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Special Edition: An Exposition of Staff-Student Research Projects 2012 – 2014
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The *Southern Institute of Technology Journal of Applied Research* (SITJAR) is an online journal that specialises in applied research in the vocational and educational sector. The journal seeks original material in any field of applied research related to vocational education and training and is aimed at practitioners, academics and researchers.

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An exposition of Southern Institute of Technology staff-student research projects

Hollie Longman

Welcome to this special edition of the Southern Institute Journal of Applied Research (SITJAR) that comprises several staff-student research projects initiated within the Southern Institute of Technology from 2012 to 2014. These articles showcase the supervised small-scale research projects that have been undertaken by students during their undergraduate programmes at Southern Institute of Technology, and profile the rich development of research that is active in these departments.

The value of undergraduate research is continually developing as an area of global interest in education studies. Within this broad area there is a focus on the value for undergraduates where the practice of classroom study extends to scholarly application. Sprosen-Smith et al. (2013) highlight research inquiry as an educational practice that is recognized as “high impact” and one that “enhances student learning outcomes” (p 105).

Undergraduate research is a concept and practice that Southern Institute of Technology is actively engaged with, and the institute is continually developing pathways for its students to apply theoretical and practical knowledge to the relevant areas of academia. Many students enrolled in Bachelor-level degrees at the Southern Institute of Technology are engaged in research projects at third year level. These projects enable the students to put into practice the theoretical research knowledge acquired during the first two years of their various degree studies.

The research showcased in this edition of SITJAR is presented in two different forms. The first four articles are in the form of brief reports on diverse research projects procured during 2012 to 2014 from departments in the institute. These research projects are often developed under time constraints, and have a necessarily limited scope, however the projects featured here demonstrate depth of investigation, a wide range of methodologies and a fascinating diversity of topic choices that reinforce the value of carrying out substantial research at undergraduate level. This edition features research from students in the Bachelors of Environmental Management, Sports and Exercise and Contemporary Music programmes. The projects featured address the diverse topics of self-supporting urban food sheds, physical activity by pregnant women, community choirs and smoking cessation among Maori.

The final article is in the form of reflective research. As part of the call for submissions to this edition there was an opening to source reflective articles on collaborative works by Southern Institute of Technology students in our community. This is an area of research that can sometimes be overlooked, however populist perspectives that are ignited and developed through anecdotal findings contribute significantly to the development of thought in academic disciplines. In many academic texts we can observe a global space that undertakes and documents reflective work by practitioners. This process is highly valued by Southern Institute of Technology, and the inclusion of work highlighted in this edition of SITJAR documents the valuable contribution that is being made in this area. This edition features one such submission, from the School of Music.

As part of the submission process to the journal participants were requested to write reflections on their research processes. Supervisors were invited to comment on what the educational goals were for students in undertaking the research study, and the approaches they took to supervision. These comments are given in the table below. Student researchers were asked to comment on what they had learned by conducting the research, what skills they gained or practices they learned that may be relevant to their future, and what support they needed from the supervision process to help their project be successful. These comments give insightful feedback to both supervisors and students, and support the concept of the value of undergraduate research inquiry at the institute. These reflections are included at the end of each article.
What were your educational goals for students undertaking this research study?

I want students to produce research outcomes that are tangible; it is always very rewarding when research outcomes are useful. However, the whole research process is a steep learning curve, the lessons never end and you learn something new every time you do a research project. A variety of skills are learned during the process and these can be applied anywhere and anytime in life. (Erine van Niekerk)

The student research project is a partial requirement of the third year. (Duncan McKenzie)

This study comes from an independent research project that students do as part of the BCM370 Music Education Studies 3 paper. Students are able to choose an aspect relating to music education that interests them, and investigate it thoroughly using secondary sources. The main goals were that the student was able to work independently, but felt able to ask for advice when needed. A further goal was whatever topic that was chosen would be useful to the student in some way: either because it related to a future project or activity, or a particular area of interest. (Sally Bodkin-Allen)

The use of the research process enables students to apply their theoretical knowledge and to develop their graduate profile in order to become proficient in the following capabilities:

- critical analysis and reflective thinking
- problem solving
- effective teamwork
- application of knowledge
- understanding the research process
- effective oral and written communication
- awareness of the sport and recreation industry and current issues in local, national and global settings
- awareness of the cultural, social and ethical environment
- an ability to practice professionally and to effectively deal with all types of people from a variety of ethnic backgrounds
- an ability to manage and/or work with others as part of a team
- an ability to work independently and solve problems at multiple levels with own initiative
- competence in one or more specialist areas and the integration of theory and practice
- sourcing evidence-based research to inform day-to-day practice
- demonstrable industry related research skills. (Hennie Pienaar)

What approach do you take to supervision and what aspects of the supervision process do you enjoy?

