100.0		

**Table 74: When I am physically active it is because I want to take responsibility for my own health**

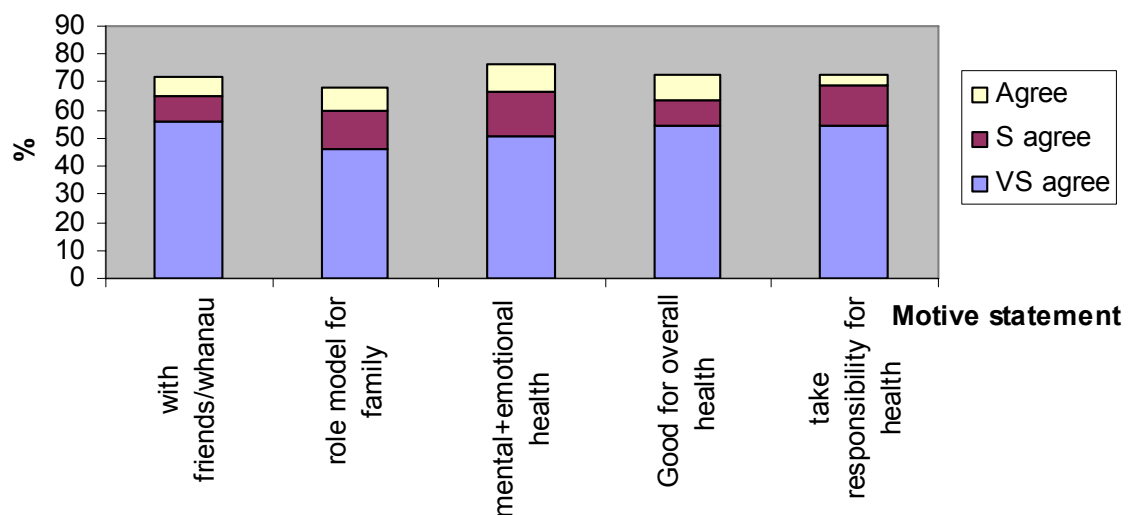
<b>Take responsibility for own health</b>		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	103	54.8	61.7	61.7
	Strongly agree	27	14.4	16.2	77.8
	Agree	7	3.7	4.2	<b>82.0</b>
	Neutral	11	5.9	6.6	88.6
	Disagree	4	2.1	2.4	91.0
	Strongly disagree	3	1.6	1.8	92.8
	Very strongly disagree	12	6.4	7.2	100.0
	Total	167	88.8	100.0	
Missing	System	21	11.2		
Total		188	100.0		

**Table 75: When I am physically active it is because I want to be a good role model for my family**

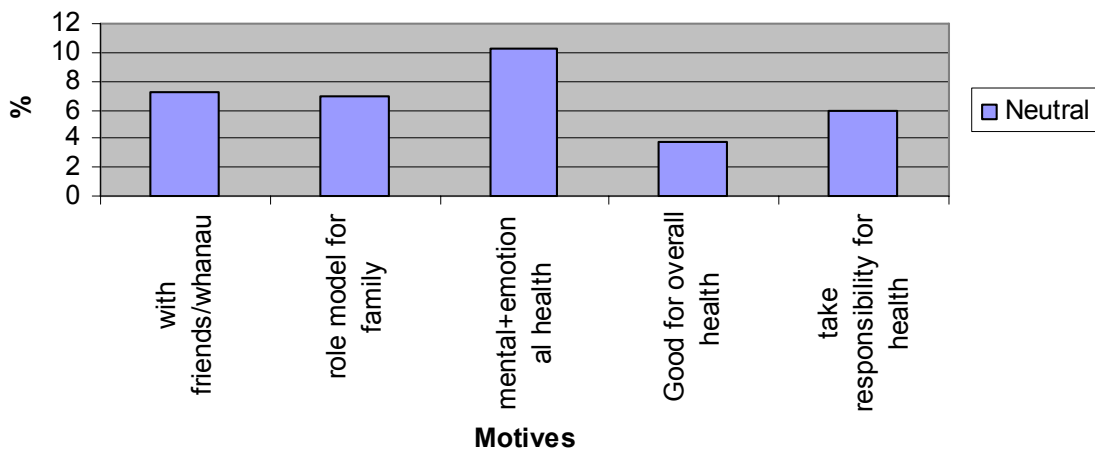
Good role model for my family		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	87	46.3	53.7	53.7
	Strongly agree	26	13.8	16.0	69.8
	Agree	15	8.0	9.3	<b>79.0</b>
	Neutral	13	6.9	8.0	87.0
	Disagree	6	3.2	3.7	90.7
	Strongly disagree	7	3.7	4.3	95.1
	Very strongly disagree	8	4.3	4.9	100.0
	Total	162	86.2	100.0	
Missing	System	26	13.8		
Total		188	100.0		

The number of respondents agreeing, being neutral, or disagreeing with the statements that are classified as ‘health and family/whānau’ focused motives are represented visually in **Figures 14 to 16**.

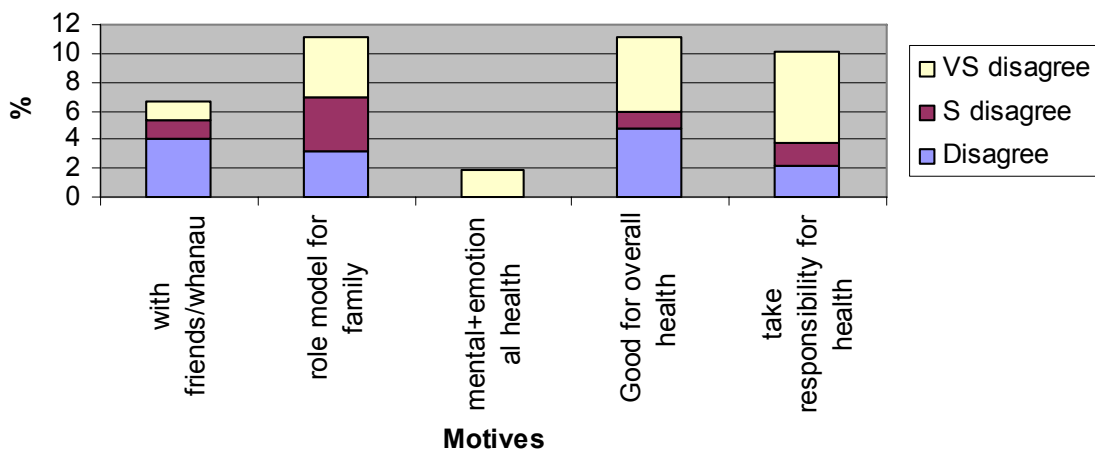
**Figure 14: Summary of positive responses to health & family motives**



**Figure 15: Summary of neutral responses to health/family motives**



**Figure 16: Summary of negative responses to health & family motives**



#### **b) Intrinsic motives**

Intrinsic motives such as enjoyment, challenge, important choice, keeping in shape, competition, and achievement of goals were the next group of motives that respondents tended to agree with (from 78% to 63%). These percentages are presented in **Tables 76 to 81**.

**Table 76: Physically active because of enjoyment**

I enjoy physical activity		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	85	45.2	51.2	51.2
	Strongly agree	20	10.6	12.0	63.3
	Agree	25	13.3	15.1	<b>78.3</b>
	Neutral	20	10.6	12.0	90.4
	Disagree	9	4.8	5.4	95.8
	Strongly disagree	2	1.1	1.2	97.0
	Very strongly disagree	5	2.7	3.0	100.0
	Total	166	88.3	100.0	
Missing	System	22	11.7		
Total		188	100.0		

**Table 77: When I am physically active it is because of the challenge**

I like the personal challenge		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	65	43.3	49.6	49.6
	Strongly agree	24	16.0	18.3	67.9
	Agree	13	8.7	9.9	<b>77.9</b>
	Neutral	20	13.3	15.3	93.1
	Disagree	4	2.7	3.1	96.2
	Strongly disagree	5	3.3	3.8	100.0
	Total	131	87.3	100.0	
Missing	System	19	12.7		
Total		150	100.0		

**Table 78: Physically active because it is an important choice**

It is an important choice I want to make		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	64	34.0	41.6	41.6
	Strongly agree	30	16.0	19.5	61.0
	Agree	19	10.1	12.3	<b>73.4</b>
	Neutral	26	13.8	16.9	90.3
	Disagree	4	2.1	2.6	92.9
	Strongly disagree	4	2.1	2.6	95.5
	Very strongly disagree	7	3.7	4.5	100.0
	Total	154	81.9	100.0	
Missing	System	34	18.1		
Total		188	100.0		

**Table 79: When I am physically active it is because I want to be in shape**

<b>I care about keeping in shape</b>		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	70	37.2	42.4	42.4
	Strongly agree	23	12.2	13.9	56.4
	Agree	17	9.0	10.3	<b>66.7</b>
	Neutral	33	17.6	20.0	86.7
	Disagree	7	3.7	4.2	90.9
	Strongly disagree	6	3.2	3.6	94.5
	Very strongly disagree	9	4.8	5.5	100.0
	Total	165	87.8	100.0	
Missing	System	23	12.2		
Total		188	100.0		

**Table 80: When I am physically active it is because I'm competitive**

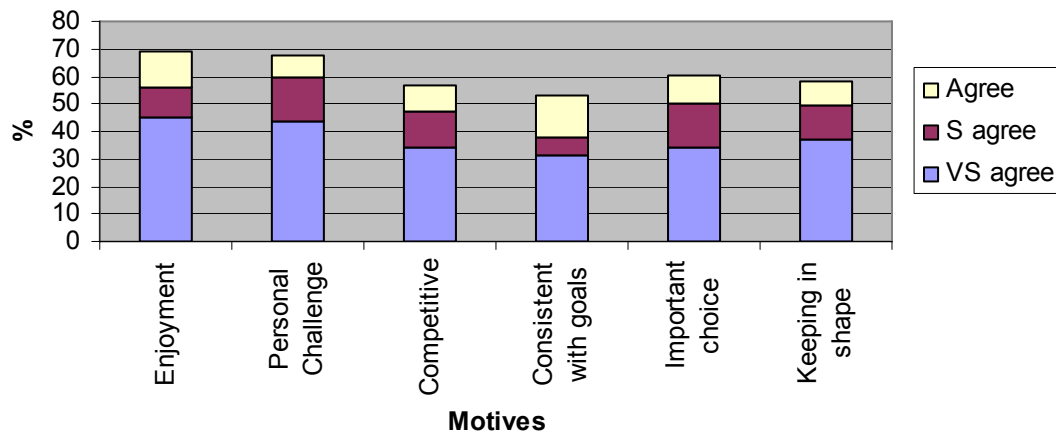
<b>Like being competitive</b>		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	51	34.0	39.8	39.8
	Strongly agree	20	13.3	15.6	55.5
	Agree	14	9.3	10.9	<b>66.4</b>
	Neutral	18	12.0	14.1	80.5
	Disagree	7	4.7	5.5	85.9
	Strongly disagree	4	2.7	3.1	89.1
	Very strongly disagree	14	9.3	10.9	100.0
	Total	128	85.3	100.0	
Missing	System	22	14.7		
Total		150	100.0		

**Table 81: I am physically active because it is consistent with my goals**

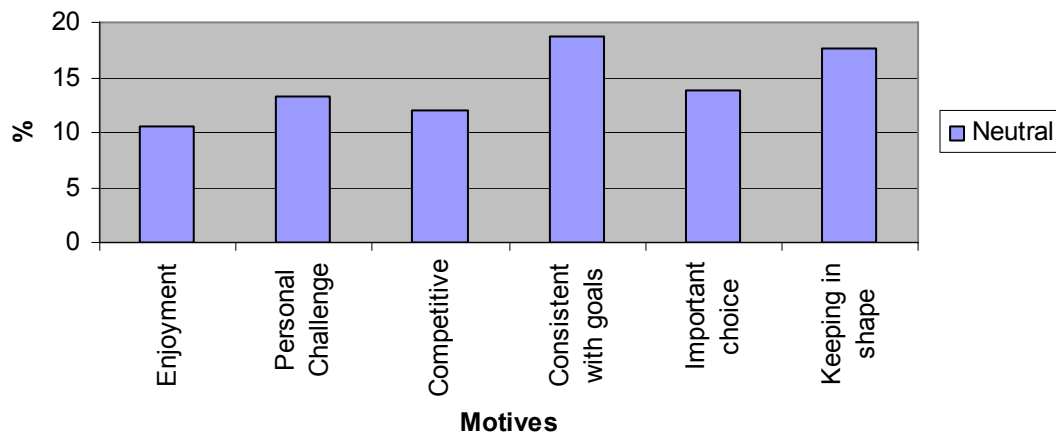
<b>Consistent with my goals</b>		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	10	31.3	37.0	37.0
	Strongly agree	2	6.2	7.4	44.4
	Agree	5	15.6	18.5	<b>62.9</b>
	Neutral	6	18.8	22.3	85.2
	Disagree	2	6.2	7.4	92.6
	Strongly disagree	2	6.2	7.4	100.0
	Total	27	84.4	100.0	
Missing	System	5	15.6		
Total		32	100.0		

The number of respondents agreeing with, being neutral, or disagreeing with the statements that are classified as intrinsic-focused motives are represented visually in **Figures 17 to 19**.

**Figure 17: Summary of positive responses to intrinsic motives**

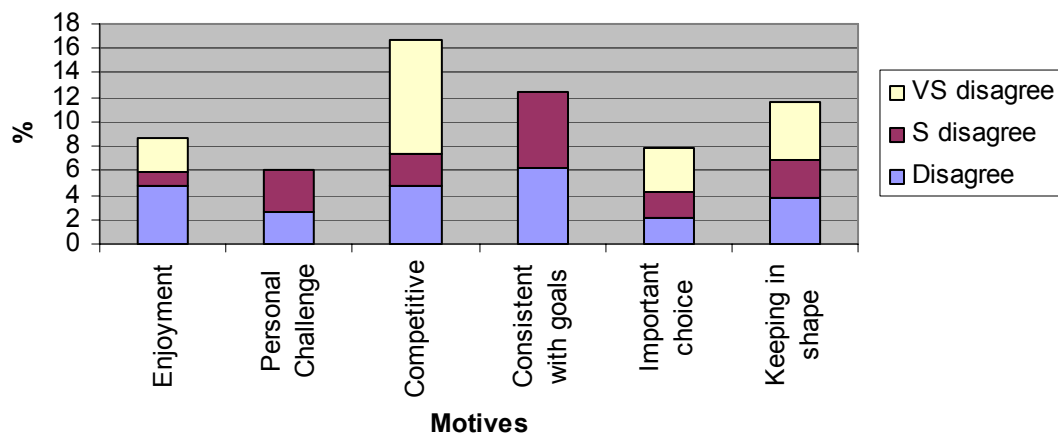


**Figure 18: Summary of neutral responses to intrinsic motives**





**Figure 19: Summary of negative responses to intrinsic motives**



**c) Avoidance and necessity motives**

The next set of motives that respondents tended to agree with were categorised under 'avoidance and no choice' motives (from 57% to 48%). These motives were associated with being driven to avoid ill-health and shame/guilt, and because it was a part or necessity of their work/career. See **Tables 82 to 84** for a summary of these percentages.

**Table 82: When I am physically active it is because not doing so puts my health at serious risk**

Serious health risk if I don't		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	58	30.9	36.0	36.0
	Strongly agree	19	10.1	11.8	47.8
	Agree	15	8.0	9.3	<b>57.1</b>
	Neutral	30	16.0	18.6	75.8
	Disagree	10	5.3	6.2	82.0
	Strongly disagree	6	3.2	3.7	85.7
	Very strongly disagree	23	12.2	14.3	100.0
	Total	161	85.6	100.0	
Missing	System	27	14.4		
Total		188	100.0		

**Table 83: When I am physically active it is because it is part of my job to be active**

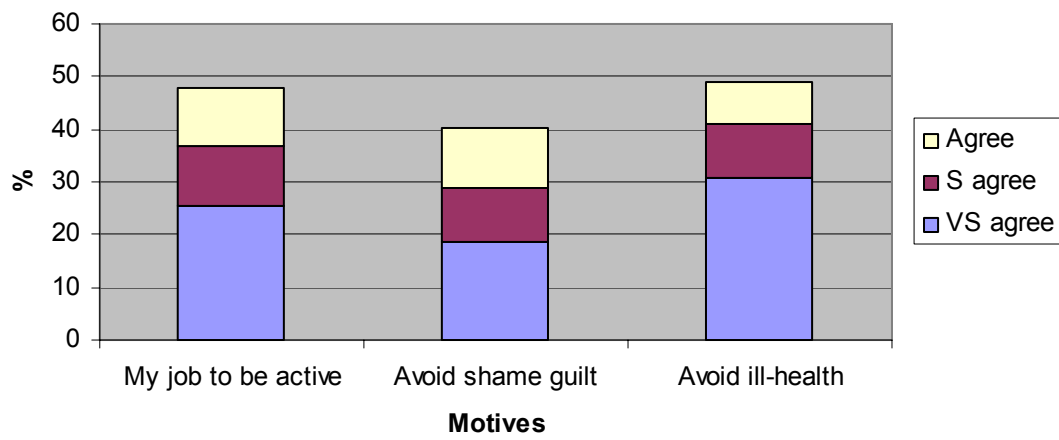
Part of job		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	48	25.5	29.4	29.4
	Strongly agree	21	11.2	12.9	42.3
	Agree	21	11.2	12.9	<b>55.2</b>
	Neutral	36	19.1	22.1	77.3
	Disagree	10	5.3	6.1	83.4
	Strongly disagree	6	3.2	3.7	87.1
	Very strongly disagree	21	11.2	12.9	100.0
	Total	163	86.7	100.0	
Missing	System	25	13.3		
Total		188	100.0		

**Table 84: When I am physically active it is to avoid shame or guilt**

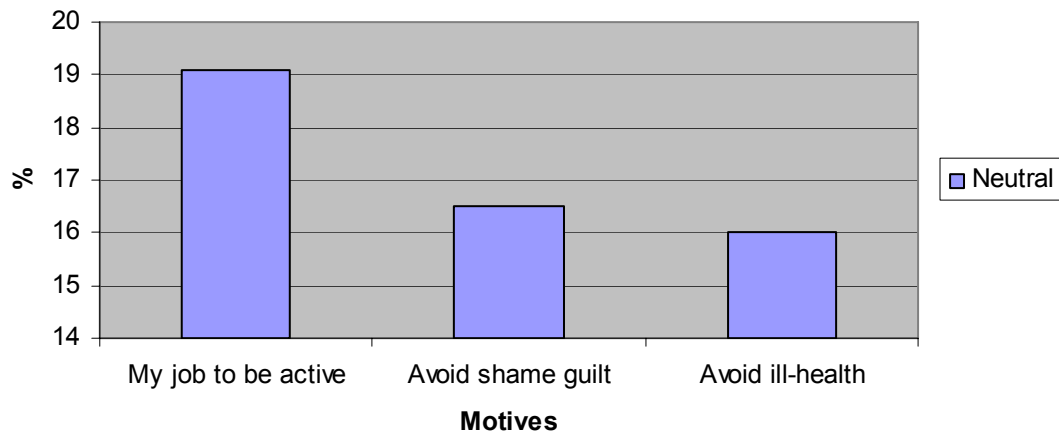
I'd feel guilty or ashamed if I didn't		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.5	.6	.6
	Very strongly agree	35	18.6	22.0	22.6
	Strongly agree	19	10.1	11.9	34.6
	Agree	22	11.7	13.8	<b>48.4</b>
	Neutral	31	16.5	19.5	67.9
	Disagree	10	5.3	6.3	74.2
	Strongly disagree	10	5.3	6.3	80.5
	Very strongly disagree	31	16.5	19.5	100.0
	Total	159	84.6	100.0	
Missing	System	29	15.4		
Total		188	100.0		

The number of respondents agreeing with, being neutral, or disagreeing with the statements that are classified as avoidance or necessity motives are represented visually in **Figures 20 to 22**.

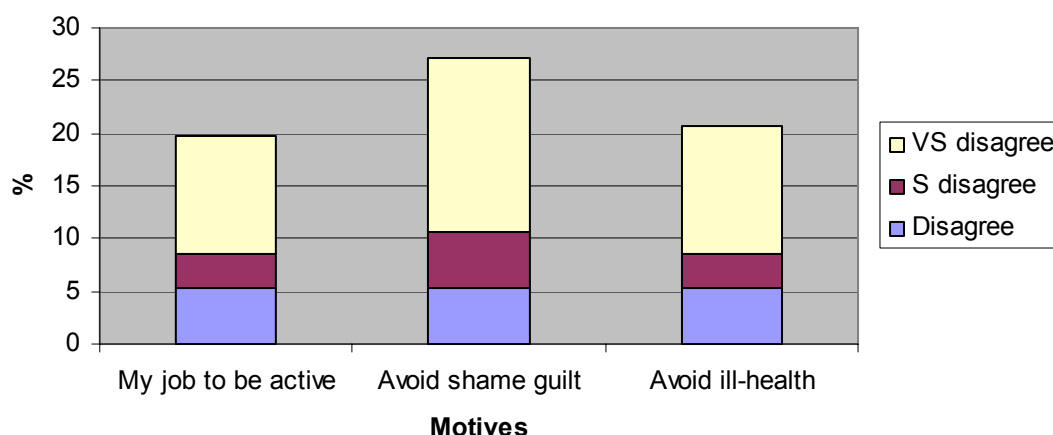
**Figure 20: Summary of positive responses to avoidance/necessity motives**



**Figure 21: Summary of neutral responses to avoidance/necessity motives**



**Figure 22: Summary of negative responses to avoidance/necessity motives**



**d) Others-oriented motives**

The collection of statements that had the lowest percentage of respondents agreeing with them, were those that could be associated with 'others-oriented'. The percentage of respondents agreeing with these statements ranged from 43% to 25% (see **Tables 85 to 90**). These motives included not wanting to let down (43%), or upset (32%) others, wanting to show others they can do it (40%), feeling pressure from others (30%), wanting approval (25%), or because the dog needs exercise (36%).

**Table 85: When I am physically active it is because I don't want to let others down**

Let others down		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	23	15.3	18.5	18.5
	Strongly agree	16	10.7	12.9	31.5
	Agree	15	10.0	12.1	<b>43.5</b>
	Neutral	26	17.3	21.0	64.5
	Disagree	6	4.0	4.8	69.4
	Strongly disagree	7	4.7	5.6	75.0
	Very strongly disagree	31	20.7	25.0	100.0
	Total	124	82.7	100.0	
Missing	System	26	17.3		
Total		150	100.0		

**Table 86: When I am physically active it is because I want others to see I can do it**

I want others to see I can do it		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	35	18.6	22.0	22.0
	Strongly agree	14	7.4	8.8	30.8
	Agree	15	8.0	9.4	<b>40.3</b>
	Neutral	32	17.0	20.1	60.4
	Disagree	10	5.3	6.3	66.7
	Strongly disagree	12	6.4	7.5	74.2
	Very strongly disagree	41	21.8	25.8	100.0
	Total	159	84.6	100.0	
Missing	System	29	15.4		
Total		188	100.0		

**Table 87: When I am physically active it is because it is important to me that my dog gets enough exercise**

dog gets enough exercise		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	32	17.0	22.9	22.9
	Strongly agree	10	5.3	7.1	30.0
	Agree	9	4.8	6.4	<b>36.4</b>
	Neutral	34	18.1	24.3	60.7
	Disagree	6	3.2	4.3	65.0
	Strongly disagree	4	2.1	2.9	67.9
	Very strongly disagree	44	23.4	31.4	99.3
	Not applicable	1	.5	.7	100.0
	Total	140	74.5	100.0	
Missing	System	48	25.5		
Total		188	100.0		

**Table 88: When I am physically active it is because others would be upset with me if I didn't**

Others would be upset if I didn't		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	22	11.7	13.8	13.8
	Strongly agree	9	4.8	5.7	19.5
	Agree	20	10.6	12.6	<b>32.1</b>
	Neutral	39	20.7	24.5	56.6
	Disagree	9	4.8	5.7	62.3
	Strongly disagree	11	5.9	6.9	69.2
	Very strongly disagree	49	26.1	30.8	100.0
	Total	159	84.6	100.0	
Missing	System	29	15.4		
Total		188	100.0		

**Table 89: When I am physically active it is because I feel pressure from others to be physically active**

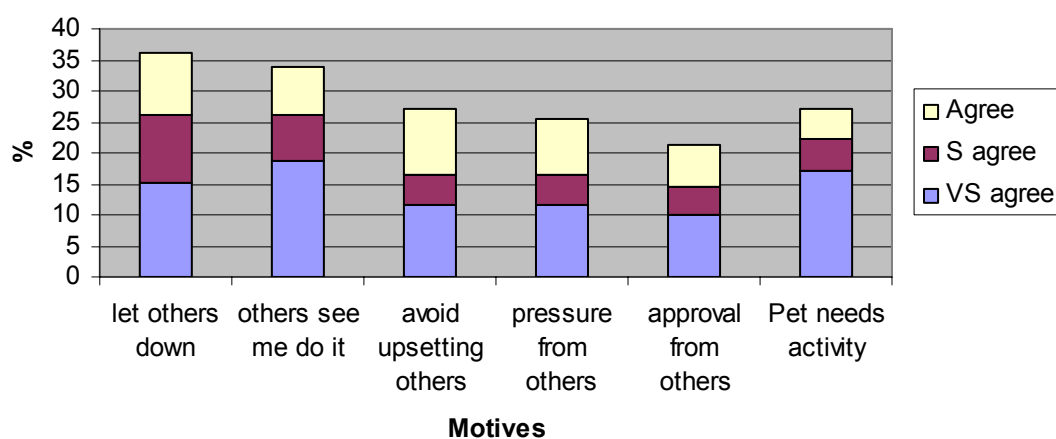
Pressure from others to be more active		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	22	11.7	13.7	13.7
	Strongly agree	9	4.8	5.6	19.3
	Agree	17	9.0	10.6	<b>29.8</b>
	Neutral	34	18.1	21.1	50.9
	Disagree	13	6.9	8.1	59.0
	Strongly disagree	8	4.3	5.0	64.0
	Very strongly disagree	58	30.9	36.0	100.0
	Total	161	85.6	100.0	
Missing	System	27	14.4		
Total		188	100.0		

**Table 90: When I am physically active it is because I want others to approve of me**

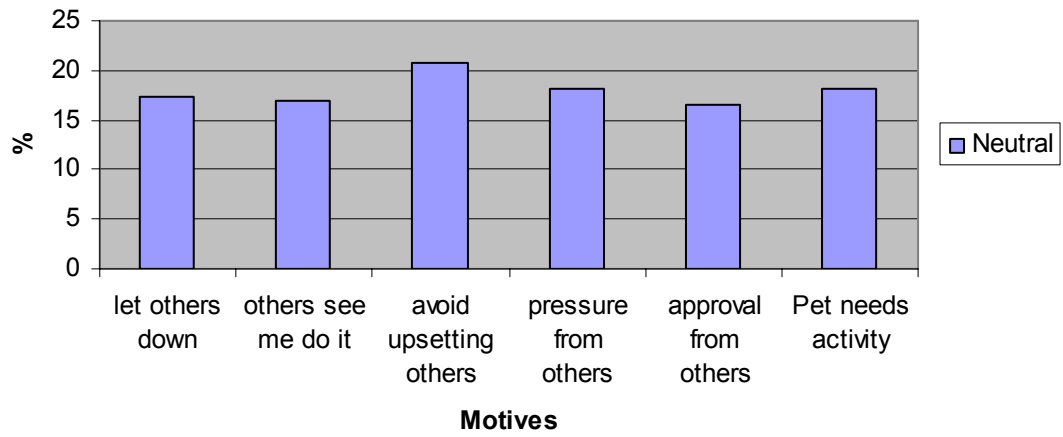
I want others to approve of me		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very strongly agree	19	10.1	11.9	11.9
	Strongly agree	8	4.3	5.0	17.0
	Agree	13	6.9	8.2	<b>25.2</b>
	Neutral	31	16.5	19.5	44.7
	Disagree	12	6.4	7.5	52.2
	Strongly disagree	16	8.5	10.1	62.3
	Very strongly disagree	60	31.9	37.7	100.0
	Total	159	84.6	100.0	
Missing	System	29	15.4		
Total		188	100.0		

The number of respondents agreeing with, being neutral, or disagreeing with the statements that are classified as others-oriented motives are represented visually in **Figures 23 to 25**.

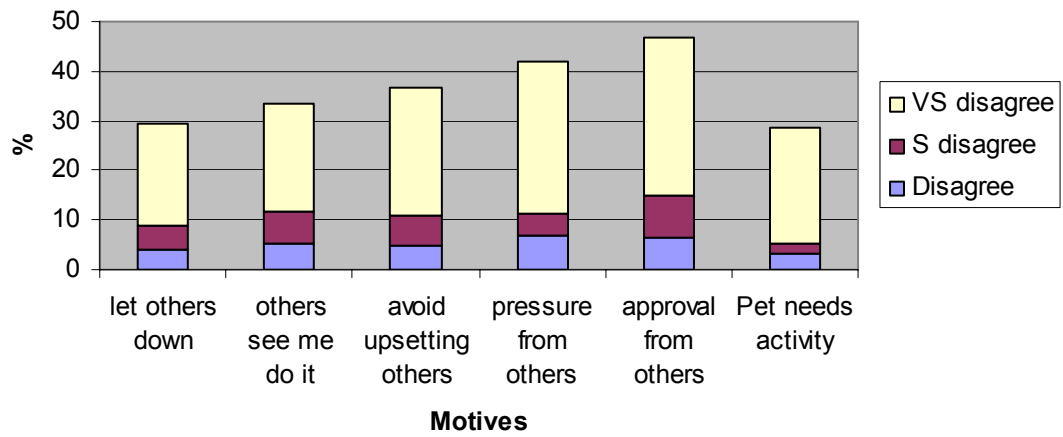
**Figure 23: Summary of positive responses to others-oriented motives**



**Figure 24: Summary of neutral responses to others-oriented motives**

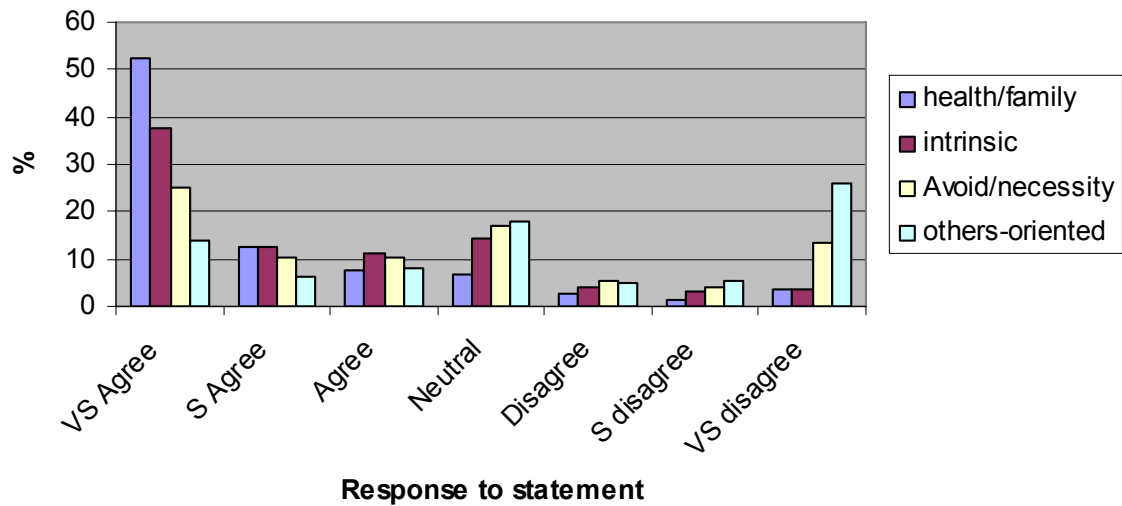


**Figure 25: Summary of negative responses to others-oriented motives**





**Figure 26: Summary of responses across motive groups**



### Summary of physical activity motives

**Figure 26** summarises the average range of responses (from strongly agree to strongly disagree) across four motive groups. Respondents very strongly agreed with motive statements associated with health/family and intrinsic motives, and very strongly disagreed with motive statements associated with avoidance/necessity motives and others-oriented motives.

### 3.1.11 Awareness and use of Community Facilities

The survey also tried to what community facilities respondents used currently, and whether they would consider using these facilities in the future if they were provided. Responses to these questions are presented in **Tables 91 to 110**.

Approximately 76% of respondents stated that they used facilities/venues that were associated with water (e.g., swimming pools, beach, river, etc). When asked if they would use this facility if it were available in the community, 48% stated that they would. A summary of these responses is given in **Figure 27**

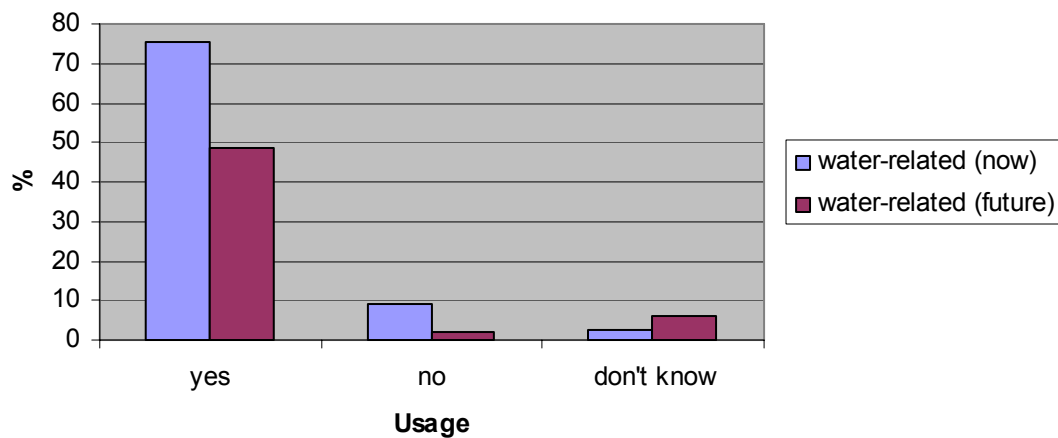
**Table 91: Do you use swimming pools, beach etc?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	142	<b>75.5</b>	86.6	86.6
	No	17	9.0	10.4	97.0
	Don't Know	5	2.7	3.0	100.0
	Total	164	87.2	100.0	
Missing	System	24	12.8		
Total		188	100.0		

**Table 92: Would you use swimming pool, beach etc?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	91	<b>48.4</b>	85.8	85.8
	No	4	2.1	3.8	89.6
	Don't Know	11	5.9	10.4	100.0
	Total	106	56.4	100.0	
Missing	System	82	43.6		
Total		188	100.0		

**Figure 27: Use of water-related facilities now and potentially**



The next most popular facility to currently be used by respondents was public parks with playing fields. Approximately 72% used these facilities now, and approximately 45% said that they would possibly use them in the future. A summary of the use of public parks with playing fields is provided in **Figure 28**.

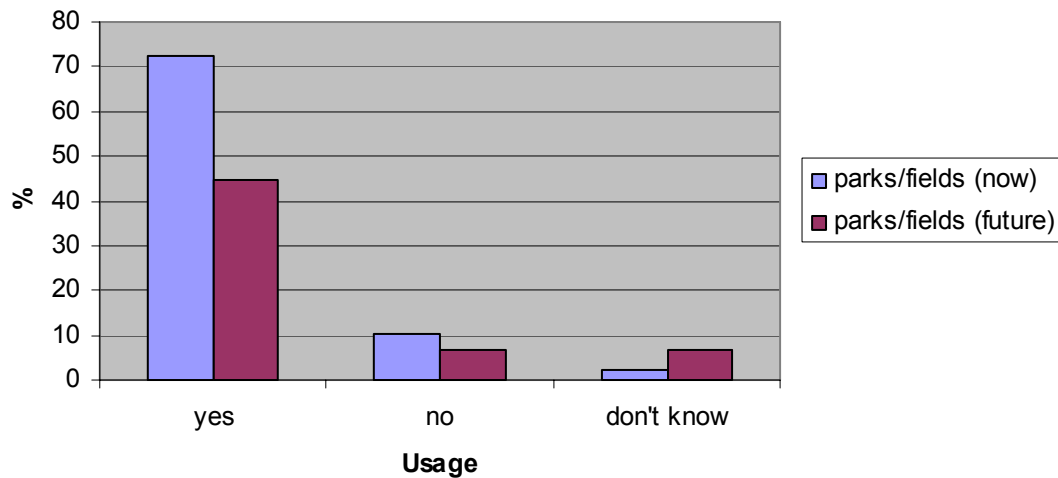
**Table 93: Do you use public parks with playing fields?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	136	<b>72.3</b>	85.5	85.5
	No	19	10.1	11.9	97.5
	Don't Know	4	2.1	2.5	100.0
	Total	159	84.6	100.0	
Missing	System	29	15.4		
Total		188	100.0		

**Table 94: Would you use public parks with playing fields?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	84	<b>44.7</b>	76.4	76.4
	No	13	6.9	11.8	88.2
	Don't Know	13	6.9	11.8	100.0
	Total	110	58.5	100.0	
Missing	System	78	41.5		
Total		188	100.0		

**Figure 28: Use of parks/fields now and in future**



Netball/basketball/tennis courts were used by approximately 57% of the respondents now, and would be used by approximately 36% in the future. A summary of the usage of these court facilities is presented in **Figure 29**.

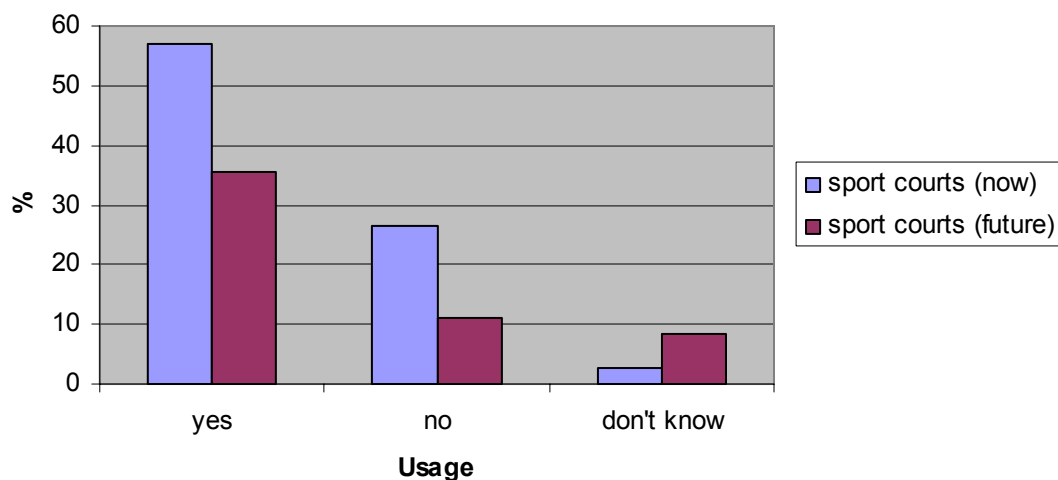
**Table 95: Do you use netball/basketball or tennis courts?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	107	<b>56.9</b>	66.0	66.0
	No	50	26.6	30.9	96.9
	Don't Know	5	2.7	3.1	100.0
	Total	162	86.2	100.0	
Missing	System	26	13.8		
Total		188	100.0		

**Table 96: Would you use netball/basketball or tennis courts?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	67	<b>35.6</b>	64.4	64.4
	No	21	11.2	20.2	84.6
	Don't Know	16	8.5	15.4	100.0
	Total	104	55.3	100.0	
Missing	System	84	44.7		
Total		188	100.0		

**Figure 29: Use of courts now and in future**



According to 52% of the respondents, they currently use historical walking tracks, and 50.5% said they would use these tracks if they were available. Refer to **Figure 30** for a visual presentation of these responses to the use of historical walking tracks.

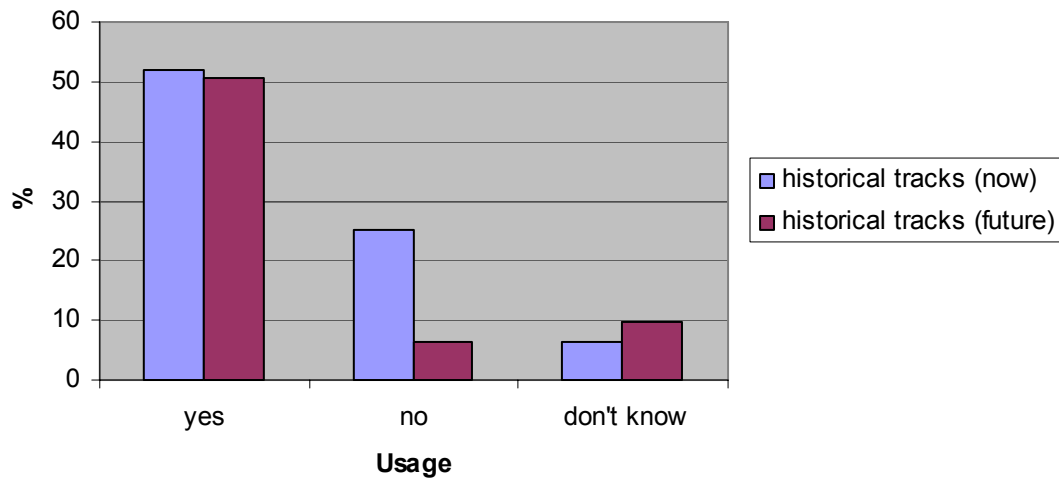
**Table 97: Do you walk historical tracks?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	98	<b>52.1</b>	62.4	62.4
	No	47	25.0	29.9	92.4
	Don't Know	12	6.4	7.6	100.0
	Total	157	83.5	100.0	
Missing	System	31	16.5		
Total		188	100.0		

**Table 98: Would you use walking/historical tracks?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	95	<b>50.5</b>	76.0	76.0
	No	12	6.4	9.6	85.6
	Don't Know	18	9.6	14.4	100.0
	Total	125	66.5	100.0	
Missing	System	63	33.5		
Total		188	100.0		

**Figure 30: Use of walking tracks now and in future**



According to **Tables 99 and 100**, 44% of the respondents currently use cycle lanes, and 36% would use them if they were available in the community. These percentages are represented visually in **Figure 31**.

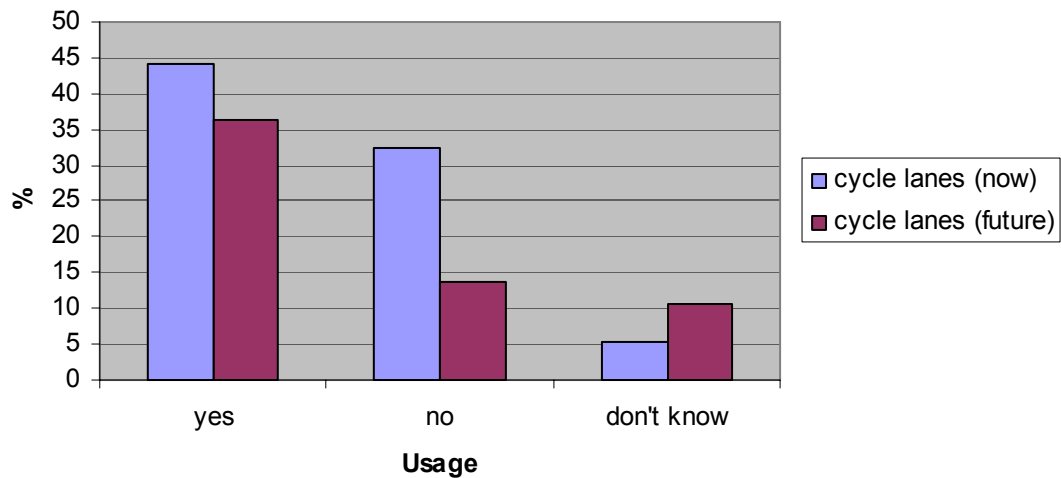
**Table 99: Do you use cycle lanes or paths?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	83	<b>44.1</b>	53.9	53.9
	No	61	32.4	39.6	93.5
	Don't Know	10	5.3	6.5	100.0
	Total	154	81.9	100.0	
Missing	System	34	18.1		
Total		188	100.0		

**Table 100: Would you use cycle lanes or paths?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	68	<b>36.2</b>	59.6	59.6
	No	26	13.8	22.8	82.5
	Don't Know	20	10.6	17.5	100.0
	Total	114	60.6	100.0	
Missing	System	74	39.4		
Total		188	100.0		

**Figure 31: Use of cycle lanes now and in future**



Approximately 44% of respondents said that they currently played social sports (i.e., no training) and approximately 33% said that they would play social sports if they were available in the community. This information is presented visually in **Figure 32**.