I find that a supervisor needs to be involved every step of the way. This is not to do the work for the student but to facilitate the process, giving guidance where necessary and stepping back when appropriate. I find it very effective to have regular scheduled meetings with students, to keep a record of all suggestions and recommended changes, and to follow up on these with students. Also effective is a detailed timeline of expected outcomes; not only in terms of the planning and data collection process, but also for writing up the research. I always require students to start writing up the first chapter of the research report as soon as the proposal has been finalised. This is followed with regular deadlines for further chapters. Students are then required to make the necessary changes before they submit the next chapter. Although this process is very time intensive it is highly effective. (Erine van Niekerk)

Within this paper there is a classroom teacher and supporting academic mentor. The mentor offers guidance to the student and assists in the marking of student assessments. (Duncan McKenzie)

The supervision of this project involved a discussion with the student to focus the framework of the topic, and then looking over drafts of the write up. I particularly enjoy the opportunity a research project such as this gives students to pursue topics that really interest them. (Sally Bodkin-Allen)

The approach to supervision is to act as an academic mentor, to help facilitate the research process, to be explicit about expectations and requirements, to provide constructive feedback and a critical yet professional analysis, to encourage intellectual rigor, and to provide an environment of continued personal and professional support. What I enjoy most about the process is to be part of the students’ growth
process, to share in their passion of their chosen research topics, to see the students succeed and develop into successful graduates – ones we can be proud of. (Hennie Pienaar)

**What supervision processes do you find most effective?**

It is always good to be involved in the process from the beginning: starting when a student shares an idea, and looking at various options and ideas for getting to the stage where an idea is put on paper and shaped into a proposal. I am also involved in setting up networks with industry for the student, and in making sure that the project is topical and would be of maximum benefit to the student as well as to industry. I enjoy working together with students to turn ideas into really viable projects, going through all the stages with them, looking forward to the results, and even experiencing the challenges they are facing. Probably the best moment is to share their pride in presenting well-executed projects at the Research Project Seminar at the end of the year and hearing all the positive feedback that we get from industry on the quality of the student research. An additional benefit is that it is a learning process for me as well. Our students do a variety of research projects every year and I always learn something from every project. (Erine van Niekerk)

The role of the academic mentor is an interesting one. It allows for open discussions with the student, questioning and offering advice when appropriate. Each student must overcome many hurdles associated with a research project of this magnitude. From a mentor’s perspective, it is wonderful to see a student complete the written project and poster presentation. (Duncan McKenzie)

I find one-on-one meetings at the initial stages the most helpful; discussion is the best way to stimulate ideas and focus in on a particular area. Group discussions can also be useful at this stage. As time goes on reading drafts via email and inserting comments can work well too, as it is very efficient and gives direct and comprehensive feedback to the student concerned. (Sally Bodkin-Allen)

Effective supervision processes include continued support and guidance with key topics, making use of a reflective journal and an activities log and providing students with an opportunity to critically reflect and analyse their experiences. There are set protocols for all student-supervisor meetings. All structured meetings should have a set agenda. Easy and regular access to the academic mentor is essential. (Hennie Pienaar)

This valuable feedback not only enables us to observe the unique and student-focused supervision that is applied during the research process, but gives insight to the committed and passionate approach of staff members who ensure that their students actualize their intended outcomes within the parameters of the time-frame and scope that is provided within this process. Student researchers also reflect these observations with their feedback, suggesting that they are working within a firm support network and feel empowered to realize their goals.

As the Special Edition Editor I would like to thank Dr Jo Smith, Dr Jo Whittle, Dr Jerry Hoffman and Dr Teri McClelland for their support in completing this edition. It is with pleasure that I present to you *An Exposition of Southern Institute of Technology Staff-Student Research Projects 2012 – 2014.*

**Reference**

GIS food shed mapping: a planning tool for Invercargill

Josh Fisher (BEM*) and Erine van Niekerk (MEM)

Abstract: The aim of this project was to formulate Geographic Information System (GIS) models that could be used to calculate food footprints and food sheds for Invercargill or any other New Zealand city using the statistics from various agricultural production models. It also assessed the usefulness of this concept as a planning tool. As food networks globally are impacted by peak oil, re-localization of food networks seems to be a valid and sensible response. Cuba’s successful adaption to low energy food systems as a result of their own energy crisis can be seen as a real life application of this principle. The modelling of hypothetical future food sheds based on food footprints using GIS can be considered a valuable tool in assessing the ability of a settlement to re-localize the food systems that provide for its material needs. In the case of Invercargill it has been shown that there are no major physical obstacles to overcome in terms of suitable available land for meeting the city’s food requirements. The mapping process however highlighted some of the major socio-political issues and obstacles that would arise as barriers to the implementation of a re-localized food network.

BACKGROUND

Modern food supply networks have become shackled to petroleum to fuel globalised transport networks and also to oil derivatives such as fertilizer, pesticides and herbicides. Cheap oil during the 1960s and associated technologies initiated a revolution in agriculture (United Nations Food and Agriculture Organisation, 1966, para.2) creating a heavy reliance on one source of energy and thus leaving the entire food supply network vulnerable to collapse if oil flow was to be disrupted. Various countries like England after the oil shock in 1973 (Church, 2005, p.1) and Cuba in the 1990s (Gonzalez-Novó & Murphy, 2000, p.330) provide examples of the collapse of food networks after an oil crisis. What will happen to New Zealand and therefore Invercargill if faced with a similar scenario?

New Zealand’s status as a “highly productive agricultural nation” (Acres, 2010, p.59) is based on a heavy reliance on “fossil fuels and other non-renewable resources at virtually every stage of the food chain” (Mariola, 2008, p.195). Acres has highlighted this as “an issue of serious concern in the Parliamentary Commissioner for the Environment report ’Growing for good: intensive farming, sustainability and New Zealand’s environment’” (2010, p.63).

A solution to this problem is suggested by Mulqueen-Star who argues that “urban food production has potential to contribute significantly towards urban sustainability” (2009, p.8). Food footprint mapping and food shed mapping has been used internationally as an aid to urban food system planning. In this study footprint mapping is based on the hectares needed for each of the agricultural models used, displayed as circles on a map of the area. Food shed mapping uses the same hectares needed for each agricultural model but take into consideration suitable soil types. This changes the spatial distribution from circular to irregular depending on the location of the soil types. The use of both footprint and food shed maps may well be useful in Invercargill as a way of engaging planners with the concepts and issues related to peak oil, and could form the basis of further studies into the sustainability of food supply systems in New Zealand. An important initial question to answer before formulating a local food system is whether Invercargill has enough land to produce all its food requirements. One method of answering this question is by using Geographical Information Systems (GIS) to calculate and formulate maps to describe food footprints and food sheds.

AIM

To formulate a GIS model that can be used to calculate food footprints and food sheds for Invercargill or any other New Zealand city, using the statistics from various agricultural production
models, and to assess the usefulness of this concept as a planning tool.

METHODS

The methodology used for this project was similar to the methodologies utilised by Hopkins, Thurstan-Goodwin and Fairlie in the paper ‘Can Totnes feed itself’ (2009). The food print map and food shed maps have been developed using GIS modelling based on dietary models produced by Fairlie (2007). The food print maps spatially represent the overall amount of land that a settlement (in this case Invercargill) needs for food production; it does not take into account soil type or any other practical variables.

The first step in producing a footprint map was to calculate the amount of land required for each land use model based on agricultural types that included: chemical based vegan, chemical based livestock, organic vegan, organic with livestock, permaculture based vegan and permaculture with livestock (Fairlie, 2007, p.18). The total hectares of land needed to produce food by each of these different agricultural types requires different soil types and different areas of land. The calculations are based on a calorific value of 2700 per person per day that Mellanby as cited by Fairlie (2007) used and that is consistent with findings of the FAO.

Table 1: Example of Fairlie’s dietary model layout and results.

<table>
<thead>
<tr>
<th>Chemical with livestock</th>
<th>2.5</th>
<th>14</th>
<th>0.179</th>
<th>9008.712</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical vegan</td>
<td>1</td>
<td>20</td>
<td>0.05</td>
<td>2516.4</td>
</tr>
<tr>
<td>Organic vegan</td>
<td>1</td>
<td>8</td>
<td>0.125</td>
<td>6291</td>
</tr>
<tr>
<td>Organic with livestock</td>
<td>2</td>
<td>7.5</td>
<td>0.267</td>
<td>13437.57</td>
</tr>
<tr>
<td>Live stock permaculture</td>
<td>1.8</td>
<td>8</td>
<td>0.225</td>
<td>11323.8</td>
</tr>
<tr>
<td>Vegan permaculture</td>
<td>1</td>
<td>8.5</td>
<td>0.118</td>
<td>5938.704</td>
</tr>
</tbody>
</table>

Table 2: Calculations of “Total hectares needed” for each agricultural model for Invercargill.

<table>
<thead>
<tr>
<th>No. of hectares needed</th>
<th>No. of people feed</th>
<th>Hectares, per person</th>
<th>Total hectares needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical with livestock</td>
<td>2.5</td>
<td>14</td>
<td>0.179</td>
</tr>
<tr>
<td>Chemical vegan</td>
<td>1</td>
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<tr>
<td>Vegan permaculture</td>
<td>1</td>
<td>8.5</td>
<td>0.118</td>
</tr>
</tbody>
</table>

This was ultimately used to calculate how much land is necessary to feed one person and then multiplied by the total population for Invercargill to determine the total hectares needed for each model (Table 2 and Figure 1).