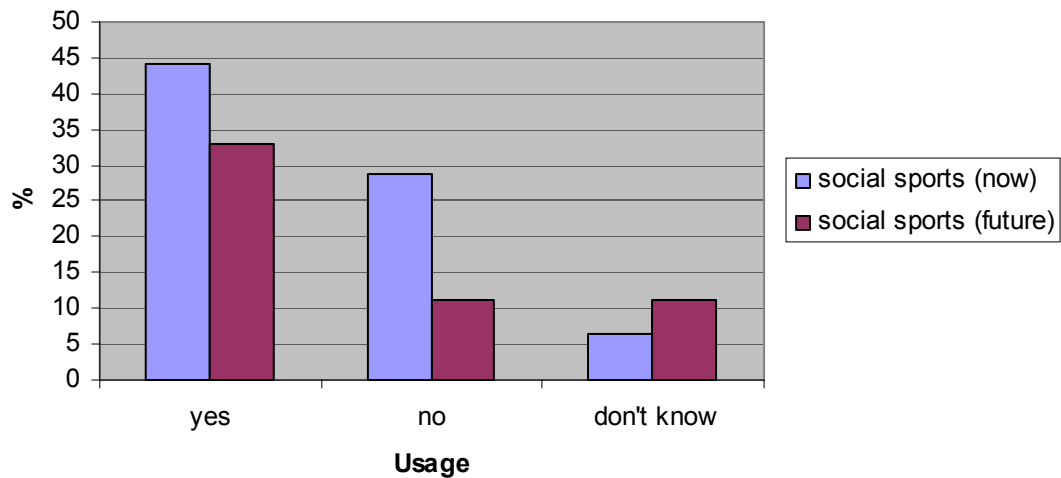
**Table 101: Do you play social sports with no training?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	83	44.1	55.7	55.7
	No	54	28.7	36.2	91.9
	Don't Know	12	6.4	8.1	100.0
	Total	149	79.3	100.0	
Missing	System	39	20.7		
Total		188	100.0		

**Table 102: Would you play social sports with no training?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	62	33.0	59.6	59.6
	No	21	11.2	20.2	79.8
	Don't Know	21	11.2	20.2	100.0
	Total	104	55.3	100.0	
Missing	System	84	44.7		
Total		188	100.0		

**Figure 32: Use of social sports now and in future**



According to **Tables 103 and 104**, approximately 40% of respondents play seasonal organised sport (i.e., with trainings), and approximately 35% would play seasonal sports if they were available in the community. See **Figure 33** for a visual presentation of these responses.

**Table 103: Do you play seasonal sports with trainings?**

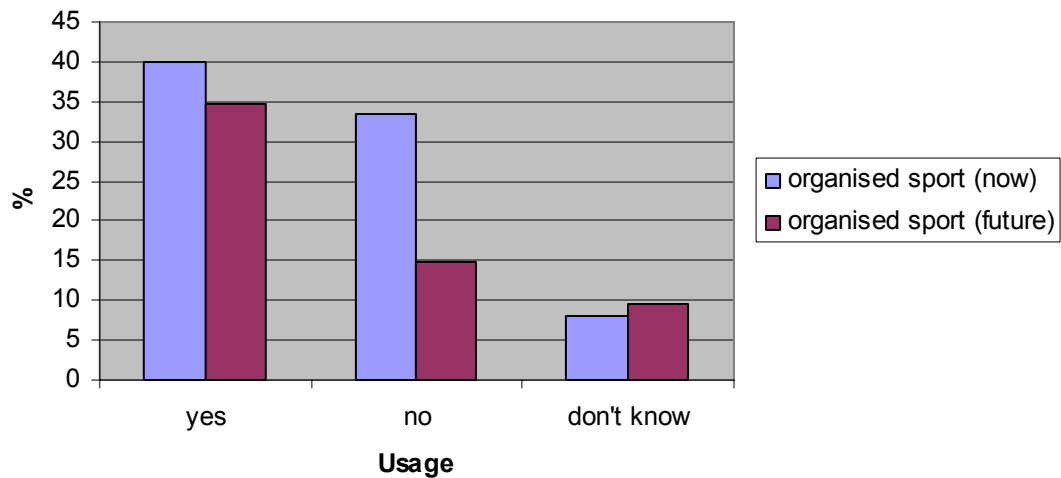
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	75	<b>39.9</b>	49.0	49.0
	No	63	33.5	41.2	90.2
	Don't Know	15	8.0	9.8	100.0
	Total	153	81.4	100.0	
Missing	System	35	18.6		
Total		188	100.0		

**Table 104: Would you play seasonal sports with trainings?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	65	<b>34.6</b>	58.6	58.6
	No	28	14.9	25.2	83.8
	Don't Know	18	9.6	16.2	100.0
	Total	111	59.0	100.0	
Missing	System	77	41.0		
Total		188	100.0		



**Figure 33: Use of organised sport now and in future**



Approximately 37% of respondents used the community hall or recreation centre currently, and approximately 34% would use it if it were available in the community. **Figure 34** represents this information in summary form.

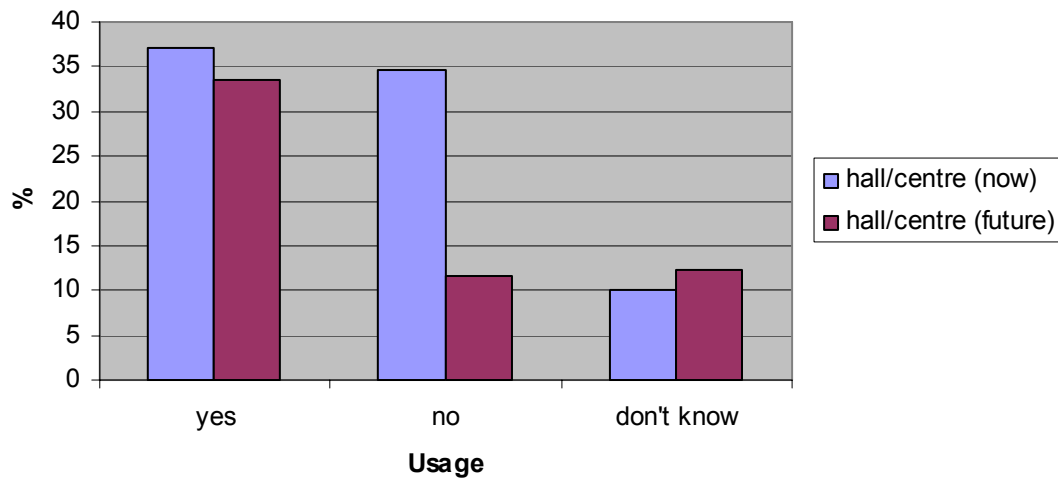
**Table 105: Do you use the community hall or recreation centre?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	70	<b>37.2</b>	45.5	45.5
	No	65	34.6	42.2	87.7
	Don't Know	19	10.1	12.3	100.0
	Total	154	81.9	100.0	
Missing	System	34	18.1		
Total		188	100.0		

**Table 106: Would you use the community hall or recreation centre?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	63	<b>33.5</b>	58.3	58.3
	No	22	11.7	20.4	78.7
	Don't Know	23	12.2	21.3	100.0
	Total	108	57.4	100.0	
Missing	System	80	42.6		
Total		188	100.0		

**Figure 34: Use of halls now and in future**



Approximately 35% of respondents currently use home exercise equipment and 45% said that they would use home exercise equipment. **Figure 35** represents these responses in visual form.

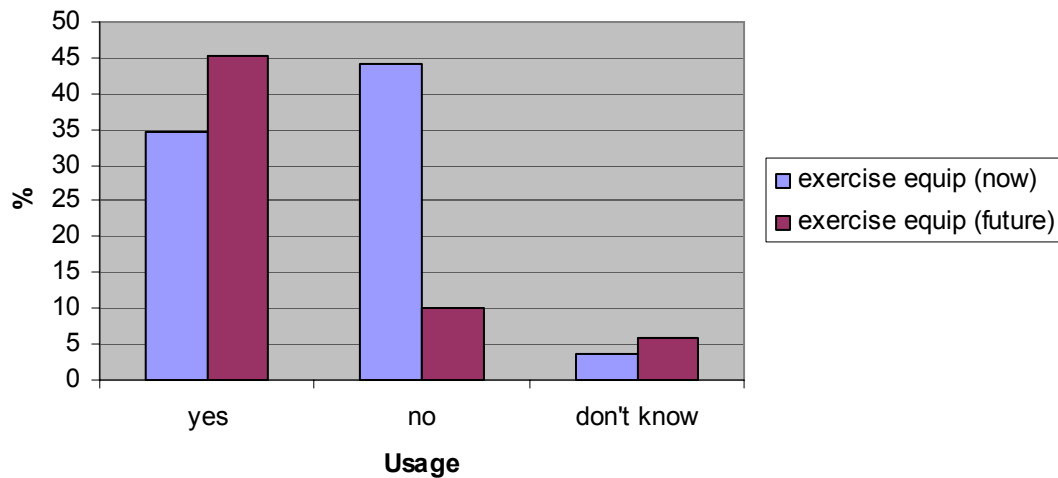
**Table 107: Do you use home exercise equipment?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	65	<b>34.6</b>	41.9	41.9
	No	83	44.1	53.5	95.5
	Don't Know	7	3.7	4.5	100.0
	Total	155	82.4	100.0	
Missing	System	33	17.6		
Total		188	100.0		

**Table 108: Would you use home exercise equipment?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	85	<b>45.2</b>	73.9	73.9
	No	19	10.1	16.5	90.4
	Don't Know	11	5.9	9.6	100.0
	Total	115	61.2	100.0	
Missing	System	73	38.8		
Total		188	100.0		

**Figure 35: Use of exercise equipment now and in future**



According to 32.7% of respondents, they currently use a health club or gym in their community. The percent of respondents who would use a health club or gym if it were available in their community is approximately the same at 31.3%. A summary of these frequencies (now and in the future) is provided in **Figure 36**.

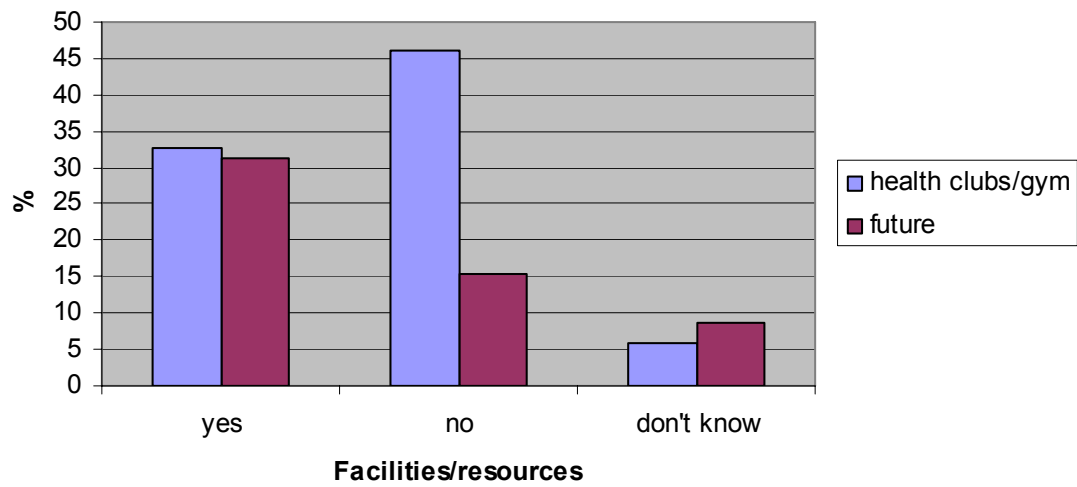
**Table 109: Do you use a health club or gym?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	49	32.7	38.6	38.6
	No	69	46.0	54.3	92.9
	Don't Know	9	6.0	7.1	100.0
	Total	127	84.7	100.0	
Missing	System	23	15.3		
Total		150	100.0		

**Table 110: Would you use a health club or gym?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	47	31.3	56.6	56.6
	No	23	15.3	27.7	84.3
	Don't Know	13	8.7	15.7	100.0
	Total	83	55.3	100.0	
Missing	System	67	44.7		
Total		150	100.0		

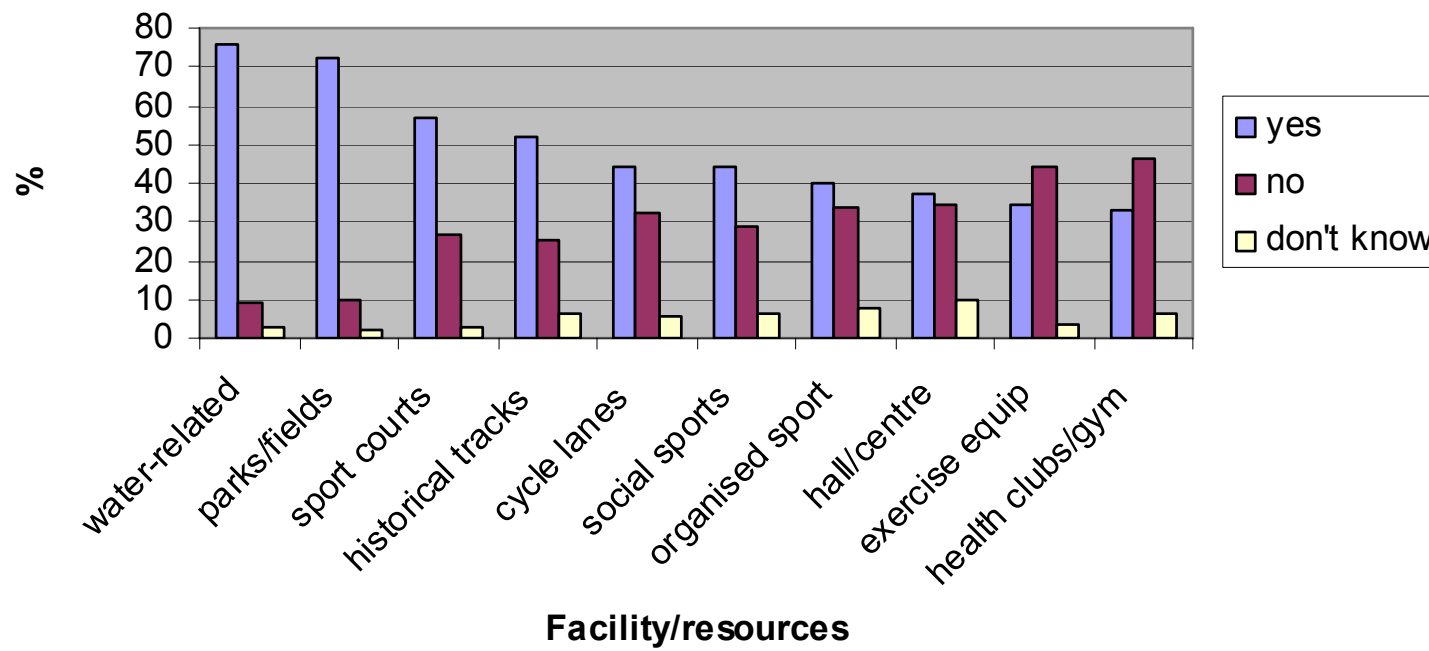
**Figure 36: Use of health club/gym now and in future**



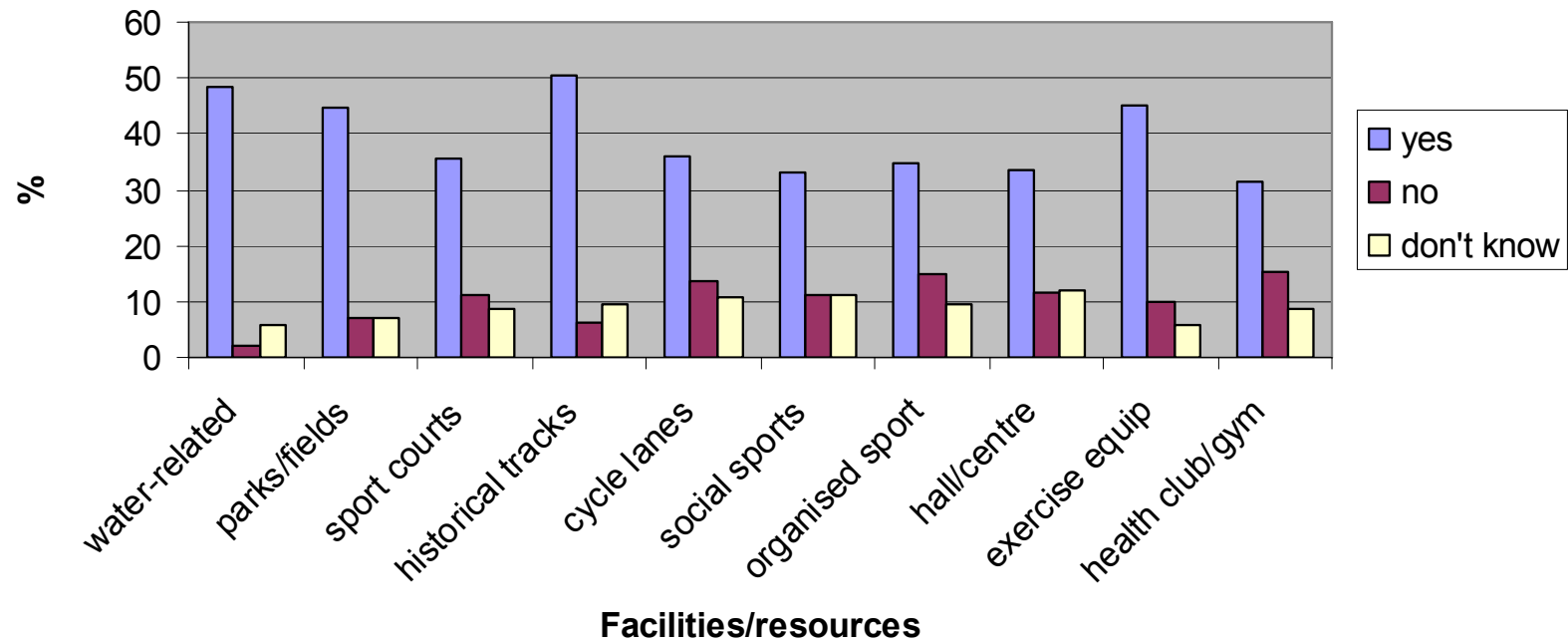
### **Summary of awareness and use of community facilities/resources**

A summary of all of the facilities/programmes related to physical activity being used by the respondents is provided in **Figures 37 and 38**.

**Figure 37: Summary of use of facilities now**



**Figure 38: Summary of use of facilities in future**



### 3.1.12 Awareness and use of Community Services

Respondents were asked to indicate how aware they were of community services available in the community, and were asked if they used them currently and/or would use them if they were made available in the future. The responses to these questions are presented in **Tables 111 to 118**.

#### a) Health Services

Māori health providers were currently used by approximately 39% of those who responded to the survey, and an equal percentage of respondents would use these providers/services if they were available in their community (see Tables 111 and 112).

**Table 111: Do you use Māori Health providers/services?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	59	<b>39.3</b>	45.4	45.4
	No	61	40.7	46.9	92.3
	Don't Know	10	6.7	7.7	100.0
	Total	130	86.7	100.0	
Missing	System	20	13.3		
Total		150	100.0		

**Table 112: Would you use Māori Health providers/services?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	59	<b>39.3</b>	67.8	67.8
	No	13	8.7	14.9	82.8
	Don't Know	15	10.0	17.2	100.0
	Total	87	58.0	100.0	
Missing	System	63	42.0		
Total		150	100.0		

Community Health Services were used by approximately 39% of the respondents. Thirty seven percent said they would use community health services if made available in the community (see Tables 113 and 114).

**Table 113: Do you use Community Health Services?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	73	<b>38.8</b>	47.4	47.4
	No	65	34.6	42.2	89.6
	Don't Know	16	8.5	10.4	100.0
	Total	154	81.9	100.0	
Missing	System	34	18.1		
Total		188	100.0		

**Table 114: Would you use Community Health Services?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	70	<b>37.2</b>	63.6	63.6
	No	17	9.0	15.5	79.1
	Don't Know	23	12.2	20.9	100.0
	Total	110	58.5	100.0	
Missing	System	78	41.5		
Total		188	100.0		

Whānau well-being services were used by approximately 28% of respondents, and approximately 38% would use them if they were available (see Tables 115 and 116).

**Table 115: Do you use whānau well-being services?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	52	<b>27.7</b>	34.9	34.9
	No	70	37.2	47.0	81.9
	Don't Know	27	14.4	18.1	100.0
	Total	149	79.3	100.0	
Missing	System	39	20.7		
Total		188	100.0		

**Table 116: Would you use whānau well-being services?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	72	<b>38.3</b>	62.6	62.6
	No	16	8.5	13.9	76.5
	Don't Know	27	14.4	23.5	100.0
	Total	115	61.2	100.0	
Missing	System	73	38.8		
Total		188	100.0		



Approximately 17% of respondents currently used Sport Manawatu personnel and services, and 24.5% said they would use them (see Tables 117 and 118).

**Table 117: Do you use Sport Manawatu personnel & services?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	32	<b>17.0</b>	22.2	22.2
No	90	47.9	62.5	84.7
Don't Know	22	11.7	15.3	100.0
Total	144	76.6	100.0	
Missing System	44	23.4		
Total	188	100.0		

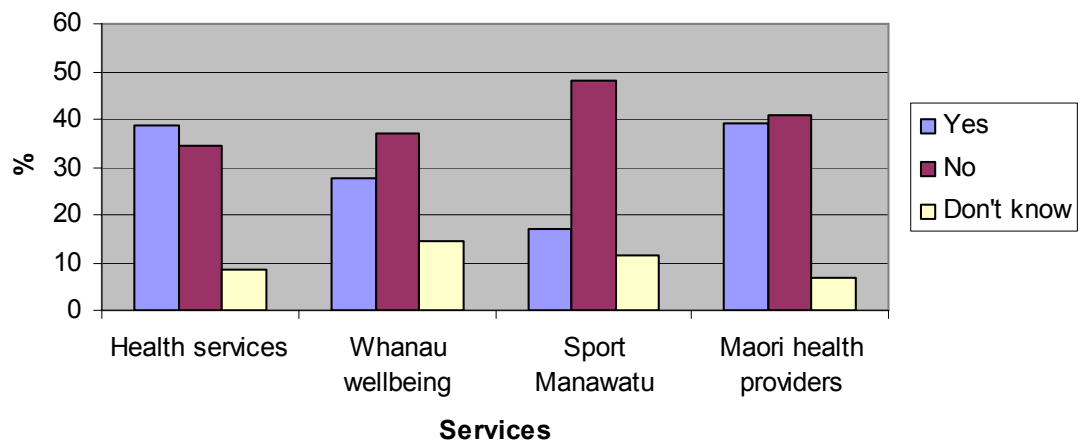
**Table 118: Would you use Sport Manawatu personnel and services?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	46	<b>24.5</b>	42.2	42.2
No	27	14.4	24.8	67.0
Don't Know	36	19.1	33.0	100.0
Total	109	58.0	100.0	
Missing System	79	42.0		
Total	188	100.0		

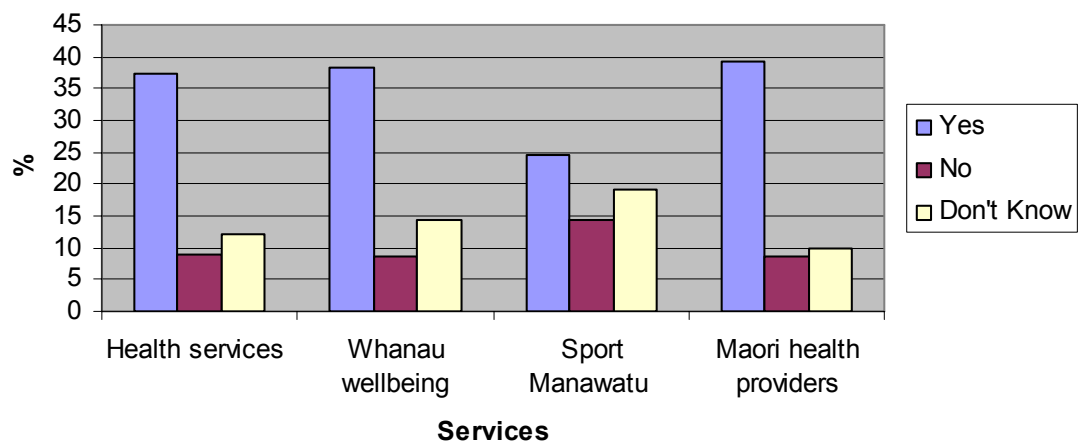
### Summary of health service awareness and use

The awareness and use of Māori health providers and services in the region seems relatively high with 39% stating that they are aware of and use these services and would use these services if available. The awareness of community health service is also approximately 39%, with a slightly lower percentage of respondents who stated that they would use community health services if available. Whānau wellbeing services were used by approximately 28% of respondents, and a higher percentage (38%) would use these whānau services if they were available in their community. Awareness of Sport Manawatu personnel and services seems low, with 17% of respondents stating that they are aware of these services in the community. A slightly higher percentage (24.5%), however, stated that they would use the Sport Manawatu personnel and services. A summary of community service awareness and use frequencies is provided in **Figures 39 and 40**.

**Figure 39: Summary of community services currently used by respondents**



**Figure 40: Summary of community services that could be used by respondents**



**b) Other health-related services**

Individuals who completed the longest version of the survey (at the Te Matatini Festival) were asked questions related to a variety of community services including social work services, iwi services, disability services, and nursing services. Unfortunately, only 21 individuals completed this survey, and a comparison could not be made with the other surveys because the questions were not included in later versions of the survey (in order to produce a higher rate of completion the survey was shortened).

Thirty eight percent of respondents believed that social work services were readily available in their community, and 38% would use social work services (see Tables 119 and 120)

**Table 119: Social work services - are these readily available?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	8	<b>38.1</b>	57.1	57.1
	No	1	4.8	7.1	64.3
	Don't Know	5	23.8	35.7	100.0
	Total	14	66.7	100.0	
Missing	System	7	33.3		
Total		21	100.0		

**Table 120: Would you use social work services?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	8	<b>38.1</b>	53.3	53.3
	No	2	9.5	13.3	66.7
	Maybe	5	23.8	33.3	100.0
	Total	15	71.4	100.0	
Missing	System	6	28.6		
Total		21	100.0		

Thirty three percent of respondents believed iwi services were readily available, and thirty eight percent would use these iwi services (see Tables 121 and 122).

**Table 121: Iwi Services - are these readily available?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	7	<b>33.3</b>	53.8	53.8
	No	3	14.3	23.1	76.9
	Don't Know	3	14.3	23.1	100.0
	Total	13	61.9	100.0	
Missing	System	8	38.1		
Total		21	100.0		

**Table 122: Would you use iwi services?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	8	<b>38.1</b>	61.5	61.5
	Maybe	5	23.8	38.5	100.0
	Total	13	61.9	100.0	
Missing	System	8	38.1		
Total		21	100.0		

Approximately 29% believed disability services were readily available in their community, and 19% would use them (see Tables 123 and 124).

**Table 123: Disability services - are these readily available?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	6	<b>28.6</b>	42.9	42.9
	No	2	9.5	14.3	57.1
	Don't Know	6	28.6	42.9	100.0
	Total	14	66.7	100.0	
Missing	System	7	33.3		
Total		21	100.0		

**Table 124: Would you use disability services?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	4	<b>19.0</b>	28.6	28.6
	No	2	9.5	14.3	42.9
	Maybe	8	38.1	57.1	100.0
	Total	14	66.7	100.0	
Missing	System	7	33.3		
Total		21	100.0		

Thirty three percent of respondents believe that nursing facilities are readily available in their community, and 24% would use these services (see Tables 125 and 126).

**Table 125: Nursing services - is this readily available?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	7	<b>33.3</b>	53.8	53.8
	No	1	4.8	7.7	61.5
	Don't Know	5	23.8	38.5	100.0
	Total	13	61.9	100.0	
Missing	System	8	38.1		
Total		21	100.0		

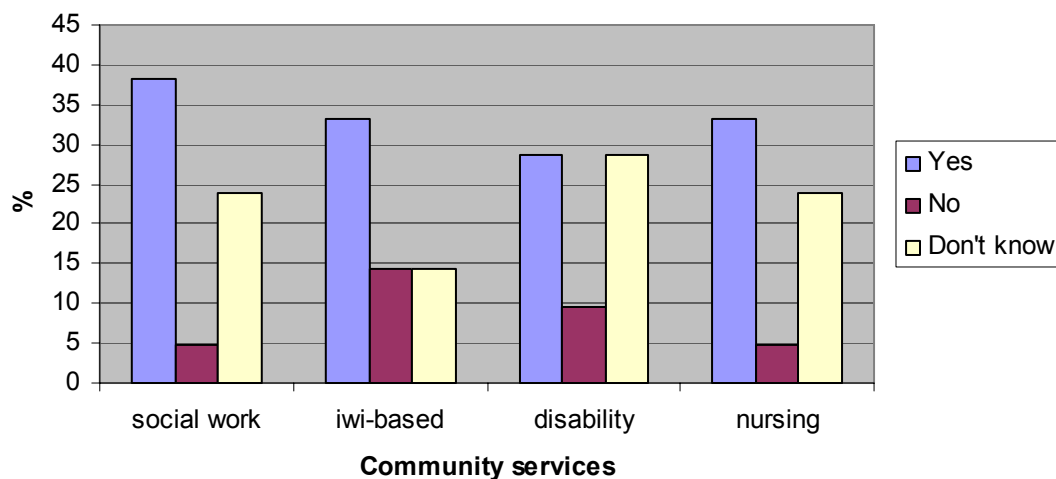
**Table 126: Would you use nursing services?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	5	<b>23.8</b>	35.7	35.7
	No	1	4.8	7.1	42.9
	Maybe	8	38.1	57.1	100.0
	Total	14	66.7	100.0	
Missing	System	7	33.3		
Total		21	100.0		

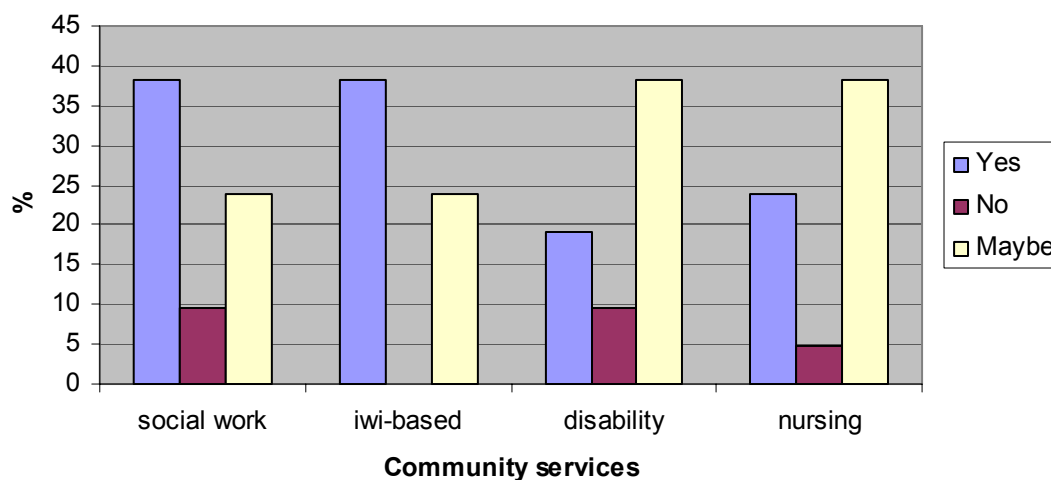
### Summary of other health-related services awareness and use

Although the numbers of respondents in this sample are small, they provide a point of comparison for the health-related and sport-related services. It appears as if the awareness of social work, iwi-based, disability and nursing services in the community is reasonably high (33% to 38%) and 38% of respondents would use social work and iwi-based services. A summary of the services these samples were aware of and would use is provided in **Figures 41 and 42**.

**Figure 41: Awareness of community services**



**Figure 42: Use of community services**



**c) Sport and physical activity services**

Although the awareness of Sport Manawatu was not relatively high (i.e., 17%), when specific questions were asked with regards to involvement in events and activities Sport Manawatu co-ordinated, managed, and facilitated, the figures were higher.

More specifically, the percentage of respondents who play one-off events such as iwi games and relay for life was approximately 57% and 39% stated that they would play one-off events if they took place in their community.

**Table 127: Do you play one-off events (iwi games)?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	86	<b>57.3</b>	66.2	66.2
	No	37	24.7	28.5	94.6
	Don't Know	7	4.7	5.4	100.0
	Total	130	86.7	100.0	
Missing	System	20	13.3		
Total		150	100.0		

**Table 128: Would you play one-off events (iwi games)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.7	1.2	1.2
	Yes	58	<b>38.7</b>	69.9	71.1
	No	13	8.7	15.7	86.7
	Don't Know	11	7.3	13.3	100.0
	Total	83	55.3	100.0	
Missing	System	67	44.7		
Total		150	100.0		

According to approximately 31% of respondents, they currently play regular marae games, and approximately 41.5% would play marae games in the future if they were available in the community.

**Table 129: Do you play regular marae games?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	58	<b>30.9</b>	38.4	38.4
	No	79	42.0	52.3	90.7
	Don't Know	14	7.4	9.3	100.0
	Total	151	80.3	100.0	
Missing	System	37	19.7		
Total		188	100.0		

**Table 130: Would you play marae games?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	78	<b>41.5</b>	65.5	65.5
	No	18	9.6	15.1	80.7
	Don't Know	23	12.2	19.3	100.0
	Total	119	63.3	100.0	
Missing	System	69	36.7		
Total		188	100.0		

The percentage of respondents who join physical activity programmes for Māori was 29%, and 39% said they would join physical activity programmes for Māori if they were available in their community.

**Table 131: Do you join physical activity programmes for Māori?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	44	<b>29.3</b>	34.9	34.9
	No	69	46.0	54.8	89.7
	Don't Know	13	8.7	10.3	100.0
	Total	126	84.0	100.0	
Missing	System	24	16.0		
Total		150	100.0		

**Table 132: Would you join physical activity programmes for Māori?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	59	<b>39.3</b>	64.8	64.8
	No	11	7.3	12.1	76.9
	Don't Know	21	14.0	23.1	100.0
	Total	91	60.7	100.0	
Missing	System	59	39.3		
Total		150	100.0		

### Summary of sport services awareness and use

The percentages of respondents who currently utilise Sport Manawatu programmes or events is relatively high, with 57% getting involved in one-off events such as iwi games and relay for life, 31% playing regular marae games, and 29% joining in physical activity programmes specifically for Māori. When respondents were asked if they would take part in these activities/events in the future, approximately 39% would get involved in one-off events, 41.5% would play marae games, and 39% would join physical activity programmes for Māori. See **Figures 43 and 44** for a summary.

**Figure 43: Summary of sport services awareness and current use**

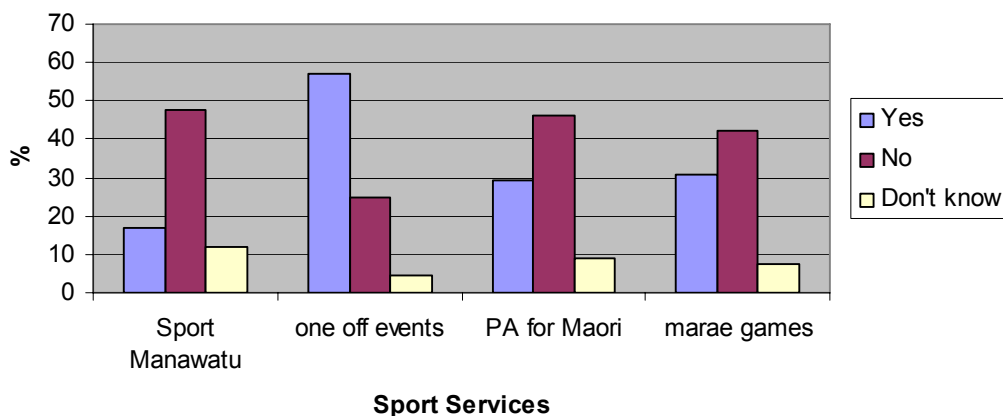
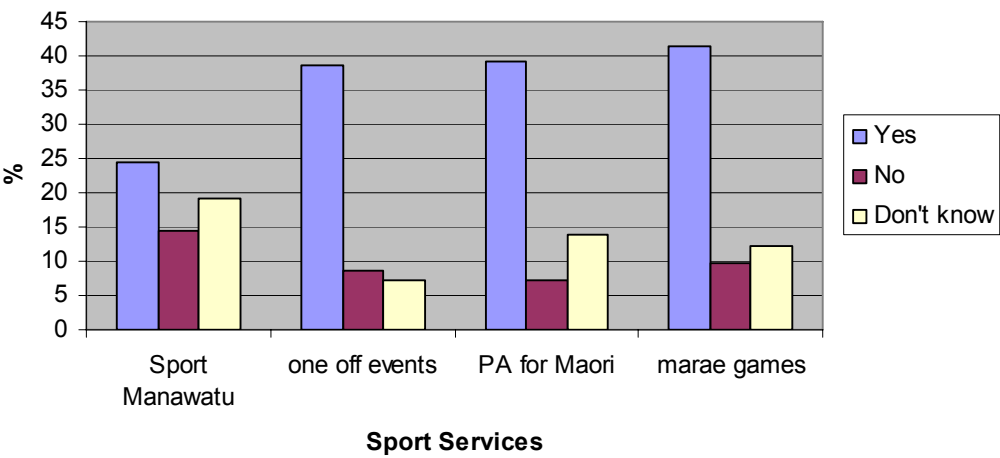




Figure 44: Summary of sport services use if available



### 3.1.13 Nutritional Information

According to recent Ministry of Health reports (Source: [www.moh.govt.nz](http://www.moh.govt.nz) webpage, retrieved March, 2006) Māori are more likely than non-Māori to experience poor health as a consequence of inappropriate nutrition. The factors that have contributed to this trend include:

- the impacts of colonisation on Māori, including the adoption of a European diet and the loss of mahinga kai (traditional food-gathering areas) through land loss and the pollution of coasts and waters
- changes to Māori economic and social status, with the result that Māori are concentrated in low socioeconomic groups
- possible genetic factors (such as those that may predispose Māori to diabetes, or lead to lower rates of bowel cancers)
- cultural factors in Māori society that may affect the types of food eaten.

There could be significant Māori health gain if all Māori were able to access good nutrition and dental care, and there were fewer barriers to regular physical activity. Respondents, therefore, were asked questions relating to their current nutritional status and willingness to be involved in future nutrition programmes for themselves, their whānau, and their marae (see Tables 133 to 136). According to **Table 133**, approximately 55% of respondents are eating the recommended amount of fruit and vegetables per day. Furthermore, **Table 134** indicates that 14% of respondents are taking dietary pills or supplements of some nature.

**Table 133: Do you eat 5+ a day of fruit and vegetables?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	82	<b>54.7</b>	57.7	57.7
	No	60	40.0	42.3	100.0
	Total	142	94.7	100.0	
Missing	System	8	5.3		
Total		150	100.0		

**Table 134: Are you taking dietary pills or supplements?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	21	<b>14.0</b>	14.8	14.8
	No	121	80.7	85.2	100.0
	Total	142	94.7	100.0	
Missing	System	8	5.3		
Total		150	100.0		

With regards to wanting nutritional advice, approximately 51% would like to receive nutritional advice for themselves and/or their whānau, as well as for their marae (see **Tables 135 and 136**).

**Table 135: Would you and/or your whānau like nutritional advice?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	76	<b>50.7</b>	54.7	54.7
	No	63	42.0	45.3	100.0
	Total	139	92.7	100.0	
Missing	System	11	7.3		
Total		150	100.0		

**Table 136: Would you like training opportunities for your marae regarding nutrition?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	77	<b>51.3</b>	56.2	56.2
	No	60	40.0	43.8	100.0
	Total	137	91.3	100.0	
Missing	System	13	8.7		
Total		150	100.0		

### 3.2 *Qualitative Analysis of Surveys*

The quantitative close-ended questions or likert scale questions attempted to determine the responses to specific questions, issues, and factors in particular. The close-ended questions also tried to replicate the questions that were asked in other surveys such as the Obstacles to Action survey, and the New Zealand Physical Activity Questionnaires used by the Ministry of Health and Sport and Recreation New Zealand (SPARC). Although this provides excellent comparative data, it sometimes fails to determine what the actual motives, enablers, and barriers are for Māori in terms of physical activity and sport participation.

For this reason, open-ended questions were included in the survey in an attempt to get qualitative responses from those surveyed. This often requires more effort on behalf of the respondents, but also provides insightful information with regards to the motives and barriers that other surveys may not have addressed.

The following open-ended questions were included in the survey, and qualitatively analysed according to common themes and patterns of responses:

- What motivates you to be active (i.e., **current motives**)?
- What barriers exist that keep you from being physically active on a regular basis (i.e., **current barriers**)?
- What would make you more active on a regular basis (i.e., **potential enablers**)

### 3.2.1 Current motives for physical activity

Responses to the open-ended question 'what motives you to be active?' were clustered into 4 categories. These were i) Health, ii) Others-oriented, iii) Intrinsic motives, and iv) Extrinsic motives (see **Tables 137 and 138**).

**Table 137: Summary of qualitative responses to the question ‘What motivates you to be active?’**

<b>HEALTH</b>	<b>OTHERS-ORIENTED</b>	<b>INTRINSIC</b>	<b>EXTRINSIC</b>
<b>Health and wellbeing (39)</b>	<b>Socialise, people, whānau (16)</b>	<b>Pleasure, fun, and enjoyment (28)</b>	<b>Work (15)</b>
<p>You are only young once</p> <p>Physical growth</p> <p>To have a healthy and long life</p> <p>Understand benefits of exercise on a regular basis</p> <p>Gives me more energy</p> <p>Life is much easier when you're physically fit – more active and feel good about yourself</p> <p>Healthy body = healthy mind</p> <p>Relieves pain</p> <p>Strengthen muscles</p>	<p>my friends because they encourage me</p> <p>Social growth</p> <p>Friends – running and walking together</p> <p>I am a coach (give back to people)</p> <p>Kaumātua group (6)</p> <p>Getting out (3)</p> <p>Others to be active with, because its more fun</p> <p>Get to know other people, share experiences</p> <p>Pptn in team sport activities (4)</p> <p>Interacting with friends/family</p> <p>Youth group exercise and sport</p>	<p>I like to go for walks</p> <p>Hobby</p> <p>Fun involved</p> <p>Because I love sport</p> <p>I love it!</p> <p>Feel good once I have done some sort of activity</p> <p>Dancing and singing</p> <p>Love working out at the gym makes me feel good</p>	<p>Physio</p> <p>Clients</p> <p>Gym instructor + teacher</p> <p>Its very hard out so you have to be active</p> <p>Health promoter</p> <p>Stairs at work + pressure to meet deadlines</p> <p>railways</p> <p>Farmer, builder – always active</p> <p>Have to practice what I preach and set an example for others to follow</p>
<b>Weight loss or maintenance, and 'shape' (23)</b>	<b>Family and whānau (16)</b>	<b>Intrinsic motives and emotions (11)</b>	<b>Achievement, goal-oriented, competitive activities (9)</b>
<p>fat</p> <p>Weight control and energy levels</p> <p>Stay in good shape</p> <p>Being overweight not good – too many sicknesses can happen</p> <p>To lose weight because it makes me feel good</p> <p>Trying to fit clothes that have shrunk</p> <p>Maintain to look good</p> <p>Incentive to be active = lose weight</p> <p>Work toward goal of looking good in a bikini</p>	<p>Whānau – because they care</p> <p>They send my adrenalin high and make me happy</p> <p>Nieces and nephews</p> <p>Keeping fit for Mokopuna</p> <p>Caring for my mokopuna</p> <p>My moko – they are constantly on the move and quite demanding</p> <p>Want to spend as much time with my whānau (live long life)</p> <p>Mokopuna – they're worth running around after</p> <p>Competitive activities family can do together</p> <p>Enjoy active time with family</p>	<p>self motivation, determination</p> <p>Teaching self-discipline, self-respect, respect toward others</p> <p>Keep a positive outlook</p> <p>I enjoy morning runs</p> <p>I like a brisk walk in the morning/evenings</p> <p>My desire</p> <p>Benefits energy levels</p> <p>Sedentary job therefore need to be active for balance</p> <p>Enjoy results from training</p>	<p>When I'm good at it</p> <p>Like a challenge</p> <p>Need to be effective on the rugby league field</p> <p>I train to reach goals our club has set</p> <p>New Zealand Academy of Sport</p> <p>Sport training</p> <p>Training, exercise programme</p> <p>Motivates me to work harder so I become better</p> <p>Being able to compete as individual and as family</p> <p>Set myself a goal</p>

**Table 138: Summary of qualitative responses to the question ‘What motivates you to be active?’**

<b>HEALTH</b>	<b>OTHERS-ORIENTED</b>	<b>INTRINSIC</b>	<b>EXTRINSIC</b>
<b>Longevity/avoid ill-health (13)</b>	<b>Children (13)</b>	<b>Lifestyle habit (5)</b>	<b>Weather (6)</b>
Fear of having bad health Longevity of lifespan Death, getting older Family history of diabetes Seeing sick friends and whānau (diabetes, heart disease) Free of viruses, colds, cancer, arthritis etc Getting older – need to motivate myself My future – want to live as long as I can and enjoy my treasures (whānau)	To stay on my toes for my daughters take the kids walking a lot too I coach and try to get as much exercise while coaching Need to keep up with my young children Role model for my children When needed to with my son Caring for them keeps me busy Kids want to play or go for a walk	Myself because I’m used to it Played sport from teenager to older adult Early morning walks start my day off well – more energy and motivated. Eating well Like to keep busy Made physical activity part of my lifestyle	Sunny day and snow on the hill Don’t like to waste good weather If its warm and sunny Get out into fresh air
<b>Injuries and illness (8)</b>	<b>Others, role models (5)</b>	<b>Avoid boredom (3)</b>	<b>Purposeful activities (4)</b>
Arthritis in legs and back Keeps my bones working I am diabetic Knee surgery To ensure that I am mobile and walking My age and I have high blood pressure High cholesterol – doctor said diet and exercise or take pills	Seeing others being active makes me want to play Action movies, seeing heroines that are tough and toned Watching Olympics – want to be a weight lifter Passion to help others To motivate others	Better than sitting at home Get bored so play sport and its fun	Fishing – had to learn to provide for myself Need to mow lawns, walk the dog, dig the garden Walking the dog, she enjoys her daily walks
<b>Fitness (18)</b>	<b>Kaupapa Māori element (3)</b>	<b>Sense of Freedom (3)</b>	<b>Sport (14)</b>
So I can feel fit and able to do tasks	Kapa haka, Marae exercise classes, Muaūpoko Family Sports Day – variety of events (tug-o-war, running, walking, kapa haka)	Horse riding – feel free and along all by myself Riding my bike Time out from busy life	Netball, Rugby, Softball, Volleyball, Touch, Basketball, Physical sports
	<b>School (2)</b>		<b>Money (2)</b>
	PE and sport at school		To reduce the amount spent on health medication and advice

## **Summary of current motives**

### ***i) Health-related motives***

The general desire for 'health and wellbeing' was a common response to the question 'what motives you to be active?' among the respondents with 39 comments being made to this effect.