The food shed maps were constructed using a topo soil climate data set representing the common soil types across the Southland region. Venture Southland commissioned this very detailed topo climate data set and this data was important in the successful development of the food shed maps. In fact without soils data or some kind of land versatility data it is probably impossible to make food shed maps. Soil classes in the data set were allocated based on permaculture zoning that had the overall goal of creating a design “that used human energy efficiently and to reduce the energy input required for maximum energy output” (Tomik & Landman, 2009, p.2); therefore high energy land uses should be placed as close as possible to urban centres to reduce energy use and cut down on the transport cost of labour and resources and,
GIS food shed mapping: a planning tool for Invercargill

consequently, possibly lower the distribution costs of produce.

RESULTS

The data from the food footprint models were used to construct a food footprint map using ArcGIS 10. This map is similar to the food footprint map produced by Hopkins et al (2009) in the Totnes study. The data needed to create the maps required the breakdown of the total hectares needed for every model into subclasses and had to be adjusted using Fairlie’s (2007) model. A LinzTop0 250 map was used as a base map and the hectares per subclass for Invercargill were first plotted using the total urban area of Invercargill (Figure 2).

Figure 2: Food print comparison map.

Results of the food shed maps (Figures 3 to 5) show that vegan based systems seem to use the least amount of land and therefore would be the most efficient in terms of feeding Invercargill. Chemical vegan agriculture is by far the lowest land user; this is due to fertility being provided by fossil fuel based fertilisers but it is not self-sufficient in the long term. Using fossil fuel based fertiliser will retain dependence on other resources which will increase the amount of land to be used to provide these resources, further adding to the cost of transport if these additional resources have to be imported. Vegan organic and vegan permaculture systems are relatively similar in size with the livestock system requiring the most land (Figures 6 to 8). It can be seen that the Invercargill footprint maps do not overlap with any other settlements in Southland, unlike the situation in other regions and other parts of the world, and therefore there would not be any issues to overcome relating to overlapping resource use, but they are affected by other land uses that are currently in place.

Figure 3: Chemical vegan food shed (Arable Land).

Figure 4: Organic vegan food shed (Arable Land).
The food shed maps based on the topo climate soil maps were very detailed and therefore suitable for use on this scale. The food shed maps show that Invercargill has ample land to meet its needs for each agricultural system. The soils surrounding Invercargill are all suitable for agriculture whether it be pasture or arable cropping land. There is also plenty of suitable land for forestry as a source of fuel and construction materials. It could be considered that Invercargill has a high level of versatility based on its soil types. All of the agricultural models could be applied in the area without any obvious environmental limitations. It could be assumed, if working with the concept of permaculture zoning, that the distance this land is away from the centre of Invercargill could cause increased energy use in the form of transport for produce and labour.

None of the food sheds take into account what land use is already in place. It is noted that the area where the airport is situated is included in the pasture parcels in all the livestock-based maps. In addition land may be covered with buildings, roads and other non-agricultural applications. Further refinement of the food shed maps could involve the exclusion of such unsuitable land and the inclusion of more detail in relation to what land is already being used for. Another interesting point to make is that hypothetical food shed mapping does not take into account any barriers to implementation not based on environmental limits (for example cultural or political systems or land ownership patterns).
CONCLUSION

As a tool to describe spatially, in abstract terms, the land requirements of Invercargill or any other settlement for that matter, food prints can be considered a successful tool. Without a lot of time and effort they can be employed to assess at a glance the land requirements for food production and identify at an early stage any major issues such as resource overlaps with other settlements. To make them more useful, however, it would be necessary to include other resource requirements such as fuel production to give a more realistic view of a settlement’s needs. Inclusion of factors such as legislation or the inclusion of land currently in private ownership could be seen as highlighting almost by default additional barriers to urban self-sufficiency and could direct the focus of legislators and planners toward addressing these issues.

The food shed maps generated by this project are as successful as any of the models explored in the literature review. Compared to the other case studies reviewed, this and the Totnes study are the only projects that make any attempt to include other elements (such as fuel) in the agricultural system models. If the purpose of food print/shed mapping is to assess a region’s ability to achieve some level of self-sufficiency, then this must be taken into account when allocating soils and land parcels in the mapping process. If this is not done, there is the possibility that land will be incorrectly allocated, thereby leading to erroneous assumptions about a region’s level of self-sufficiency, and that of settlements within that region.

References


Student researcher reflections

During my third year research project I learned a lot about myself and what I am capable of producing as well as what it actually takes to produce a well-researched and meaningful report.

Aside from the technical skills relating to GIS I really began to get a feel for how to research. This knowledge could be applied to any piece of work in future and has left me with the desire to continue on with possible future studies.