Interestingly, a large number of respondents (n = 23) commented that 'keeping in shape, losing weight or maintaining weight were key motives for physical activity.

Fitness (which was often mentioned along with health) was also a common motive among Respondents.

Avoiding ill-health and/or increasing longevity of life were mentioned by those respondents who mentioned they had an acute or chronic illness and/or injury. Respondents also mentioned 'getting older' and witnessing others ill-health or death as motives for being physically active themselves.

### ***ii) Others-oriented motives***

Socialising with others (friends and family), and the concept of whānaungatanga (relationships) were the strongest motivating factors in the category of 'others-oriented' with 16 respondents mentioning these elements.

Children were also a motivating force for 13 of the respondents, especially those who were involved in caring for or coaching their children. Some said that being a good role model for their children was a motivating force. Five other respondents mentioned role models as a motivating factor. This meant either being a role model for others, or being motivated by seeing others being active in person or in televised sport (e.g., Olympics) or in the movies (e.g., action heroes). Activities organised in a Māori context, by Māori for Māori was also a motivating influence for 3 of the respondents, and the physical activity



emphasis and opportunities at school provided 2 of the respondents motivation to be active.

### ***iii) Intrinsic motives***

The simple experience of enjoyment, pleasure, and fun motivated many of the respondents (n = 28) to be active. The feelings of achieving goals and demonstrating pro-social attributes such as determination, self-discipline, self-respect, and respect toward others motivated 11 respondents. The recreational role that physical activity and sport played in maintaining balance was also mentioned in terms of providing energy, starting the day off properly, or providing the antithesis of a sedentary workplace. Some of the respondents mentioned that physical activity was an integral part of their lifestyle, so it was more habitual for them. A small number of respondents participated in physical activity to avoid boredom, or to gain a sense of freedom.

### ***iv) Extrinsic motives***

Work was a motivating factor for many of the respondents (n = 15). These was either because the work itself was physical (e.g., physiotherapy, farming), or because there were opportunities to be active at work (e.g., walk to work, walk upstairs, etc). Achieving outcome goals and a competitive drive were also motivating factors for 9 of the respondents. This seemed to be associated with sport in particular with regards to training in order to 'be better' in sport competition. Being successful or 'good at it' also encouraged further participation in physical activities. This may have been reflected in the number of respondents (n = 14) who mentioned that sport (specific or general) was a motivating influence on their physical activity levels. Good weather was also a reason to be physically active with sun, warmth, and fresh air promoting physical activity. Activities that had a purpose were motivating for a small number of participants (e.g., fishing, mowing lawns, walking the dog, etc), and reducing the amount of money being spent on healthcare was a motivating factor for a few respondents.

### 3.2.2 Current barriers for physical activity

Responses to the open-ended question 'what barriers prevent you from being physically active on a regular basis?' were clustered into 4 categories. These were i) Others-oriented, ii) Internal, iii) Facilities/services, and iv) External barriers (see **Table 139**).

Eight of the respondents noted that they considered there were 'no barriers' to being physically active on a regular basis. If barriers were mentioned, they were not considered insurmountable, and were seen as an excuse not to be physically active, rather than a legitimate reason.

Some of the comments made with regards to 'no barriers' included;

- The only barriers are in one's head
- There are no other excuses (other than money)
- I haven't really got any barriers
- No barriers if you have the willpower
- No barriers, I like to keep fit for dancing

**Table 139: What barriers prevent you from being physically active on a regular basis?**

<b>OTHERS-ORIENTED</b>	<b>INTERNAL BARRIERS</b>	<b>FACILITIES/SERVICES</b>	<b>EXTERNAL BARRIERS</b>
<b>Children (9)</b>	<b>Health (35)</b>	<b>Lack of organised activities (3)</b>	<b>Time (33)</b>
Being pregnant (2) No Babysitters (4) • I only have 2 children but find it very difficult to find babysitters to watch kids (and don't have \$\$ to pay for babysitter) Raising young children (2) Demanding kids	Injuries and illness (27)) ➤ Walking too far aggravates injuries (bad back pain) ➤ Pin in my leg plays up sometimes ➤ Broken thigh bone with metal rod (allergic to chlorine) ➤ Asthma (4) ➤ Having the flu (3) ➤ Heart Lack of fitness Age Disability Weight (3) Hungover (night out on the town)	Tai chi once a week Less games Lack of teams outside of College	Time (30) ➤ Sometimes not enough hours in the day (between work and family commitments) Time Management (3) Not organised enough to plan regular exercise time
		<b>Lack of facilities/knowledge (2)</b>	<b>Work (20)</b>
		good care givers or crèche facilities would certainly help Lack of knowledge of where things are happening	Work commitments (14) Sedentary occupation Can't play rugby because working Self-employed (making time to participate while earning an income) School (3)
<b>Family/Whānau (6)</b>	<b>Attitude (33)</b>	<b>Alternative leisure activities (10)</b>	<b>Money (13)</b>
Mum cooks tea early and not allowed back outside after that Family events Only barriers are tangis and kaumātua duties Family visits (interrupts my programme) – although having them visit is wonderful and keeps me active (especially mokopuna)	Procrastination Lazy/Mangere (9) Lack of self-motivation (11) Can't be bothered Attitude of 'she's right' Willpower and passion Over-sleeping/tired (7) Get bored easily Modesty I will never wear shorts or skirts.	Playstation/x-box (4) TV (3) Computer (2) Reading and drawing	Money for babysitter Would be sensible to join a gym but I can't afford it Don't have right food to eat (like meat) It costs money to go to a gym Currently need goggles and cap and pay 24 week subs No income Go to school and play = no time for job
	<b>Other commitments (7)</b>	<b>Transport/location (7)</b>	
	Jobs around the house Eating Too busy cleaning the house and cooking tea after work Tautoko communities Church activities	Transport /location (6) • sometimes if Danny not available I can't go because I don't drive Living too far from town	
		<b>Lifestyle (3)</b>	<b>Weather(13)</b>
		<b>Lifestyle choices, busy lifestyle</b> <b>Jail</b>	Especially for outdoor activities Too cold and wet

## **Summary of current barriers**

### ***i) Others-oriented barriers***

Although some of the respondents mentioned children as a motivating factor for physical activity, others (n=9) mentioned them as a barrier. Being pregnant was considered a barrier to physical activity for 2 of the survey respondents, and not having a babysitter or childcare facilities was the dominant reason for children being considered a barrier to physical activity. Family expectations and responsibilities were also a barrier for 6 of the respondents. Family events (e.g., tangi), family duties (e.g., kaumātua duties), family rules (e.g., not allowed outside after dinner), and family visits were considered to constrain some people from being physically active. This barrier appears not to focus on family members themselves being restrictive, but the expectations of family were. It appeared as if family and children can act as both a motivating force and a potential constraint at the same time. This is reflected in a comment made by one respondent who stated that ‘family visits interrupt my physical activity programme, although having them visit is wonderful and keeps me active – especially my mokopuna’.

### ***ii) Internal barriers***

A large number of respondents (n = 33) felt that the barriers to physical activity were internal. These included the lack of motivation feelings (e.g., lazy, procrastinating, can't be bothered, etc). Being tired, getting easily bored, and modesty issues were also mentioned by a few of the respondents. Perceived health barriers were also mentioned by a large number of respondents (n = 35). This included being chronically injured (joint/bone replacements, bad back, disability) or in ill-health (asthma, flu, heart problems). In more general terms, a lack of fitness, age and weight were also mentioned as barriers that prevented respondents from being physically active on a regular basis. Priorities also played a role in what was determined as a barrier. For 7 of the respondents ‘other commitments’ acted as a barrier to regular physical activity. These included jobs around the house (e.g., cooking and cleaning), as well as community and church activities.

### **iii) Facilities/service barriers**

For ten of the respondents the attraction of alternative leisure activities and facilities outweighed the motivation to be physically active. These 'alternatives' included sedentary activities such as playstation/x-box games, television, computers, reading and drawing. A perceived lack of organised activities and lack of knowledge about what was available and going on in the community that was physical activity-related was also an issue for a small number of respondents. A lack of tai-chi classes, games, and teams outside of school were specifically identified as barriers, and a lack of knowledge about available childcare facilities and events were noted. Transport was considered to be associated with facilities/services barriers because for seven of the respondents, living too far away from where the facilities and programmes are, or not being able to drive there themselves acted as a major barrier (especially for the kaumātua).

### **iv) External barriers**

Not surprisingly, lack of discretionary time (n = 33) and work/school commitments (n = 20) were the most common barriers to regular physical activity. These two constraints were often connected. For instance, discretionary time was lacking because of work commitments. Some respondents felt that their inability to manage time effectively was a barrier to physical activity, rather than a 'lack of time' in general. A perceived lack of discretionary money for physical activity pursuits was mentioned by 13 of the respondents. This money wasn't necessarily for spending on physical activity, but for childcare and proper nutrition so that physical activity could be considered. Many felt that work and physical activity were competing for time, and because money was essential to survival, physical activity was sacrificed. Some respondents mentioned the cost of gym membership and equipment (e.g., swim goggles and cap). The weather, especially wet, cold weather and darkness, were seen as barriers for 13 of the respondents.

### 3.2.3 Potential enablers to physical activity

Responses to the open-ended question ‘what would make you more active on a regular basis?’ were clustered into 8 categories. These were i) Leisure and physical activities, ii) Sport activities, iii) Others-oriented, iv) Organised activities, and v) Purposeful activities vi) Internal enablers, viii) External enablers, and viii) Tikanga-based enablers (see **Tables 140 and 141**).

**Table 140: What would make you more active on a regular basis?**

Leisure/Physical Activity		Sport		Others-oriented	Organised activities	
Walking	26	Sports (in general)	15	<b>Children (5)</b> <ul style="list-style-type: none"><li>• Keeping up with my kids</li><li>• Not being pregnant</li><li>• Watching children play sport (walking along sideline)</li><li>• Walking my children to school every day</li></ul>	<b>Competition</b> <ul style="list-style-type: none"><li>• Tournaments</li><li>• National competitions</li><li>• Walkathons and fun runs (9)</li><li>• Organised sporting activities</li></ul>	12
Gym	10	Team sports	5			
Running	8	Social sports	3			
Weight training/lifting	6	Swimming	14			
Dancing (+Hip hop)	4	Rugby	13	<b>Social element (9)</b> <ul style="list-style-type: none"><li>• Being active with a group of friends</li><li>• Playing at school with friends</li><li>• Free social activity</li><li>• walking groups (3)</li></ul>	<b>Club</b> <ul style="list-style-type: none"><li>• Organised club with a club house, uniforms, sponsors</li><li>• Joined gym– doing weights, walking &amp; cycle machines</li></ul>	2
Aerobics/exercise group Push-ups, sit ups etc	6	Netball (+ indoor)	12			
Tai chi	2	Basketball	8			
Cardio workout, Yoga/pilates Half-marathon, Exercise machines, Basic exercise Hiking, PE classes, Karate, Riding	9	Touch	6	<b>Whānau (9)</b> <ul style="list-style-type: none"><li>• Any sports that involve families</li><li>• Family support</li><li>• Family holidays</li><li>• Neighbourhood activities</li><li>• More whānau or hapū activities</li></ul> Supporting mokopuna	<b>School</b> <ul style="list-style-type: none"><li>• General activities</li><li>• Riding my bike to school</li><li>• School sports</li><li>• After school sports (soccer)</li></ul>	3
		Cycling (+ spin)	5			
		Table tennis, triathlons, rugby league, squash, softball, snooker, golf, indoor bowls	16			
		Ball games, tabloid sports, non-contact sports, low-impact, indoor, more interesting sports	6		<b>Purpose-oriented activities</b>	
		V/ball, tennis, running badminton, hockey, cricket, waterpolo, darts, mini-ball	11		Mow lawns, Walking the dog , Chopping wood, Fishing , Digging for toheroa, Shopping	6
					Gardening	7
					Work (+ walking to work)	2

**Table 141: What would make you more active on a regular basis?**

Internal enablers		External enablers		Tikanga Māori enablers	
Health & Fitness	<b>3</b>	<b>Money</b> <ul style="list-style-type: none"> <li>• A paid activity</li> <li>• Try to score a goal in hockey to get money from Uncle</li> <li>• Free social activity</li> </ul>	<b>3</b>	Kaumātua programme	<b>4</b>
Self-discipline Making representative teams Activities I enjoy Good planning Self-motivation	<b>5</b>	<b>Time</b> <ul style="list-style-type: none"> <li>• So I can exercise</li> <li>• I like walking but by the time I finish work it is too cold, too dark, and unsafe to walk alone and no one else wants to do it</li> </ul>	<b>2</b>	Erei momo huihuinga More Māori or pa war events! Exercise at the marae Waka ama Weaving Mau rakau Kapa haka Iwi/hapū sport events	<b>8</b>
		<b>Weather</b>	<b>1</b>		



### **i) Leisure and physical activities**

Many of the respondents mentioned specific physical activities or sports that would help them to be more active on a regular basis. As mentioned in the close-ended survey questions, walking was one of the more popular leisure and/or physical activities mentioned that would make respondents more active on a regular basis. Convenience seemed to be a common theme with many of the activities mentioned by respondents. Walking, running, basic exercises, hiking were activities that required very little in the way of resources and equipment. Gym-focused activities such as going to the gym, cardio workout, doing basic exercises, weight training, using exercise machines and doing exercise classes (e.g., from moderate classes such as yoga, tai chi and pilates to vigorous classes such as aerobics). Dancing was considered by four respondents as a way to be physically active more regularly, and one-off events such as a half-marathon were also mentioned.

### **ii) Sport activities**

Sports were mentioned as a way of making respondents more active on a regular basis. The comments either referred to 'sport' in a general sense (n = 15), and sometimes certain types of sport were mentioned. For instance, team sports, social sports, and alternative sports (e.g., low impact, non-contact, tabloid, ball games, and interesting sports) were considered to be potential enablers of physical activity. Of the specific sports mentioned by respondents, swimming was the most often mentioned (n = 14), with traditional team sports, rugby and netball coming a close second. Other team sports mentioned were basketball (n = 8) and cycling (n = 5). Sports that were mentioned once or twice included table tennis, triathlons, rugby league, squash, softball, snooker, golf, indoor bowls, volleyball, tennis, cross country running, sprinting, badminton, hockey, cricket, waterpolo, darts, and mini-ball.

### **iii) Others-oriented**

Enablers that were considered 'others-oriented' referred to children, the social element of an activity, and whānau/family as key enablers. It appeared that whānaungatanga (relationships), socialising, and a sense of unity were key elements in terms of making respondents more active on a regular basis. This feeling of togetherness and unity could be achieved in families, with a group of friends, at school, in walking groups, in the neighbourhood, hapū and iwi-related activities, and observing/participating in physical activity with children and mokopuna.

### **iv) Purposeful activities**

A small number of participants felt that if a physical activity had a purpose, they would be more active on a regular basis. Mowing the lawns, walking the dog, chopping the wood, fishing, digging for toheroa, shopping, gardening, and work-related physical activity (n = 7) were some of the examples given.

### **v) Organised activities**

Organised activities (n = 12) included sport competitions, tournaments, and fun group events (e.g., walkathons, fun runs). Club activities or gym membership were also seen as ways of making respondents more active on a regular basis. Having resources provided (e.g., uniforms, sponsors, equipment), was seen as an enabler of physical activity, and organisations such as sport and fitness clubs were perceived to have these resources. School was another organisational structure where being active would be enabled through general activities (e.g., riding bike to school), physical education classes, school sports, and after-school activities.

The next three enablers were more 'abstract' and were about priorities, and motives for doing physical activity.

#### **vi) Internal enablers**

A small number of respondents mentioned health and fitness (in general terms) as being a reason to be more active on a regular basis. Intrinsic motives and attitudes such as having self-discipline, striving for representative status, enjoyment, planning, and self-motivation were also mentioned by a small number of respondents (n = 5).

#### **vii) External enablers**

Money was mentioned by 3 of the respondents as a way of motivating physical activity (paid to do activity, or inspired to do well in sport in order to get monetary reward from family member). Time was mentioned by 2 respondents and weather by 1 respondent as potential enablers of more regular physical activity.

#### **viii) Tikanga-based enablers**

The respondents who were part of the kaumātua programme felt that continuation of the programme was one way of making them more active on a regular basis. Others (n = 8) also mentioned the significance of having a Māori element to the physical activity as a way of motivating more regular physical activity. Marae-based exercises and tournaments, traditional Māori activities (e.g., kapa haka, waka ama, weaving, mau rakau), and gatherings with a Māori element to them.

## **4. Conclusions**

### **4.1 Demographics**

- 43% of respondents identified with Ngāti Raukawa ki te Tonga, 28% with Muaūpoko, and 11% with Rangitaane.
- The majority of respondents resided in Levin (30%), followed by Otaki (19%), Palmerston North (18%) and Feilding (16%).
- 38% of the respondents were male, and the majority (59%) were female.
- There were a range of ages surveyed from Under 15 years of age, to over 70 years of age. The largest age group was 15-19 years of age (19%), followed by 40-44 years (11.7%) and 30-34 years of age (9.6%).

### **4.2 General physical activity levels**

- 50% of respondents exceeded the recommended levels of physical activity
- 9% were physically active for the recommended amount of time (i.e., 3.5 hours/week)
- 33% were active, but did not meet the recommended levels
- 8% were inactive
- Those respondents involved in the kaumātua group were physically active on a regular basis
- 31% of respondents spent 25-30 minutes/day walking
- A total of 74% of respondents said that walking was a physical activity they participated in, of which 40% said they walked often
- 19% reported that they hadn't walked in the last 7 days

#### **4.3 *Work-related activity***

- 81% of respondents carried light loads, 77% did heavy cleaning, and 68% carried heavy loads.

#### **4.4 *Home-related activity***

- 79% of respondents said they were physically active when playing with their children
- 70% did gardening, and 69% mowed lawns

#### **4.5 *Sport-related activity***

- 69% of respondents were involved in competitive team sports
- 35% were involved in social sports
- 22% were involved in competitive individual sports
- The specific sports respondents participated in (from most to least) were golf, tennis doubles, badminton, cricket, netball, touch, bowls, basketball, rugby, rugby league, tennis singles, softball, soccer, and volleyball.

#### **4.6 Culture-related activity**

- 50% of respondents took part in kapa haka and dancing of some sort.
- 28% did taiaha/haka and 17% were involved in waka ama.

#### **4.7 Food-gathering activity**

- 56% of respondents took part in activities that were related to traditional food-gathering techniques such as gathering kaimoana, eeling, picking puha/watercress, making rewana bread, and hunting.

#### **4.8 Exercise-related activity**

- Walking was the most popular exercise-related activity (75%)
- Exercising at home (63%), going to the gym (41%) and using exercise equipment at home (39%) were also popular exercise activities for respondents.

#### **4.9 Outdoor-related activity**

- Swimming was the most frequently stated outdoor-related activity, with 65% of respondents doing this physical activity.
- Cycling (56%), surfing/body boarding (28%), and skateboarding (24%) were also popular.

#### ***4.10 Physical activity motives***

- The largest proportion of respondents agreed with physical activity motives associated with health and family. This level of agreement ranged from 79% to 86%
- 63% to 78% agreed to some extent with statements associated with intrinsic motives such as enjoyment, challenge, competition, important choice, and keeping in shape.
- 48% to 57% of respondents agreed with statements that were associated with avoidance behaviour (avoid guilt/shame) or necessity (e.g., work).
- 25% to 43% of respondents agreed with statements associated with others-oriented motives.

#### ***4.11 Awareness and use of community facilities/resources***

- Community facilities that were used by respondents (from highest to lowest frequency) were pools/beaches, parks, courts, historical tracks, cycle lanes, social sport programmes, competitive sport programmes, community halls, home exercise equipment, and marae games.

#### ***4.12 Awareness and use of community services***

- 39% of respondents used Māori health services and community health services, and a similar percentage would use them if they were available in the community.
- 28% used whānau wellbeing services now, and 38% would use them if they were available in the community.
- 17% used Sport Manawatu services and personnel, and 25% would use them if they were available in the community.

- When a small sample of respondents were asked if they'd use social work services, iwi services, disability services, and nursing services, the percentage of affirmative responses were 38%, 38%, 19%, and 24% respectively.
- Fifty seven percent of respondents are involved in one-off events, and 39% would like to be involved in these events.
- Thirty one percent are involved in marae games, and 41.5% would like to be involved.
- Twenty nine percent are involved in physical activity programmes for Māori, and 39% would like to be involved in these programmes.

#### **4.13 Nutrition**

- 55% of respondents were eating the recommended amounts of fruit and vegetables, and 14% were taking dietary pills or supplements.
- 51% would like further nutritional advice for themselves, their whānau, and their marae.



## **5. Limitations**

### **5.1 *Methodological limitations***

The national surveys reviewed for this project (e.g., NZPAQs, Obstacles to Action Survey, 2003) were administered face-to-face (validated) or over the phone (a method which has not been validated yet). The surveys in this project, however, were distributed to individuals to complete on the spot (at public hui or events), or in their own time (at home/work). The methods used to distribute the survey varied from having local Māori distribute the survey at the Te Matatini Festival, to mailing the survey (with return envelopes and a pen) to those on the iwi database. Hasty design of the surveys (in time for Te Matatini Festival), and an over-ambitious attempt to incorporate questions from other national surveys meant that the survey was considered too long and complicated for individuals to complete fully. This had an impact on the number of completed questions we could use in the analysis, and may explain why we only had 188 surveys returned (out of approximately 2000 surveys distributed). This gives us a very low return-rate of approximately 9%.