The support I received from my supervisor was the support I needed. I had help with structure and ironing out any hurdles that I encountered. My supervisor also gave me the confidence that I was working in the right direction.
Perceptions and patterns of physical activity amongst Southland women during pregnancy

Liudmila Laverty (BSE*) and Duncan McKenzie (Med (PE))

Objective: To identify perceptions and patterns of physical activity in a cohort of pregnant Southland women.

Design: A structured non-disguised questionnaire (with open and closed questions) was developed specifically for this study. An intercept strategy was used.

Participants: Fifty-six participants were recruited through midwifery practices in Invercargill, Winton and Gore.

Outcome Measures: Exploratory analysis of the closed and open-ended questionnaire.

Results: Before pregnancy, approximately 21% (12 of 56) of respondents reported vigorous activity levels, 60% of respondents reported moderate activity levels, 18% of respondents reported light activity levels and 1% of respondents reported sedentary levels. During pregnancy approximately 9% of respondents reported vigorous activity levels, 45% of respondents reported moderate activity levels, 39% of respondents reported light activity levels and 7% of respondents reported sedentary levels.

During pregnancy there was a drop in moderate and very good health levels. Before pregnancy, approximately 39% of respondents reported excellent health, 32% very good, 21% good and 7% fair. During pregnancy, approximately 20% of respondents reported excellent health, 27% very good, 45% good and 9% fair.

Activities that pregnant Southland women would have liked to participate in, if they had the opportunity, included: swimming or water aerobics designed for pregnant mums (27%), walking (18%), pregnancy yoga classes (15%), low intensity activities which would be safe for them and their baby (13%), gym workout (8%), sports (6%), running (6%) and any activity (4%). Approximately 3% did not wish to do anything.

Conclusion: There was a decline in physical activity levels during pregnancy when compared to the period before pregnancy. During pregnancy there was a drop in vigorous and moderate activity levels and a move to light and sedentary activity levels. There was also a decline in health levels. However, pregnant women in this study have tended to remain reasonably active and in reasonably good health. The patterns of physical activity, perceptions of the value of physical activity and perceived barriers to physical activity identified in this study were consistent with those from related studies in the literature. The most reported physical activities participated in during pregnancy were: walking, housework, swimming, pre-natal yoga, gardening/mowing lawns and cycling. The types of activity pregnant women in Southland would like to be further involved in during their pregnancy included swimming or water aerobics designed for pregnant mums, walking, pregnancy yoga classes, low intensity activities which would be safe for them and their baby and gym workouts. The challenge for health professionals and exercise providers is to help promote the value of physical activity during pregnancy and to facilitate the activities identified in this and other studies.

Key words: pregnancy, physical activity, exercise, health

INTRODUCTION

There is a reduction in levels of physical activity during pregnancy when compared with the pre-pregnancy stage, even in women who reported engaging in sports in both states (Clarke & Gross, 2004, p.139). Yet physical activity during pregnancy may not only be safe, but also highly beneficial. Pregnant woman without obstetric or medical problems are encouraged to engage in at least 30 minutes or more of moderate exercise activities on most if not all days (Downs & Hausenblas, 2004, p.138).

Exercise during pregnancy is associated with decreased rates of depression and anxiety and with a higher sense of self-esteem (Wadsworth, 2007, p.334). Exercise during pregnancy can tone muscles, so the body returns more quickly to its original shape after delivery (Edlin, Golanty & McCormack-Brown, 1999, p.178). Berk (2004, p.18) surmises that exercise during pregnancy provides benefits such as prevention and/or reduction of most pregnancy related symptoms (including back pain, ankle swelling, fatigue, venous thrombosis and varicose veins), enhanced psychological well-being, reduced cardiovascular stress, prevention of excess weight gain, maintenance of fitness, easier labour, easier delivery and faster recovery after delivery.

Women who continued to exercise at ≥ 50% of their pre-pregnancy activity level throughout pregnancy have a lower incidence of cesarean delivery.
section and less acute fetal distress during delivery and they are more likely to have a spontaneous vaginal delivery compared to their non-exercising counterparts (Melzer et al., 2010, p.266). Loprinzi, Loprinzi and Cardinal (2012) note that pregnant women who regularly participate in physical activities and have an active lifestyle have fewer leg cramps while sleeping and are less likely to have difficulty finishing a meal. Exercise may also play a role in reducing the risk of pregnancy complications such as preeclampsia, gestational diabetes and preterm delivery (Fell, Joseph, Armson & Dodds, 2009, p.597). A group of researchers who monitored fetal cardiac responses during mothers’ exercise, found no evidence of distress, even with women who were sedentary before pregnancy and had begun an exercise programme after they become pregnant (Wadsworth, 2007, p.335). There was no documented reduction in the birth weight of infants whose mothers exercised moderately. Furthermore, exercise may have a protective effect on preterm labour and infants’ small size for gestational age. (Wadsworth, 2007, p.335).