The research team realised this was not the best way to conduct research with Māori, but with the limited resources (time and researchers available), surveys were the only way of getting the information needed. In hindsight, the time and effort required to encourage members of the 3 iwi to complete the survey, may have been better spent interviewing select groups. As part of another Te Puni Kōkiri-funded research project being conducted by Dr Farah Palmer, this is exactly what has taken place. Interviews with specific sub-groups (e.g., kaumātua, tamariki, rangatahi) have taken place, and the findings from these interviews are being analysed. Findings from this project will be shared with Te Puni Kōkiri and Sport Manawatu to help with the design and implementation of He Oranga Poutama programmes in this region.

### **5.1.1 Recommendations regarding future methodology**

If additional surveys are to be completed, these need to be administered face-to-face or by phone. In addition, the lessons learnt (in terms of designing the survey and how best to approach individuals and groups) should be considered by researchers/practitioners when attempting to survey Māori in this region about sport and physical activity levels and issues.

Surveys of Māori stakeholders of sport and physical activity programmes in the Manawatu region need to occur regularly in order to see changes in behaviour and attitudes toward sport and physical activity in the future.

Additional interviews need to take place with specific sub-groups of the rohe (e.g., kaumātua, tamariki, rangatahi, wāhine, tāne, etc) in order to gain a more in-depth knowledge of the needs of Māori in the Manawatu region. Preferably these interviews should be conducted by someone from within the iwi group that is well-known, has good networks, and who has regular contact with the interviewees.

## **5.2 *Analytical limitations***

Because of the small number of completed surveys, the analysis of survey responses was relatively superficial. A description of the 'physical activity' levels, issues, and motives/barriers was provided by using the SPSS programme to create frequency tables and statistics. With more data, however, comparisons between specific sub-groups of the targeted population (e.g., women compared to men, differences/similarities between age groups and iwi, etc) could be conducted.

### **5.2.1 Recommendation regarding future analysis**

That further analysis of the data takes place in order to focus on specific sub-groups of the iwi population.

## **5.3 *Other limitations***

The section of the survey which aimed to determine what sports respondents were involved in was not well-designed, and as a result, respondents appeared to over-report their involvement in the sports that were specifically mentioned in the survey (e.g., cricket, golf, doubles tennis, and badminton).

### **5.3.1 Recommendation regarding design of survey question**

Administering the survey face-to-face or over the phone may prevent over-reporting or inaccurate reporting from happening in the future. The survey could be redesigned so that respondents must list the sports they are involved in earlier in the survey. This may result in more accurate methods of recording involvement in specific sports.

## 6. Discussion and Recommendations

The overall objective of the project was to produce guidelines for the named iwi in order to develop effective health and wellbeing strategies through physical activity and sport programmes.

Specific objectives of the project were to:

- a) Provide **baseline information** around the health and physical activity levels of Māori affiliating to the 3 iwi in this region, and **compare these to national guidelines**.
- b) Provide a **Māori slant on the 'Obstacles to Action'** results in the Manawatu/Wanganui/Taranaki region conducted in 2003 and released in 2005.
- c) Provide evidence-based information around types of **services** being delivered in and accessed by the community.
- d) Gain an indication of the **awareness** of the benefits of physical activity.
- e) Determine what **enables** and what **constrains** iwi members with regards to their level and type of physical activity involvement.

### 6.1 Baseline health/physical activity information

According to National guidelines (promoted by SPARC through the Push Play campaign) 30 minutes a day of physical activity is recommended for health. The SPARC facts relating to Māori (2001), state that 71% of young Māori (5-17 years) and 67% of adult Māori (18+ years) were considered active.

Approximately 59% of respondents in this survey were at or above the recommended levels of physical activity.

The SPARC Facts for Māori (2001) claimed that 22% of Māori men and 21% of Māori women were not active on any days. In this survey, only 8% of respondents stated that they were inactive. This is a positive comparison, as it indicates that the majority of Māori in this region are active to some degree.

It appears, therefore, that the spread of physical activity among Māori in the Manawatu region is not as broad as it is nationally. Māori in Manawatu are not as active as the Māori nationally, but are not as inactive either.

Work and the work environment continue to act as an incentive, enabler and barrier to physical activity for Māori. If work requires physical fitness and activity it acts as an incentive (teacher, physiotherapist, gym instructor, and health promoter). If work provides opportunities for physical activity it acts as an enabler (walk up and down stairs at work), and if it requires long hours and causes mental and/or physical fatigue it acts as a barrier (self employment means making time to participate while earning an income is difficult).

Many of those surveyed were physically active as part of their work. It is important, however, to differentiate between physical labour/work and physical leisure. Leisure is a discretionary activity that is conducted in discretionary time and results in a pleasurable and rewarding experience or emotion. If work-related activity is to produce health benefits it needs to involve personal choice (discretion) and enjoyment.

#### ***Recommendation 6.1.1***

*Opportunities to participate in physical leisure associated with work colleagues (business house sport events/teams), work environments (walk to work, gym close to work, walking groups at lunch time), or work kaupapa (practising what is preached in terms of Māori wellness) should be encouraged through Sport Manawatu and He Oranga Poutama initiatives.*

According to the National Māori statistics (SPARC, 2001) walking was the number one leisure activity for Māori men and women. This is supported by results of this survey where 75% of respondents indicated they participated in walking. Māori respondents also seemed aware of historical walking tracks in their region which they wanted to access more.

Another popular leisure activity for Māori at the national level was gardening with 40% of men and 56% of women participating in gardening as a leisure activity (SPARC, 2001). Gardening was very popular in this survey, with 70% of respondents involved. Programmes to encourage gardening, therefore, may be one way to encourage Māori to be more physically active. Tending to a vegetable or flower garden may also appeal to the sense of purpose many Māori mentioned as a motive for being physically active. Traditional food gathering activities were also popular among respondents. As one kaumātua mentioned in an interview:

*Well, when we get kaimoana I can walk for miles but if it's a humbug walk, uh, I get tired! When it comes to mahi kai, oh yes*

### **Recommendation 6.1.2**

*Activities associated with the land should be encouraged as a way of not only improving physical health, but also spiritual and emotional health. By connecting with the land (through gardening, historical tracks, or food gathering activities), core values of tikanga Māori such as whānaungatanga (kinship), manaakitanga (caring), and atawhai (nurturing) will be fostered.*

Other popular leisure activities for Māori according to SPARC facts (2001) included fishing, swimming, home exercise, and aerobics (for Māori women). Sixty five percent of the sample in this survey stated that they participated in swimming, and 63% claimed to exercise at home. Cycling was another popular leisure activity with 56% stated that they took part in cycling, and 44% claiming to use cycle lanes in their community.

### **Recommendation 6.1.3**

*The number of Māori interested in or currently participating in one-off events such as recreational triathlons (especially for women), and team endurance events (e.g., Lake Taupo relay race, Lake Taupo cycling challenge, Relay for Life, etc) should be measured. The figures in this survey suggest there is an interest in outdoor-related activities, and the desire of Māori to socialise with family and friends and to be competitive implies these events will be very popular with Māori in this region.*

According to SPARC(2001), 97% of all Māori adults enjoy some form of sport or active leisure over a year. Sport therefore, is considered as a vehicle through which Māori can be encouraged to be more active and healthy. A high percentage of respondents were involved in competitive team sports (69%) and to a lesser extent in competitive individual sports (22%).

The National figures with regards to Māori involvement in sport indicated that 40% of Māori were active members of a gym or sports club in 2001. For Māori men this figure was 47% and for Māori women it was 34%. In this survey, 40% of respondents were involved in seasonal, competitive sports and 35% said they would be involved if they had the opportunity. Organised sport, therefore, continues to be an avenue through which Māori (especially men) can become more active.

In 2001, the top sport for Māori men was touch rugby and for Māori women the top sport was netball. The figures on specific sports participation in this survey are misleading due to over-reporting, but there are trends worthy of mentioning. Popular sports included golf, netball, touch, basketball, rugby, rugby league, tennis, softball, soccer, and volleyball. Māori involvement in traditional team sports remains high, and some individual sports where Māori representation at the organisational level is strong (e.g., tennis and golf) also appear promising.

#### **Recommendation 6.1.4**

*Sport Manawatu should continue to facilitate Māori involvement at the participatory level in sports that Māori have predominantly been involved in (e.g., touch, rugby, league, netball), but they should also consider other sports such as badminton, volleyball, and tennis which seem to be popular in the Manawatu region.*

The range of sport opportunities in New Zealand has multiplied in recent years and it may be difficult to pinpoint a handful of sports to focus on. Although basketball is popular, a study by Thomson (1998) noted that this interest does not necessarily translate into participation. The cultural consumption and spectatorship trends of North American sports are already starting to impact on participation levels of New Zealand youth.

#### **Recommendation 6.1.5**

*The interest in North American sports such as basketball need to be translated into participation through networks and facilities (e.g., Highbury Whānau Centre)*

There is also a growth in popularity of activities that are less organised and regulated and have less emphasis on traditional sporting values. Informal sport and leisure activities such as mountain biking, beach volleyball, informal basketball, rollerblading, touch rugby, and skateboarding tend to emphasise values such as excitement, spontaneity, rebellion, non-conformity, sociability and creativity, and these are assuming considerable importance in New Zealand and worldwide within the context of youth culture (Thomson, 1998).

A trend worth noting is the growing number of Māori involved in social sports and 'alternative' sports. There were more individuals involved in social sports than competitive individual sports, and 44% stated they were involved in social sport which was higher than the proportion of respondents involved in competitive, organised sports. Other leisure activities which could be considered as 'alternative' included surfing/body boarding, skateboarding, and horse-riding.



#### **Recommendation 6.1.6**

*A programme that encourages and supports social sport participation and non-traditional sports and leisure activities should be an ongoing part of any future physical activity programme targeted at Māori, and Māori youth in particular.*

Although 55% of respondents appear to be meeting nutritional guidelines in terms of daily fruit and vegetable intake, more than 50% of the respondents would like additional nutritional information for themselves, their whānau, and their marae.

#### **Recommendation 6.1.7**

*He Oranga Poutama and Sport Manawatu should continue to work in partnership with health organisations promoting the healthy living and eating message to Māori communities.*

## **6.2 Māori slant on Obstacles to Action data**

According to the Obstacles to Action Survey (2003), the levels of activity in Manawatu are similar to the national level. The activity levels of this Māori sample are compared to the Manawatu and National samples in **Table 142**.

**Table 142: Comparison of physical activity levels**

<b>Activity levels</b>	<b>National</b>	<b>Manawatu</b>	<b>Māori</b>
<b>Active</b>	45	44	59
<b>Target Group</b>	46	46	33
<b>Inactive</b>	9	10	8

The level of awareness of physical activity facilities in the community was compared between the National, Manawatu, Manawatu Target group, and Māori sample in this project. These figures are summarised in **Table 143**.

**Table 143: Comparison of facility awareness among survey respondents**

Awareness of	National results (n = 8193)	Manawatu results (n = 314)	Manawatu target group (n = 142)	Māori sample (n = 188)
<b>Water-based facilities</b>	81	79	80	76
<b>Parks/fields</b>	87	81	79	72
<b>Courts</b>	74	79	78	57
<b>Organised sports</b>	68	66	64	40
<b>Walking tracks</b>	72	67	64	52
<b>Health club/gym</b>	59	56	59	33
<b>Cycle lanes/paths</b>	49	59	59	44
<b>Hall/centre</b>	53	44	40	37
<b>Home exercise equipment</b>	36	44	44	35

In all cases, the awareness and use of facilities by the Māori sample in this project are lower than the National, Manawatu, and Manawatu target group samples identified in the Obstacles to Action Survey (2003).

#### **Recommendation 6.2.1**

*There seems to be a need to increase the awareness among Māori in the Manawatu about the availability of facilities for physical activity.*

The two target groups identified by SPARC as a result of the Obstacles to Action survey (2003) were ‘support-seekers’ and ‘others-oriented’. Māori feature in both these target groups at the national level, with 12% of ‘others-oriented’ being Māori, and 16% of ‘support-seekers’ being Māori. It is difficult to determine exactly where respondents in this survey would be situated. It appears, however, that Māori are only concerned with sensitivity to others and support from others if ‘others’ refers to whānau and friends. This is highlighted by comparing the responses to the motive questions in the survey

with Manawatu statistics gathered from the Obstacles to Action survey (2003). See **Table 144** for this comparison.

**Table 144: Comparison of key motivators in surveys**

<b>I am physically active because</b>	<b>Manawatu</b>	<b>Manawatu target</b>	<b>Manawatu Māori</b>
<i>Good for my overall health</i>	68	62	83
<i>Want to take responsibility for my own health</i>	64	54	82
<i>Want to be a good role model for my children/family</i>	40	37	79
<i>Enjoyment</i>	51	48	78
<i>Being healthy is important choice</i>	43	38	74
<i>I want to be in shape</i>	48	33	67
<i>Not doing so puts my health at serious risk</i>	33	33	57
<i>Part of my job to be active</i>	34	25	55
<i>It is to avoid shame/guilt</i>	17	11	48
<i>I want others to see I can do it</i>	13	18	40
<i>Important that my dog gets exercise</i>	21	17	36
<i>Others would be upset with me if I didn't</i>	7	6	32
<i>I feel pressure from others to be active</i>	8	12	30
<i>I want others to approve of me</i>	11	15	25

The first noticeable difference is that respondents of this survey agree with statements more than respondents in the Obstacles to Action survey (2003) did. The most obvious similarity is that health, wellbeing and enjoyment are key drivers to physical activity across the board.

Reasons for being physically active associated with 'others' generally, however were the lowest motivators for Māori in this sample. Other motivating factors such as gaining health benefits, enhancing whānaungatanga, gaining personal rewards (enjoyment, choice, challenge, competition), avoiding negatives (shame/guilt, injury and ill-health) and necessity (because of work) were more important to the Māori sampled in this project than pleasing or avoiding disapproval from others.

### **6.3 Service delivery and access**

The awareness and use of community facilities and resources that are publicly available was high among those that responded to the survey. Water-based facilities (natural and man-made), parks/fields, sport courts, historical walking tracks, and cycle lanes were used by 44% to 75% of respondents.

#### **Recommendation 6.3.1**

*Continued use of publicly available facilities by Māori such as water-based facilities, parks/fields and tennis/netball courts should continue to be promoted.*

The numbers aware of and accessing halls/centres and organised sport are similar to the numbers who are not aware of or accessing these facilities. Although the costs associated with these facilities are minimal (e.g., hiring fee, registration fees), their perceived inaccessibility may act as a barrier to regular physical activity. Furthermore, the awareness and involvement in social sports is higher than the involvement and awareness of organised sports.

#### **Recommendation 6.3.2**

*'How to' information should be provided to Māori wanting to use halls/centres or join organised sport. Future programmes, should also focus on social sports as an avenue for encouraging physical activity among Māori.*

A number of respondents were keen to access and use exercise equipment, although this wasn't necessarily associated with gyms and health clubs. Many respondents exercised at home (63%) and/or used exercise machines at home (39%). Providing access to these exercise machines in a Māori environment may encourage physical activity among Māori target groups such as kaumātua or mothers. One member of the kaumātua group, for instance, mentioned that the kaumātua programme helped to improve her self-esteem and gave them the confidence to join a gym.

### **Recommendation 6.3.3**

*A 'have a go' day to familiarise Māori with exercise equipment could be organised to encourage physical activity in their homes (e.g., swiss balls) and to act as a pathway to joining a gym. Further investigation should occur into the option of providing access to exercise equipment in community facilities (e.g., marae or centres/halls in predominantly Māori communities).*

Awareness and use of Māori health providers, general health services, and to a lesser extent whānau wellbeing services was high. The level of awareness and use of Sport Manawatu personnel and services, however, was relatively low. This may indicate that Māori in the region are not familiar with the services and facilities offered by Sport Manawatu, or it could indicate that Sport Manawatu is the type of service that goes largely unnoticed (when assisting other community groups and organisations with sport and physical activity programmes).

### **Recommendation 6.3.4**

*The awareness within the Māori community of the expertise and resources Sport Manawatu can provide in terms of health, physical activity, and sport facilitation needs to increase.*

Although the awareness of Sport Manawatu personnel and services seems low, the enthusiasm for accessing programmes and events that Sport Manawatu contributes to was relatively high. In particular, respondents were highly aware of and took part in one-off events such as iwi games and the Relay for Life event, which Sport Manawatu helps to co-ordinate and manage.

### **Recommendation 6.3.5**

*Because the level of awareness of 'other' health providers (other than Sport Manawatu) is high, He Oranga Poutama programmes should be promoted within networks of health providers, and in particular within Māori and whānau health services and programmes. This will ensure greater impact and hopefully uptake in terms of accessing more Māori, and encouraging/facilitating their involvement in physical activity and sport.*

## **6.4 Awareness of physical activity benefits**

As mentioned earlier, motives for physical activity were predominantly associated with health issues. Health issues mentioned by respondents included enhancing and maintaining general health and wellbeing, losing weight or maintaining current shape, avoiding ill health, increasing longevity, as well as keeping injuries and illness in check. The message that physical activity is good for health seems to be well and truly in the minds of the respondents. Witnessing the ill-health of close friends and family members, and 'wanting to live as long as I can to enjoy my treasures (my whānau)' were health-related motives that indicated an awareness of the role physical activity plays in maintaining health and increasing longevity.

### **Recommendation 6.4.1**

*Programmes that encourage physical activity should continue to push the health messages of regular physical activity to Māori. These messages can be similar to auahi kore messages that focus on benefits to the whānau of remaining smokefree.*

## **6.5 Identifying enablers and barriers to physical activity**

Despite increasing documentation that the health-related benefits of physical activity are achievable by most individuals, adherence to structured programmes in free-living environments has remained at 50% over the last 3 decades (Seefeldt, Malina & Clark, 2002).

### **a) Motives**

The concept of motivation refers to the forces that initiate, direct and sustain human behaviour (Iso-Ahola, 1999 cited in Alexandris, Tsorbatzoudis & Grouios, 2002). Early studies assumed that only two types of motivation

existed, namely intrinsic and extrinsic motivation. More recent studies have proposed that there are three dimensions of intrinsic motivation, and three dimensions of extrinsic motivation. This is explained in **Table 145**.

**Table 145: Dimensions of Intrinsic and Extrinsic Motivation**

<b>Motivation</b>	<b>Dimension</b>	<b>Explanation</b>
Intrinsic	Motivation to know	Performing the activity for the satisfaction derived from learning, exploring or trying to understand new concepts
	Motivation to accomplish	Engaging in an activity for the pleasure and satisfaction experienced when one attempts to reach personal objectives
	Motivation to experience stimulation	Engaging in activities in order to experience stimulating sensations such as sensory pleasure, aesthetic experience, fun and excitement
Extrinsic	External regulation	Traditional view of engaging in the behaviour for external rewards (e.g., social recognition)
	Introjected regulation	Behaviours that are initiated and regulated by internally controlling imperatives (e.g., guilt or anxiety)
	Identified regulation	Individual judges the behaviour as important, and therefore, performs it out of choice

A booklet summarising the effectiveness of recreational programmes designed for inactive and/or at-risk Māori was released by Te Puni Kōkiri in 1995. The two most significant motivating factors were a desire to be physical, and a desire to be involved with whānau and hapū in activities organised by Māori for Māori (Te Puni Kōkiri, 1995b). A desire to be physical for instance could be categorised as ‘intrinsic motivation to experience stimulation’ or ‘intrinsic motivation to accomplish’. A desire to be involved with whānau and hapū activities could be categorised as ‘identified regulation’.

i) *Intrinsic motivation to experience stimulation + Identified Regulation*

As already mentioned, the strongest motive for physical activity from respondents of this survey was personal health. This was considered to be an important choice and one that was necessary in order to improve and/or maintain it. The family element, however, was also a strong motive. This included being motivated by a sense of togetherness, shared goals, and social interaction with friends, whānau, children and other Māori.

As one respondent noted, they participated in the kaumātua programme because it was 'good company, and teasing the other kaumātua was enjoyable'. The social element to this programme was such a strong attraction for this individual, that they 'couldn't wait for the next class'.

***Recommendation 6.5.1***

*Programmes that encourage social interaction among like-minded individuals such as the kaumātua programme should be supported as 'best practice' examples of how to get more Māori, more active, more often.*

The survey responses also indicate that children play a significant role in the physical activity opportunities of Māori in this region. Children were identified as a main motive and enabler of physical activity. Women and Māori tend to emphasise and practice an 'ethic of care' for the elderly and for children. Thompson (1990) argues that the institution of sport, for instance, has relied on the services of women for its maintenance and reproduction. National statistics also highlight the role Māori play in servicing sport at the grassroots. The SPARC facts for Māori, for instance, states that Māori more than non-Māori are involved in sport in an official or helping role such as refereeing, coaching or a parent helper. Some of the responses would indicate this is a motivating factor for being active in this survey as well: This can act as a motive to be active, if physical activity is incorporated into the role, as the following quote highlights:



*“I coach and try to get as much exercise while coaching”*

**Recommendation 6.5.2**

*Māori should be encouraged to take an active role in the leisure and sport interests of their children, but this need not be an ‘either-or’ situation. Making time for their own physical leisure pursuits should not be sacrificed.*

*ii) Motivation to Accomplish + Motivation to Experience Stimulation*

The other major motivators for physical activity related to intrinsic motives to accomplish and experience stimulation such as the experience of fun and enjoyment, and achieving specific goals. These goals usually included a competitive and personally challenging element.

**Recommendation 6.5.3**

*Activities that are competitive but fun, as well as achievable yet challenging should be incorporated into physical activity and sport programmes for Māori.*

*iii) Weight loss = Introjected Regulation or Identified Regulation?*

Self presentation, the monitoring and control of how one is perceived by others, appears to be a neglected but important determinant in the exercise behaviour of adults (Seefeldt et al., 2002). This need to present oneself positively to others may persuade some adults to change their diets and physical activity levels in order to enhance their bodily shape and personal appearance. This seemed to be a strong motivator for a number of respondents who mentioned that ‘keeping in shape’ motivated them to be active.

**Recommendation 6.5.4**

*Physical activity programmes that incorporate a weight-loss or body enhancing element may attract Māori who are strongly motivated by this factor.*

### **Recommendation 6.5.5**

*Physical activity and nutrition programmes could be combined with the intent of helping Māori to achieve their goal of weight loss or weight maintenance.*

#### **iii) Intrinsic and Extrinsic motives**

Sport also acted as a motivating factor to be physically active. This related to the enjoyment/fun aspect ('I love sport'), to the socialising/whānaungatanga element (interact with friends/family), to goal-oriented behaviour (enjoy results from training), and because Māori felt they could achieve success in this endeavour (I'm good at it). Sports that were mentioned in the open-ended part of the survey included netball, rugby, softball, volleyball, touch rugby, basketball, and 'physical' sports. All of these sports were team sports. Further analysis of the data needs to take place in order to determine what age group tends to highlight sport as a motivating factor. It is assumed that the majority of individuals who mentioned sport were probably in the 15 to 40 year range. Although sport acts as a motivator for this age-group, some of the responses indicated that once Māori are no longer competitive in these sports, they stop physical activity all together.

### **Recommendation 6.5.6**

*Sport programmes and events that Māori are attracted to should continue to be promoted and developed in Māori settings, communities, and events. These sports include netball, rugby, softball, volleyball, touch rugby, basketball, team sports in general, and physical sports.*

#### **b) Enablers**

According to a review of factors affecting levels of physical activity in adults by Seefeldt, et al. (2002) individual needs, personal level of fitness, readiness for a change in behaviour, perceived personal control of the activity and its outcome, and support from family, peers and community seem to promote adherence to physical activity in structured and free-living situations.

### *I) Motivation to Accomplish*

When asked 'what would make you more active on a regular basis' many of the respondents mentioned specific activities associated with fitness, leisure, sport, structures and purposes. For instance, walking, swimming, rugby, netball, and sports in general were often mentioned as activities that would encourage activity. More organised activities such as tournaments, competitions, relay events, clubs, gyms, school sports, and after-school sports were suggested, and activities with a purpose were listed (e.g., mowing lawns, walking the dog, chopping wood, fishing, digging for toheroa, shopping, gardening, and walking to work).

Other enablers could be categorised as internal (e.g., self-discipline, motivation), external (time, money), others-oriented (children, socialising, whānau), and tikanga Māori oriented.

The internal and external enablers will be addressed when discussing the intrapersonal and structural barriers respondents mentioned. Attention, therefore, was given to 'others-oriented' enablers such as children, whānau, and tuturu Māori programmes/events.

### *ii) Motivation to know + Identified Regulation*

Seefeldt et al. (2002) advocates for the inclusion of spiritual wellbeing in physical activity programmes. This is not a new idea for Māori who have been strong advocates of total wellbeing by nurturing te taha tinana, te taha hinengaro, te taha whānau, and te taha wairua. In this project, there was a desire to be involved in more physical activity programmes with children, whānau, and Māori in particular. Events and activities such as marae exercise classes and games, kapa haka, iwi games (e.g., Muaūpoko Family Sports Day), kaumātua/tamariki programmes, and physical activity events with a Māori kaupapa were mentioned as ways of making more Māori active on a regular basis.

### **Recommendation 6.5.7**

*The kinship associated with socially interacting with children, whānau, and Māori in general is a potential enabler for Māori to get involved in physical activity.*

#### **c) Barriers**

Jackson and Henderson (1995) defined a constraint to leisure as ‘anything that inhibits people’s ability to participate in leisure activities, to spend more time doing so, or to take advantage of leisure services, or to achieve a desired level of satisfaction’ (p. 31-32 cited in Shinew, Floyd & Parry, 2004), p. 183).

Crawford and Godbey (1987, cited in Alexandris, Tsorbatzoudis & Grouios 2002) classified constraints into intrapersonal, interpersonal and structural. Crawford et al. (1991, cited in Alexandris et al. 2002) proposed that these three categories are experienced hierarchically, and intrapersonal constraints (which are the most proximal to decision-making processes) are the most powerful determinants of participation. Jackson et al. (1993, cited in Alexandris et al. 2002)) expanded the hierarchical model of leisure constraints by incorporating the negotiation proposition. They suggested that leisure participation is dependent on negotiating through constraints. Therefore, what are the intrapersonal, interpersonal, and structural constraints Māori must negotiate in order to be physically active?

Barriers specific to Māori participation in physical activity mentioned in a 1995 report by Te Puni Kōkiri included cost, transport difficulties, lack of whānau support, lack of suitable childcare, lack of self-motivation, communication and location difficulties, work commitments, inappropriate programmes, ill health, low self-esteem, low awareness of consequences, facilities, and opportunities,

and whakamaa (Te Puni Kōkiri, 1995b). Many of these potential barriers to physical activity were mentioned in this survey, but some in particular were mentioned by respondents in this project. These constraints/barriers will be discussed, and then related to a model which attempts to explain how motivation and the leisure constraints relate to each other.

#### *i) Intrapersonal Constraints*

Intrapersonal constraints are internal constraints related to individual psychological states and attributes. Perceived skills and fitness levels, perceived self-competence, subjective evaluations of the appropriateness of opportunities, perceived awareness, and negative attitudes related to past experiences are all examples of constraints that have been conceptualised as intrapersonal (Alexandris, et al., 2002).

Many of the respondents mentioned health issues as a barrier to physical activity. Aggravating injuries, asthma, weight, and the flu were some of the more common issues mentioned. Understanding the causes of poor health is beyond the scope of this project, but it is common knowledge that poor health can be due to several factors including old age, socioeconomic status, and lifestyle. Whether an inactive lifestyle has lead to poor health among respondents is not known, but the benefits of regular physical activity in terms of improving health need to be emphasised to Māori experiencing poor health.

The cultural legacy of 'being good at sport' may also act as a barrier for many Māori who are no longer fit, healthy or capable of participating competitively (their self-efficacy is probably low). One of the kaumātua did mention that there is a common perception that physical activity needs to be vigorous in order to be beneficial. This perception needs to be changed in order to attract a wider range of Māori to engage in physical activity for health reasons.

### **Recommendation 6.5.8**

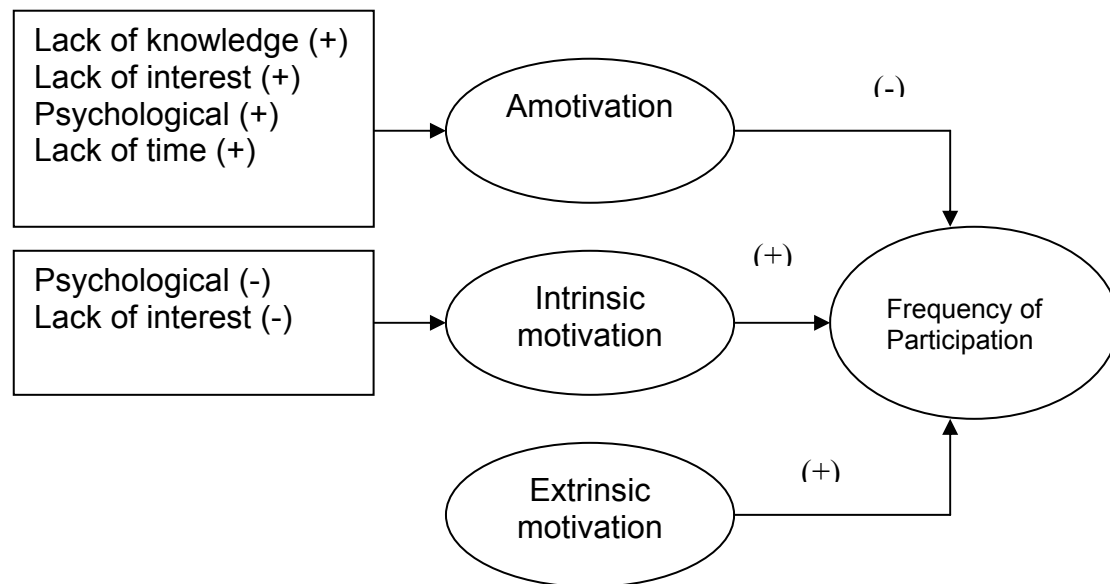
*An educational programme to highlight how moderate physical activity can relieve some of health/injury ailments needs to take place, and the idea that physical activity has to be strenuous or competitive in order to gain benefits should be challenged.*

It has been suggested that the interaction between constraints and motivation might play an important role in the negotiation of constraints process. Vallerand and Losier (1999 cited in Alexandris, et al., 2002) suggested that social factors influence intrapersonal constraints which in turn influence motivation and then behaviour.

Motivational barriers were mentioned by a large number of respondents, who felt that procrastination, laziness, lack of motivation, short attention span, lack of time, and lack of willpower prevented them from initiating and/or adhering to regular physical activity.

Research by Alexandris, et al. (2002) attempts to explain how intrapersonal constraints such as lack of knowledge, lack of interest, psychological, and lack of time influences motivation, which in turn affects behaviour. The conclusions of their research has been adapted and illustrated for this project in **Figure 45**.

**Figure 45: Relationships between constraints, motivation and frequency of sport participation (adapted from Alexandris, et al., 2002; p. 246).**



In summary, a lack of knowledge, lack of interest, psychological barriers, and perceived lack of time contribute to amotivation which in turn decreases the frequency of participation. No significant relationships were found between interpersonal and structural constraints and amotivation. Constructs such as perceived competence, perceived autonomy, task involvement, and perceived playfulness act as mediators of motivation and could be used in future studies to better conceptualise intrapersonal constraints.

The research by Alexandris et al. (2002) also indicated that intrapersonal constraints predicted intrinsic motivation. High levels of psychological constraints and lack of interest are associated with low levels of intrinsic motivation. There was no relationship between any type of constraint and extrinsic motivation.

### **Recommendation 6.5.9**

*All attempts to alleviate intrapersonal constraints such as lack of knowledge, lack of interest, psychological, and lack of time should be made, as it has been proven that these barriers positively influence amotivation and negatively influence intrinsic motivation to be physically active.*

#### *ii) Interpersonal Constraints*

Interpersonal constraints result from interpersonal interaction and include constraints related to inability to find partners to be physically active with. Some of the respondents in this survey mentioned family and tangi duties as a potential barrier to regular physical activity. Kaumātua in particular are often attending numerous tangi, and this can potentially be a health-enhancing experience (gives them mana, time with family, social interaction, and a sense of purpose). As one kaumātua mentioned, however, family duties can disrupt their physical activity programme 'although having them [mokopuna] visit is wonderful and keeps me active'. Researchers (Seefeldt, et al. 2002) suggest recommencing physical activity programmes as soon as possible after bereavement ceremonies and other family occasions have been completed. Physical activity in these situations also needs to be normalised and considered as a Māori thing to do. The marae, which is considered the heart of Māori culture in contemporary New Zealand, has been utilised as a health and fitness centre in some regions. Tahuna Marae (Ngāti Te Ata), for instance, began a 'health through the marae' project in 1990 which was supported by Te Puni Kōkiri because it helped to culturally sensitise health as a 'Māori thing to do' (Te Puni Kōkiri, 1995a).

### **Recommendation 6.5.10**

*Being physically active in traditional Māori contexts (e.g., at tangi, on the marae, at noho marae, etc) should be encouraged as a Māori thing to do through specific 'health through the marae' programmes and projects.*



As mentioned earlier, children can be a reason to be physically active, but for some of the respondents they were also perceived of as a barrier to physical activity. A few respondents mentioned that being pregnant prevented them from being physically active, and this may indicate a misunderstanding about the relationship between physical activity and the welfare of the unborn child.

***Recommendation 6.5.11***

*Programmes that dispel myths about the role of physical activity during pregnancy should target Māori mothers and their families. Programmes for pregnant Māori mothers could also be developed to encourage physical activity at this stage in a woman's life.*

Others mentioned a lack of babysitters, childcare facilities, and/or money to pay for babysitters/childcare as a reason for inactivity.

***Recommendation 6.5.12***

*Programmes and facilities that provide childcare options, and/or allow children to participate, are family-friendly, or family-oriented will encourage more Māori to be more active, more often.*

Thompson (1990) explains how women often feel that leisure time for themselves is a privilege rather than a right, and they will often put the leisure interests and needs of others ahead of their own. The baby boom generation is also becoming known as the 'sandwich generation' who are required to look after children (who are leaving home later) and parents (which is common practice among Māori). Many of the respondents mentioned 'duty to others' as an enabler to physical activity. For instance:

*I am a coach (give back to people)  
Caring for my mokopuna  
Sport teaches me to respect others  
To stay on my toes for my daughters  
Passion to help others  
To motivate others  
Role model for my children*

Unfortunately, children, domestic duties, and tautoko duties can also be perceived of as a barrier to physical activity as the following quotes highlight:

*Raising young children  
Demanding kids  
I only have 2 children but find it difficult to find babysitters to watch kids  
Too busy cleaning the house and cooking tea  
Jobs around the house  
Tautoko duties  
Church activities*

**Recommendation 6.5.13**

*The idea that ‘others’ have more of a right to leisure than caregivers needs to be challenged. Integrating a ‘tautoko’ element into sport and physical activity programmes/events may also encourage more Māori to pursue leisure activities for themselves.*

*iii) Structural Constraints*

Structural constraints are external constraints related to the unavailability of resources required to participate in leisure activities. Leisure constraints mentioned by respondents that could be considered ‘structural’ include time, work, money, and weather. Other structural constraints mentioned included a lack of opportunities to be active (e.g., out of school, not enough games, exercise class timetable doesn’t suit individual, etc), lack of childcare facilities, lack of knowledge about what is happening in the community, and lack of transport or location issues.

**Recommendation 6.5.14**

*Although many of these barriers could be perceived of as intrapersonal constraints, organisations such as Sport Manawatu could assist community groups in the provision of exercise classes, events, tournaments, and sport competitions that appeal to the motives of Māori to be physically active.*

## **7. Appendices**

Appendix A: Contract Agreement between Te Puni Kōkiri and Sport Manawatu (via Te Roopu Manaaki) .....	
Appendix B: Marae and Hapū List .....	
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## ***Appendix A: Contract Agreement***



















## Appendix B: Marae and Hapū List

IWI	HAPU	MARAE
Ngāti Raukawa ki te Tonga	Ngāti Pikiahu	Poupatate
	Ngāti Pikiahuwaewae	Te Tikanga
	Ngāti Rangatahi/Ngāti Matakore	Te Hiiri o Mahuta
	Ngāti Manomano	Taumata o te Rā
	Ngāti Parewahawaha	Ōhinepuhiawe
	Ngāti Kauwhata†	Aorangi
	Ngāti Kauwhata†	Kauwhata
	Ngāti Tūranga	Paranui
	Ngāti Rākau Paewai	Motuiti
	Ngāti Whakatere	Whakawehi
	Ngāti Ngārongo/Ngāti Takihiku	Kereru
	Ngāti Huia†	Matau
	Ngāti Huia†	Huia
	Ngāti Pareraukawa	Ngatokowaru
	Ngāti Kikopiri	Kikopiri
	Ngāti Tūkorehe	Tūkorehe
	Ngāti Wehiwehi	Wehiwehi
	Ngāti Kapumanawawhiti	Te Pou o Tainui
	Ngāti Pare/Ngāti Koroki/Ngāti Maiotaki	Raukawa
	Ngāti Huia†	Katihiku
	Ngāti Te Au	
Muaūpoko	Ngai Te Ao	Kawiu
	Ngāti Hine	Kawiu
	Ngāti Pariri	Kawiu/Kohutoroa
	Ngāti Tamarangi	Kawiu
	Ngāti Whanokirangi	Kawiu
	Punahau	Kawiu
Rangitāne	Ngāti Hineaute	Te Hotu Manawa o Rangitaane
	Ngāti Rangiaranaki	Te Hotu Manawa o Rangitaane
	Mairehau*	Te Hotu Manawa o Rangitaane/Motuiti
	Te Rangi te paia	Te Hotu Manawa o Rangitaane
	Ngāti Tauira	Te Hotu Manawa o Rangitaane
		Te Rangimarie*
Rangitaane o Tamaki Nui-a-Rua	Ngāti Mutuahi/ Ngāti Rangiwhakaewa	Makirikiri
	Ngāti Pakapaka/ Ngāti Rangiwhakaewa	Kaitoke
	Te Hika A Papauma	Owahanga
	Ngāti Te Koro	Te Ahu a Turanga
	Ngāti Mutuahi/Ngāti Pakapaka/Ngāti Rangiwhakaewa	Whiti Te Ra
	Ngāti Hamua	no marae
	Ngāti Puatotara	no marae
	Ngāti Pakaitore	no marae

Ngāti Huia recognise themselves as an independent iwi even though they are affiliated to the Raukawa iwi.

Ngāti Kauwhata recognise themselves as an independent iwi even though they are affiliated to the Raukawa iwi.

\* I'm not totally sure about this but Te Rangimarie is a marae of Rangitaane even though a number of sources state that it serves only the whānau affiliated to it (descendants of Te Awe Awe).

### Appendix C: Version 1 of Survey

1. Iwi: \_\_\_\_\_ 2. Hāpu: \_\_\_\_\_

2. Are you: Male ☐ Female ☐

3. How old are you?

15 – 19 years ☐ 20 – 24 years ☐ 25 – 29 years ☐

30 – 34 years ☐ 35 – 39 years ☐ 40 – 44 years ☐

45 – 49 years ☐ 50 – 54 years ☐ 55 – 59 years ☐

60 – 64 years ☐ 65 – 69 years ☐ 70 + years ☐

6. Where do you currently live (town/city/village)?

7. In general, would you say your health is ... (mark one box)

Poor ☐ Fair ☐ Good ☐ Very good ☐ Excellent ☐

- The next part of the survey asks you about the time you spent being physically active in the last 7 days to yesterday. DO NOT INCLUDE ACTIVITY UNDERTAKEN TODAY.
- ACTIVE means doing anything using your muscles.
- This includes the activities you do at work, at school or home, getting from place to place, and any activities you did for exercise, sport, recreation or leisure.
- These activities will be broken up into brisk walking, moderate activities and vigorous activities.

## 8. BRISK WALKING/HĪKOI

A brisk pace is a pace at which you are breathing harder than normal

In the last 7 days how many days did you walk at a brisk pace for at least 10 minutes at a time?							
DAY	THU	WED	TUE	MON	SUN	SAT	FRI
YES/NO							
<b>How much time did you typically spend brisk walking on each of those days?</b>							
TIME (in minutes)							

## 9. MODERATE PHYSICAL ACTIVITY (CARD A)

Moderate activities make you breathe a little harder than normal

Please refer to **Card A** (page 3)

Please indicate in the DAYS COLUMN the number of days you were involved in any of these activities in the last 7 days

Please indicate in the TIME COLUMN the total time (in minutes) spent on any of these activities in the last 7 days

## 10. VIGOROUS PHYSICAL ACTIVITY (CARD B)

Vigorous activities make you breathe a lot harder than normal (make you huff and puff)

Please refer to **Card B** (page 4)

Please indicate in the DAYS COLUMN the number of days you were involved in any of these activities in the last 7 days

Please indicate in the TIME COLUMN the total time (in minutes) spent on any of these activities in the last 7 days

**CARD A**  
**MODERATE PHYSICAL ACTIVITY**

<b>ACTIVITY</b>	<b>DAYS</b>	<b>TIME</b>	<b>ACTIVITY</b>	<b>DAYS</b>	<b>TIME</b>
Carrying light loads			Actively playing with children		
Electrical work			Badminton		
Farming			Dancing (ballroom, nightclub)		
Heavy gardening (digging, weeding, raking, planting, pruning, clearing section)			Bowls (indoor, outdoor, lawn)		
Heavy cleaning (sweeping, cleaning windows, moving furniture)			Cricket (outdoors, batting and bowling)		
House renovation			Cycling (recreational)		
Machine tooling (operating lathe, punch press, drilling, welding)			Deer hunting		
Lawn mowing (manual mower)			Doubles tennis		
Plastering			Exercising at home (not gym)		
Plumbing			Golf		
Active fishing/eeling			Horse riding		
Kapa haka practice			Kayaking, waka ama, rowing (slow)		
Waiata-a-ringā, poi			Skate boarding		
Surfing/ body boarding			Yachting, sailing, dingy sailing		
Swimming (recreational, bombs, playing, in ocean/ river)			Building (furniture, smaller projects)		
Gathering seafood, kaimoana			Picking puha or watercress		

*Please turn back to page 2 for Question 10.*



**CARD B****VIGOROUS PHYSICAL ACTIVITY**

<b>ACTIVITY</b>	<b>DAYS</b>	<b>TIME</b>	<b>ACTIVITY</b>	<b>DAYS</b>	<b>TIME</b>
Carrying heavy loads			Boxing		
Forestry			Aerobics, step classes		
Heavy construction			Kayaking, waka-ama, rowing (fast)		
Digging ditches			Athletics (track & field)		
Chopping or sawing wood			Aquarobics		
Ultimate Frisbee			Skiing, snow boarding		
Taiaha			Badminton (competitive)		
Haka			Basketball		
Mountain biking			Hunting (vigorous)		
Soccer			Cricket – indoors (batting & bowling)		
Cycling (competitive road & track)			Rugby League		
Cycling – fast recreational			Rugby Union		
Rock climbing, abseiling			Hockey (ice and field)		
Exercise classes, going to gym, weight training			Bodybuilding		
Race walking			Netball		
Running, jogging, cross country			Judo, karate, other martial arts		
Table tennis (competitive)			Softball (running & pitching only)		
Tennis (singles)			Squash		
Touch rugby			Surf life-saving, surf competitions		
Tramping			Swimming (lengths, competitive)		
Triathlon			Waterpolo		
Volleyball			Gymnastics		
Home exercise machines (treadmill, rowing)			Shearing/Wool-handling		

*Please turn to page 5 for Question 11.*

## 11. STATE OF CHANGE

Please indicate (by circling the appropriate number) how much you personally agree or disagree with each statement. (If you don't understand a statement, please leave that line blank)

1 = strongly agree

4 = neither agree nor disagree

7 = strongly disagree

**When I am physically active it is because ...**

I enjoy physical activity	1	2	3	4	5	6	7
It is an important choice I really want to make	1	2	3	4	5	6	7
I would feel guilty or ashamed of myself if I didn't	1	2	3	4	5	6	7
I believe it is a very good thing for my health	1	2	3	4	5	6	7
Others would be upset with me if I didn't	1	2	3	4	5	6	7
I feel pressure from others to be more active	1	2	3	4	5	6	7
It is consistent with my life goals	1	2	3	4	5	6	7
I want others to approve of me	1	2	3	4	5	6	7
I want others to see I can do it	1	2	3	4	5	6	7
Not doing so puts my health at serious risk	1	2	3	4	5	6	7
My family wants me to	1	2	3	4	5	6	7
I want to take responsibility for my own health	1	2	3	4	5	6	7
I want to be a good role model for my children	1	2	3	4	5	6	7
I care about keeping in shape	1	2	3	4	5	6	7
My work is physically active	1	2	3	4	5	6	7
It is important to me that my dog gets enough exercise	1	2	3	4	5	6	7
Other reasons? (please state)							

## 12. COMMUNITY SERVICES

Below is a list of things you may have in your neighbourhood or at work.