The most commonly cited barriers to sport and exercise participation while pregnant are maternal physical health issues (Clarke & Gross, 2004, p.139), women’s uncertainty about exercise safety, lack of social support, lack of motivation and weather or seasonal changes (Evenson, Moos, Carrier, & Siega-Riz, 2009, p.369). The study conducted by Evenson et al. (2009, p.369) found that pregnant Australian women identified “too tired, unwell and that exercise was uncomfortable” as commonly cited reasons for not being active.

Mothers’ perceived ideas about physical activity during pregnancy are to help control blood sugar levels, weight gain, improved energy, mood stability, staying fit, making labour tasks easier to perform and improve infant health (Mudd et al., 2009, p.197). However, while considering these benefits, this group of women rated rest and relaxation as being of more importance when compared to exercising during pregnancy (Mudd et al., 2009, p.197).

The aim of this research was to identify perceptions and patterns of physical activity in a cohort of pregnant Southland women.

METHOD

A structured non-disguised questionnaire was developed specifically for this study. Closed questions were used to investigate the demographic characteristics of the participants such as age group, education level, occupational status, health before and during pregnancy, physical activity level before and during pregnancy, week of gestation and the number of children in their families. Open questions related to activities they participate in, their perceptions of the benefits of, and barriers to, exercise and what activities they would like to participate in while pregnant. 

The first page of each questionnaire had a brief explanation about the research project. The participants were informed that by completing the questionnaire they were giving informed consent to participate in the study. Participation was voluntary and the questionnaires were anonymous. The questionnaires were placed in the waiting rooms of midwifery practices in Winton, Gore and Invercargill. An intercept strategy was used and participants were asked to participate. A total of 56 completed questionnaires (n=56) were returned. Participants were aged 18+ years old, had the ability to understand written English and needed to have resided in the Southland region during their pregnancies.

The data was entered into spreadsheets (SPSS 19) for the generation of descriptive statistics. Ethical approval was attained from the Southern Institute of Technology’s School of Health, Exercise and Recreation Research Committee prior to commencement.

RESULTS AND DISCUSSION

Of the 56 completed questionnaires, seven came from Winton, five from Gore and 44 from Invercargill. Approximately 32% of the respondents were 18 to 24 years, 25% were 25 to 29 years, 27% were 30 to 35 years and 16% were 36+ years. Approximately 25% of respondents had a tertiary degree, 38% had a tertiary certificate or diploma and 34% had high school education as their highest education qualification. Approximately 80% of the respondents were married or living together with their partner, 18% had never married and 2% were divorced or separated. The majority of subjects were in employment, with 43% in full time employment, 21% in part time employment and 32% unemployed. Approximately 14.3% of respondents were in their first trimester, 30% were in their second trimester and 56% were in
Perceptions and patterns of physical activity amongst Southland women during pregnancy

During pregnancy there was a decline in vigorous and moderate activity levels and a move to light and sedentary levels. Before pregnancy approximately 21% (12 of 56) of respondents reported vigorous activity levels, 60% of respondents reported moderate activity levels, 18% of respondents reported light activity levels and 1% of respondents reported themselves as sedentary. During pregnancy approximately 9% of respondents reported vigorous activity levels, 45% of respondents reported moderate activity levels, 39% of respondents reported light activity levels and 7% of respondents reported sedentary levels. While there was an increase in sedentary levels, 93% of respondents reported light, moderate or vigorous activity levels.

Table 1: Physical activity before and during pregnancy.

<table>
<thead>
<tr>
<th>ACTIVITY LEVEL</th>
<th>Sedentary</th>
<th>Light</th>
<th>Moderate</th>
<th>Vigorous</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before pregnancy</td>
<td>1</td>
<td>10</td>
<td>33</td>
<td>12</td>
<td>56</td>
</tr>
<tr>
<td>During pregnancy</td>
<td>4</td>
<td>22</td>
<td>25</td>
<td>5</td>
<td>56</td>
</tr>
</tbody>
</table>

The reasons for not exercising during pregnancy included tiredness and fatigue (26%), health issues associated with pregnancy such as shortness of breath (15%), lack of time or work commitments (13%), movement restriction (9%), weather issues (6%), looking after other children (6%), morning sickness (5%), joint pain, pain in the pelvic area or back pain (5%), comments from other people as in: “you’re doing too much” (4%), lack of motivation (2%) and one respondent did not do anything because she “could no longer play contact sports”. Approximately 8% of respondents answered that they did not have any reasons for not exercising. This study was completed over the Southland winter and the inclement weather pattern may have influenced respondent’s perceptions. Approximately 56% of respondents were also in their third trimester. This period is associated with increasing discomfort for the mother.