Column A: mark the box that best indicates whether or not you would use each of these things if they were available to you.

Column B: mark one box to indicate which ones you consider are readily available to you now.

		Column A					Column B		
		Would you use this if it were available to you?					Is it readily available now?		
		Definitely would not		Definitely would			Yes	No	Don't know
A	Cycle lanes or paths								
B	Walking/hīkoi groups								
C	Walking tracks								
D	Public park with playing fields								
E	Swimming pool, beach, lake or river								
F	School gym/pool open to community								
G	Netball or tennis courts								
H	Community recreation centre								
I	Health club or gym near work								
J	Health club or gym near home								
K	Shower at work								
L	Home exercise equipment								

		Column A					Column B		
		Would you use this if it were available to you?					Is it readily available now?		
		Definitely would not		Definitely would			Yes	No	Don't know
M	Organised seasonal sports (with trainings)								
N	Organised one-off events (examples)								
O	Marae games								
P	Social sport competitions (no trainings)								
Q	General medical\								
R	Sport Manawatu personnel & services								
S	Community Health services								
T	Social work services								
U	Iwi services (education, scholarships, treaty claim advice)								
V	Physical activity programmes for Māori								
W	Whānau wellbeing services								
X	Disability services								
Y	Nursing services								
Z	Health screening services (breast screening, diabetes)								

**13. How much time do you intend to spend at the Te Matatini Aotearoa Kapa Haka Festival?**

A couple of hours	Half a day	1 day	2 days	3+ days
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**14. What are your reasons for attending the Festival?**

---

---

**15. How did you find out about the Festival?**

---

---

**16. Would you be interested in being interviewed with regards to you and your family's physical activity and health attitudes and patterns in the next month or so?**

**YES** ☐

**NO** ☐

**17. If you ticked the YES box, please write down your contact details so that one of our researchers can contact you to set up an interview time that is convenient for you.**

Name	
Postal Address	
Phone number (Home)	
Phone number (Work)	
Mobile phone number	
Email address	

**He mihi nunui ki a koe mō ō whakaaro.  
Thank you for completing this survey.**

***Tama tū, tama ora. Tama noho, tama mate.***

## Appendix D: Version 2 of Survey

1. Iwi: \_\_\_\_\_ 2. Hāpu: \_\_\_\_\_

2. Are you: Male ☐ Female ☐

3. How old are you?

15 – 19 years ☐ 20 – 24 years ☐ 25 – 29 years ☐

30 – 34 years ☐ 35 – 39 years ☐ 40 – 44 years ☐

45 – 49 years ☐ 50 – 54 years ☐ 55 – 59 years ☐

60 – 64 years ☐ 65 – 69 years ☐ 70 + years ☐

6. Where do you currently live (town/city/village)?

---

7. In general, would you say your health is ... (mark one box)

Poor	Fair	Good	Very good	Excellent
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. How much time do you intend to spend at the Te Matatini Aotearoa Kapa Haka Festival?

A couple of hours	Half a day	1 day	2 days	3+ days
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. What are your reasons for attending the Festival?

---

---

10. How did you find out about the Festival?

---

11. Please indicate the number of DAYS and TOTAL TIME you spent on these activities **in the last 7 days**.

ACTIVITY	Number of DAYS	Total TIME	ACTIVITY	Number of DAYS	Total TIME
Carrying light loads			Actively playing with children		
Electrical work			Badminton		
Farming			Dancing (ballroom, nightclub)		
Heavy gardening (digging, weeding)			Bowls (indoor, outdoor, lawn)		
Brisk Walking			Yoga/Tai Chi		
Heavy cleaning (sweeping, cleaning windows, moving furniture)			Cricket (outdoors, batting and bowling)		
House renovation			Cycling (recreational)		
Machine tooling (operating lathe, punch press, drilling, welding)			Deer hunting		
Lawn mowing (manual mower)			Doubles tennis		
Plastering			Exercising at home (not gym)		
Plumbing			Golf		
Active fishing/eeling			Horse riding		
Kapa haka practice			Kayaking, waka ama, rowing (slow)		
Waiata-a-ringā, poi			Skate boarding		
Surfing/ body boarding			Yachting, sailing, dingy sailing		
Swimming (recreational, bombs, playing, in ocean/ river)			Building (furniture, smaller projects)		
Gathering seafood, kaimoana			Picking puha or watercress		

12. Please indicate the number of DAYS and TOTAL TIME you spent on these activities in the **last 7 days**.

ACTIVITY	DAYS	TIME	ACTIVITY	DAYS	TIME
Carrying heavy loads			Boxing		
Forestry			Aerobics, step classes		
Heavy construction			Kayaking, waka-ama, rowing (fast)		
Digging ditches			Athletics (track & field)		
Chopping or sawing wood			Aquarobics		
Ultimate Frisbee			Skiing, snow boarding		
Taiaha			Badminton (competitive)		
Haka			Basketball		
Mountain biking			Hunting (vigorous)		
Soccer			Cricket – indoors (batting & bowling)		
Cycling (competitive road & track)			Rugby League		
Cycling – fast recreational			Rugby Union		
Rock climbing, abseiling			Hockey (ice and field)		
Exercise classes, going to gym, weight training			Bodybuilding		
Race walking			Netball		
Running, jogging, cross country			Judo, karate, other martial arts		
Table tennis (competitive)			Softball (running & pitching only)		
Tennis (singles)			Squash		
Touch rugby			Surf life-saving, surf competitions		
Tramping			Swimming (lengths, competitive)		
Triathlon			Waterpolo		
Volleyball			Gymnastics		
Home exercise machines (treadmill, rowing)			Shearing/Wool-handling		



13. Please indicate (by circling the appropriate number) how much you personally agree or disagree with each statement. (If you don't understand a statement, please leave that line blank)

1 = strongly  
disagree

4 = neither agree nor  
disagree

7 = strongly agree

When I am physically active it is because ...	Disagree				Agree		
	1	2	3	4	5	6	7
I enjoy physical activity	1	2	3	4	5	6	7
It is an important choice I really want to make	1	2	3	4	5	6	7
I would feel guilty or ashamed of myself if I didn't	1	2	3	4	5	6	7
I believe it is a very good thing for my health	1	2	3	4	5	6	7
Others would be upset with me if I didn't	1	2	3	4	5	6	7
I feel pressure from others to be more active	1	2	3	4	5	6	7
It is consistent with my life goals	1	2	3	4	5	6	7
I want others to approve of me	1	2	3	4	5	6	7
I want others to see I can do it	1	2	3	4	5	6	7
Not doing so puts my health at serious risk	1	2	3	4	5	6	7
My family wants me to	1	2	3	4	5	6	7
I want to take responsibility for my own health	1	2	3	4	5	6	7
I want to be a good role model for my children	1	2	3	4	5	6	7
I care about keeping in shape	1	2	3	4	5	6	7
My work is physically active	1	2	3	4	5	6	7
It is important to me that my dog gets enough exercise	1	2	3	4	5	6	7
Other reasons? (please state)							

14. Below is a list of things you may have in your community.

Column A: mark the box that best indicates whether or not you would use each of these things if they were available to you.	Column B: mark one box to indicate which ones you consider are readily available to you now.
---	--

	Column A					Column B		
	Would you use this if it were available to you?					Is it readily available now?		
	Definitely Definitely would not would					Yes	No	Don't know
Cycle lanes or paths								
Walking tracks								
Public park with playing fields								
Swimming pool, beach, lake or river								
Netball or tennis courts								
Community recreation centre								
Health club or gym								
Home exercise equipment								
Organised sports (with trainings)								
Marae games								
Social sport (no trainings)								
Sport Manawatu services								
Community Health services								
Social work services								
Iwi services								
Māori -based sport programs								
Whānau wellbeing services								
Disability services								

15. Would you be interested in being interviewed with regards to you and your family's physical activity and health attitudes and patterns in the next month or so?

YES ☐

NO ☐

If you ticked the YES box, please write down your contact details so that one of us can contact you regarding an appropriate interview time.

Name	
Postal Address	
Phone number (Home)	
Phone number (Work)	
Mobile phone number	
Email address	

He mihi nunui ki a koe mō ō whakaaro.  
Thank you for completing this survey.

*Tama tū, tama ora. Tama noho, tama mate.*

## Appendix E: Version 3 of Survey

1. Iwi: \_\_\_\_\_ 2. Hāpu: \_\_\_\_\_
2. Are you: Male ☐ Female ☐
3. How old are you?
- |  |  |  |
|--|--|--|
| 15 – 19 years <input type="checkbox"/> | 20 – 24 years <input type="checkbox"/> | 25 – 29 years <input type="checkbox"/> |
| 30 – 34 years <input type="checkbox"/> | 35 – 39 years <input type="checkbox"/> | 40 – 44 years <input type="checkbox"/> |
| 45 – 49 years <input type="checkbox"/> | 50 – 54 years <input type="checkbox"/> | 55 – 59 years <input type="checkbox"/> |
| 60 – 64 years <input type="checkbox"/> | 65 – 69 years <input type="checkbox"/> | 70 + years <input type="checkbox"/>    |
4. Do you consider yourself to be (tick all that apply):
- Tamariki ☐ Rangatira ☐ Rangatahi ☐ Kaumātua ☐
5. Please explain why you consider yourself to fit into one or more of these categories
- \_\_\_\_\_
- \_\_\_\_\_
6. Where do you currently live (town/city/village)?
- \_\_\_\_\_
7. In general, would you say your health is ...
- |                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Poor                     | Fair                     | Good                     | Very good                | Excellent                |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
8. On average how many days would you walk briskly (where you breath harder than normal) for more than 10 minutes?
- Number of days/week
9. What would be the total amount of time you spend brisk walking per week (on average)?
- Total amount of time brisk walking

**10. Indicate how many of these activities you participate in during the week by ticking the corresponding box**

ACTIVITY	Tick if you do this	ACTIVITY	Tick if you do this
Carrying light loads		Actively playing with children	
Electrical work		Badminton	
Farming		Dancing (ballroom, nightclub)	
Heavy gardening (digging, weeding, raking, planting, pruning, clearing section)		Bowls (indoor, outdoor, lawn)	
Heavy cleaning (sweeping, cleaning windows, moving furniture)		Cricket (outdoors, batting and bowling)	
House renovation		Cycling (recreational)	
Machine tooling (operating lathe, punch press, drilling, welding)		Deer hunting	
Lawn mowing (manual mower)		Doubles tennis	
Plastering		Exercising at home (not gym)	
Plumbing		Golf	
Active fishing/eeling		Horse riding	
Kapa haka practice		Kayaking, waka ama, rowing (slow)	
Waiata-a-ringā, poi		Skate boarding	
Surfing/ body boarding		Yachting, sailing, dingy sailing	
Swimming (recreational, bombs, playing, in ocean/ river)		Building (furniture, smaller projects)	
Gathering seafood, kaimoana		Picking puha or watercress	

**11. Indicate how many of these activities you participate in during the week by ticking the corresponding box**

ACTIVITY	Tick if you do this	ACTIVITY	Tick if you do this
Carrying heavy loads		Boxing	
Forestry		Aerobics, step classes	
Heavy construction		Kayaking, waka-ama, rowing (fast)	
Digging ditches		Athletics (track & field)	
Chopping or sawing wood		Aquarobics	
Ultimate Frisbee		Skiing, snow boarding	
Taiaha		Badminton (competitive)	
Haka		Basketball	
Mountain biking		Hunting (vigorous)	
Soccer		Cricket – indoors (batting & bowling)	
Cycling (competitive road & track)		Rugby League	
Cycling – fast recreational		Rugby Union	
Rock climbing, abseiling		Hockey (ice & field)	
Exercise classes, going to gym, weight training		Bodybuilding	
Race walking		Netball	
Running, jogging, cross country		Judo, karate, other martial arts	
Table tennis (competitive)		Softball (running & pitching only)	
Tennis (singles)		Squash	
Touch rugby		Surf life-saving, surf competitions	
Tramping		Swimming (lengths, competitive)	
Triathlon		Waterpolo	
Volleyball		Gymnastics	
Home exercise machines (treadmill, rowing)		Shearing/Wool-handling	

- 12. Please indicate (by circling the appropriate number) how much you agree or disagree with each statement. Please leave the line blank if you don't understand the statement**

**When I am physically active it is because ...**

	Agree			Neutral		Disagree	
I enjoy physical activity	1	2	3	4	5	6	7
It is part of my job/career to be active	1	2	3	4	5	6	7
It is an important choice I really want to make	1	2	3	4	5	6	7
I would feel guilty or ashamed of myself if I didn't	1	2	3	4	5	6	7
I believe it is a very good thing for my overall health	1	2	3	4	5	6	7
Others would be upset with me if I didn't	1	2	3	4	5	6	7
I feel pressure from others to be more active	1	2	3	4	5	6	7
It is consistent with my life goals	1	2	3	4	5	6	7
I want others to approve of me	1	2	3	4	5	6	7
I want others to see I can do it	1	2	3	4	5	6	7
Not doing so puts my health at serious risk	1	2	3	4	5	6	7
My family wants me to	1	2	3	4	5	6	7
I want to take responsibility for my own health	1	2	3	4	5	6	7
I want to be a good role model for my family	1	2	3	4	5	6	7
I care about keeping in shape	1	2	3	4	5	6	7
My work is physically active	1	2	3	4	5	6	7
I believe it helps me to feel mentally and emotionally healthy	1	2	3	4	5	6	7
It is important to me that my dog gets enough exercise	1	2	3	4	5	6	7
It is an opportunity to socialise	1	2	3	4	5	6	7

- 13. Please mention other reasons why you may be physically active that are not listed above:**

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14. Below is a list of things you may have in your community or at work. Please complete Columns A and B.

	Column A					Column B		
	Would you use this if it were available to you?					Is it readily available now?		
	Yes		Maybe	No		Yes	No	Don't know
Cycle lanes or paths								
Walking/hīkoi tracks								
Public park with playing fields								
Swimming pool, beach, lake or river								
School gym/pool open to community								
Netball/ basketball or tennis courts								
Community hall or recreation centre								
Health club or gym								
Home exercise equipment								
Organised seasonal sports with trainings								
Organised one-off events (relay for life)								
Marae games								
Social sport events with no trainings								
Sport Manawatu personnel & services								
Community Health services								
Physical activity programmes for Māori								
Whānau wellbeing services								



- 15. We would love to interview you about your family's experiences and thoughts about physical activity and health. If you would like to do an interview, please write down your contact details below.**

Name	
Postal Address	
Phone number (Home)	
Phone number (Work)	
Mobile phone number	
Email address	

**He mihi nunui ki a koe mō ō whakaaro.  
Thank you for completing this survey.**

***Tama tū, tama ora. Tama noho, tama mate.***

## Appendix F: Version 4 of Survey

**TAMA TŪ, TAMA ORA. TAMA NOHO, TAMA MATE.**

On behalf of Ngāti Raukawa, Muaūpoko and Rangitaane , Sport Manawatu would like to invite you to complete this survey to provide information about your current participation levels in physical activity. Your contribution will be invaluable to the services

**TAMA TŪ, TAMA ORA. TAMA NOHO, TAMA MATE.**

On behalf of Ngāti Raukawa, Muaūpoko and Rangitaane , Sport Manawatu would like to invite you to complete this survey to provide information about your current participation levels in physical activity. Your contribution will be invaluable to the services

1. Iwi: \_\_\_\_\_ 2. Hapu: \_\_\_\_\_

3. Are you: Tāne (male) ☐ Wahine (female) ☐

4. How old are you?
- |             |                       |             |                       |             |                       |
|-------------|-----------------------|-------------|-----------------------|-------------|-----------------------|
| 15-19 years | <input type="radio"/> | 20-24 years | <input type="radio"/> | 25-29 years | <input type="radio"/> |
| 30-34 years | <input type="radio"/> | 35-39 years | <input type="radio"/> | 40-44 years | <input type="radio"/> |
| 45-49 years | <input type="radio"/> | 50-54 years | <input type="radio"/> | 55-59 years | <input type="radio"/> |
| 60-64 years | <input type="radio"/> | 65-69 years | <input type="radio"/> | 70+ years   | <input type="radio"/> |

a) Do you consider yourself to be:

Rangatahi      ○      Taiohi      ○      Pakeke      ○      Kaumatua/Kuia      ○

5. Where do you currently live (name town, city or rural area)? \_\_\_\_\_

6. In general, would you say your health is (please circle):

1 2 3 4 5 6 7 8 9 10  
Poor Good Excellent

7. On average, how many days per week would you be physically active for more than 10 minutes (where you breathe harder than normal)? Please circle.

1                      2                      3                      4                      5                      6                      7

8. What would be the total amount of time you spend exercising per week (provide an average time)?

Total amount of time

9. What motivates you to be active? Please state why?

10. What types of activities or events would encourage you to be active on a regular basis?

11. What do you consider are barriers that prevent you from being physically active on a regular basis?

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12. Indicate how many of these activities you participate in during the week by ticking the appropriate box:

WORK-RELATED ACTIVITIES	OFTEN	SOMETIMES	RARELY	NOT AT ALL
Carrying <i>light</i> loads				
Carrying <i>heavy</i> loads				
Electrical				
Heavy cleaning (ie sweeping, vacuuming, Moving furniture)				
Plastering or plumbing				
Building				
Forestry				
Shearing/Rousing				
Other manual labour (please state):				
HOME-RELATED ACTIVITY	OFTEN	SOMETIMES	RARELY	NOT AT ALL
Actively playing with children				
Heavy gardening (ie digging, weeding)				
House renovation				
Lawn mowing (manual mower)				
SPORT-RELATED ACTIVITY	OFTEN	SOMETIMES	RARELY	NOT AT ALL
Badminton				
Bowls (indoor, lawn)				
Cricket				
Doubles tennis				
Golf				
CULTURE-RELATED ACTIVITY	OFTEN	SOMETIMES	RARELY	NOT AT ALL
Kapa Haka practice				
Dancing (ballroom, nightclub)				
Haka/Taiaha				
EXERCISE-RELATED ACTIVITY	OFTEN	SOMETIMES	RARELY	NOT AT ALL
Cycling (recreational)				
Exercising at home (not gym)				
Walking (recreational)				
Going to gym, weight training				
Exercise classes(ie aerobics)				
Home exercise machines (ie treadmill)				
Tai Chi/Yoga				

OUTDOOR-RELATED ACTIVITY	OFTEN	SOMETIMES	RARELY	NOT AT ALL
Deer or pig hunting				
Active fishing/eeling				
Gathering kai				
Kayaking, waka ama, rowing				
Surfing/boogie boarding				
Skateboarding				
Horse riding				
Yachting				
Swimming (recreational, river/sea)				
Other:				
COMPETITIVE TEAM SPORTS [please state]	OFTEN	SOMETIMES	RARELY	NOT AT ALL
COMPETITIVE INDIVIDUAL SPORTS [please state]	OFTEN	SOMETIMES	RARELY	NOT AT ALL
SOCIAL SPORTS (NO SCHEDULED TRAININGS) [please state]	OFTEN	SOMETIMES	RARELY	NOT AT ALL

13. Eating well can contribute to your motivation to be physically active.

- a) Do you meet the recommended 5+ a day intake of fruit and vegetables?    Yes    ☐    No    ☐
- b) Are you taking any dietary pills to supplement your diet?    Yes    ☐    No    ☐
- c) Would you like further information on best nutrition advice for yourself and/or your whānau?    Yes    ☐    No    ☐
- d) How about training opportunities for your marae around nutrition?    Yes    ☐    No    ☐

14. Please indicate (by circling the appropriate number) how much you agree or disagree with each statement. Please leave the line blank if you don't understand the statement.

When I am physically active it is because:

	Agree			Neutral			Disagree	
	1	2	3	4	5	6	7	
I enjoy physical activity	1	2	3	4	5	6	7	
It is part of my job/career to be active	1	2	3	4	5	6	7	
It is an important choice I really want to make	1	2	3	4	5	6	7	
I would feel guilty or ashamed of myself if I didn't	1	2	3	4	5	6	7	
I believe it is a very good thing for my overall health	1	2	3	4	5	6	7	
Others would be upset with me if I didn't	1	2	3	4	5	6	7	
I feel pressure from others to be more active	1	2	3	4	5	6	7	
I like being active with my friends or family	1	2	3	4	5	6	7	
I want others to approve of me	1	2	3	4	5	6	7	
I want others to see I can do it	1	2	3	4	5	6	7	
Not doing so puts my health at serious risk	1	2	3	4	5	6	7	
My family wants me to	1	2	3	4	5	6	7	
I want to take responsibility for my own health	1	2	3	4	5	6	7	
I want to be a good role model for my family	1	2	3	4	5	6	7	
I care about keeping in shape	1	2	3	4	5	6	7	
My work is physically active	1	2	3	4	5	6	7	
I believe it helps me to feel mentally and emotionally healthy	1	2	3	4	5	6	7	
It is important to me that my dog gets enough exercise	1	2	3	4	5	6	7	
It is an opportunity to socialise	1	2	3	4	5	6	7	

Please state other reasons why you may be physically active that are not listed above:

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15. Below is a list of facilities, programmes or services you may have in your community or at work. Please complete columns A and B:

	Column A			Column B		
	Do you use these now?			Would you use these if they were available?		
	Yes	No	Don't know	Yes	No	Don't' know
Cycle lanes or paths						
Walking/historical hikoi tracks						
Public parks with playing fields						
Swimming pool, beach, lake or river						
School gym/pool – open to the community						
Netball/basketball or tennis courts						
Community hall or recreation centre						
Health club or gym						
Home exercise equipment						
Organised seasonal sports with Trainings						

	Column A			Column B		
	Do you use these now?			Would you use these if they were available?		
	Yes	No	Don't know	Yes	No	Don't know
Organised one-off events (iwi games, Relay for Life)						
Regular marae games						
Social sport events with no trainings						
Sport Manawatu personnel and services						
Community Health Services						
Māori Health providers and services						
Physical activity programmes for Māori						
Whānau well-being services						

16. We would love to interview you about your or your whānau's experiences and thoughts about physical activity and health. If you would like to do an interview, please write down your contact details below:

Name	
Postal Address	
Phone Number (Home)	
(Work)	
(Mobile)	
Email address	

Kua tae mai koe te mutunga o te wea nei. Ka mau te wehi! Kei konei o āua mihi ki a koe mō ō whakaaro, tiaki me ō manaaki ki te rangahau nei.

Nā Pauline Chadwick rāua ko Dr Farah Palmer  
me ngā iwi o Rangitaane, Muaupoko, Ngāti Raukawa ki te Tonga.

*Mauri Ora!*

***Appendix G: Copy of Low Risk Ethics Letter***





## 8. References

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# Tama tū, tama ora. tama noho, tama mate – central. A report on the health and physical activity status of a sample of Ngāti Raukawa, Muaūpoko and Rangitaane iwi

Chadwick, Pauline

2006-04-07

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