The reasons for participating in exercise included: to keep fit (29%), limit weight gain (19%), to feel better (15%), to ease the labour (12%), mental health (4%), baby’s health (4%), reduction of stress and depression (3%), socialising (2%), better sleep (2%), reduction of pregnancy related discomfort (1%) and partner support (1%). Approximately 6% of the respondents did not see any reasons for exercising during pregnancy.

While physical activity levels declined during pregnancy, women have tended to remain reasonably active and in reasonably good health. The most selected activities are low to moderate intensity and low impact, which may indicate the women’s precaution and concern to exercise safely. The most reported physical activities participated in during pregnancy were: walking (42%), housework (15%), swimming (13%), prenatal yoga (6%), gardening and mowing lawns (5%), cycling (4%), sports (3%), gym (2%) and any activities they are comfortable doing (2%). One
respondent participated in hill climbing and a small group (3%) did not do anything.

Activities that pregnant Southland women would have liked to participate in, if they had the opportunity, included: swimming or water aerobics designed for pregnant mums (27%), walking (18%), pregnancy yoga classes (15%), low intensity activities which would be safe for them and their babies (13%), gym workout (8%), sports (6%), running (6%) and any activity (4%). Approximately 3% did not wish to do anything.

**Figure 1:** Activities women would like to participate in during pregnancy if the opportunity was available.

**CONCLUSION**

There was a decline in physical activity levels during pregnancy when compared to the period before pregnancy. During pregnancy there was a drop in vigorous and moderate activity levels and a move to light and sedentary activity levels. There was also a decline in health levels. However, pregnant women in this study have tended to remain reasonably active and in reasonably good health. The patterns of physical activity, perceptions of the value of physical activity and perceived barriers to physical activity identified in this study were consistent with those from related studies in the literature.

The most reported physical activities participated in during pregnancy were walking, housework, swimming, pre-natal yoga, gardening/mowing lawns and cycling. The types of activity pregnant women in Southland would like to be further involved in during their pregnancies included swimming or water aerobics designed for pregnant mums, walking, pregnancy yoga classes, low intensity activities which would be safe for them and their babies and gym workouts. The challenge for health professionals and exercise providers is to help promote the value of physical activity during pregnancy and to facilitate the activities identified in this and other studies.

**References**


Student researcher reflections

Conducting this research gave me a tremendous opportunity to test my academic writing and oral presentation skills. I originally started as a Diploma of Sport and Recreation student. I fell in love with the course and despite language difficulties (coming from Russia), I took the risk to get a full degree.

This project helped me to review my organization skills, improve time management and improve my ability to communicate clearly with people involved in the research process. This project convinced me of the value of future work with a “special” population, which requires specific knowledge and constant self-challenge. I have successfully implemented this as a YMCA Cardiac Club instructor. I learned the significance of seeking help and asking for advice when needed. The academic mentors’ support and guidance “boosted” ideas and directions to enable an evolution of the research project. The process allowed me to fully practice the skills I had gained.
Singing together: guidelines for setting up a community choir

Ashlie Scharres (BConMus*) and Sally Bodkin-Allen (PhD)

Abstract: Singing in a choir is a way that people can participate in a musical activity in their community. This paper examines methods a first time choir director can implement in order to lead a community choir that is accessible to all, and that promotes a positive singing environment. Using secondary sources it provides specific techniques and recommendations for facilitation of a community choir, as well as a model for structuring a choir rehearsal. This study suggests that the singing ability of the choir members or its conductor are not important factors for creating and leading an enjoyable, inclusive community choir; rather, it is about creating an atmosphere characterised by a sense of mutual support and cooperative participation.

“Singing together is a wonderful way for anyone to participate in a meaningful and instantly rewarding musical activity” (“Sing in a choir”, 2013, para. 1). This project explores methods a first-time choir director can implement in order to lead a community choir that meets the following aims: accessibility to (i.e. within the capabilities of) amateur adult singers with little or no previous formal music education; a positive atmosphere of mutual support in which participants have fun and feel comfortable singing, and the prioritisation of enjoyment and participation over perfection and performance by being ‘non-auditioned’ and open to all. Drawing upon secondary sources, primarily from directors of community choirs, specific techniques and recommendations for facilitating a community choir are presented. These address the areas of: how a choral director can foster a comfortable environment; adequate planning; proper vocal care; song material delivery, and balancing choir discipline with socialising. Finally, a model schedule for running a choir session is suggested.

Being a strong singer is apparently not necessary for running a successful community choir. Victoria Hopkins, an experienced choir director, writes:

A decent singing voice is by no means a pre-requisite to being a good choral conductor. The late, great Richard Hickox is a marvellous example. He was one of the finest conductors of his generation, with a gift for getting the best out of choirs, and he had a voice like sandpaper (Hopkins, 2013, para. 2).

Additionally, gospel director Joan Hall reassures directors that it is not necessary personally to be able to sing all notes in the intended range, but instead to vocally produce a relative note an octave above or below, as suited to one’s vocal range, in order that choir members can hear the correct note and reproduce it in the octave appropriate to their part (Hall, 2013, p.2).

Seasoned director Chris Rowbury encourages new choir leaders, stating: “Don’t worry if you feel that you have less musical training or knowledge than some of your choir members. You were the one who had the courage and initiative to set the whole thing up!” (2008b, para. 19). It is clear from the statements of these and other choir directors that there is more to running choir rehearsals than the music alone; effective planning, and choir management, for example, are imperative.

Rowbury, who has 11 years of experience directing choirs in the UK, recommends specific practical steps to creating and running a choir session. These include planning every detail of the rehearsal session how to create and maintain a comfortable and welcoming physical space in the rehearsal room prior to participant arrival, how to structure and deliver the content of the session, and debriefing with participants and oneself to review what went well and what can be improved upon for next time (Rowbury, 2008a, para. 2-5). He points out the importance of attending to the basic operative details prior to a rehearsal: planning, printing music, preparing refreshments, getting contact details and having fliers ready (Rowbury, 2008a, para. 6). By following his suggestions and thoroughly

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preparing oneself, the rehearsal space, the session content and musical materials well in advance, sticking to the plan when executing the session, and reviewing what to change for the next session, a first-time choir director can enhance the potential for a positive experience of all involved.

Rowbury shares that, even at this advanced stage of his choir directing career, he still plans each rehearsal in full detail and strongly advises others to do the same (2008a, para. 3). He writes: “At the beginning of your career as choir master, you will need to plan every single moment of the session. This may take you a whole day, but as you get more experienced, it won’t take anywhere near as long” (Rowbury, 2008a, para. 3). Vocal instructor and choral conductor Anne Peckham advises that since vocal chords of inexperienced singers can tire easily, practice sessions should be no more than one hour in length (2000, p.73). This is highly pertinent to members of community choirs who may not be accomplished singers. It is especially necessary for the choir director to ensure s/he conducts rehearsals in a way that is conducive to vocal health, by not overusing and tiring members’ vocal cords, and ensuring adequate warm-up and cool down exercises. Peckham’s book The Contemporary Singer (2000) contains thorough descriptions of multiple physical and vocal warm-up exercises directors can utilise within their choirs.

Additional important reasons exist for beginning a choir rehearsal with vocal as well as physical warm-up exercises. Rowbury provides a list of ten functions warm-ups serve, stating that they help choir members to:

1) transition from the everyday [activities related to work, household chores, kids]
2) relax and release tension
3) connect body, breath, voice
4) engage imagination and creativity
5) hone listening skills
6) develop self-awareness
7) increase confidence, loosen inhibitions
8) improve pitching and vocal range using a centred, healthy voice
9) develop sense of timing and rhythm
10) [enhance] awareness of working with others (2009, para. 9-21).

This list shows how important warm-ups are for helping the group to ‘arrive’ mentally and be attentive to one another and their own bodies. Warm-up exercises are an effective tool for producing a sense of connection within the group and generating an informal atmosphere: “a world of music-making and collaboration” (Rowbury, 2009, para. 9).

When presenting a new song to a choir, the choir director must have first spent ample time preparing and comprehensively acquainting himself or herself with the material. Hall stresses the importance for a director to intimately and thoroughly know all harmonic parts of a song prior to teaching it to the choir so that it can be delivered with conviction, and suggests studying a song “until it becomes part of you” (Hall, 2013, p.2). This will develop confidence in the choir director.

Since one of the goals of this study is to illuminate how to lead a choir in which a positive atmosphere is created, whereby participants have fun and feel comfortable, maintaining choir discipline during rehearsal time must be approached tactfully in order that a director can elicit quiet attentiveness without decreasing the overall sense of fun. Hopkins says: “It’s much easier to insist on no chatter during rehearsal if your choir has plenty of time for chatter outside rehearsal”; she therefore suggests taking a “half-time break” during the rehearsal session, as well as allowing time for members to chat before and after the rehearsal (Hopkins, 2012, para. 3). It is important to allocate time for socialising because this strengthens the sense of connection within the choir, as well as supporting members in choosing to be quiet during rehearsal since a promised break awaits them in the near future.

One of the most valuable contributions a choir director can make toward creating a positive atmosphere of cooperation, in which participants have fun and feel comfortable singing, is by striving to be personable in all his/her interactions with choir members. “The most important thing a teacher can do to motivate and manage students is to establish meaningful relationships built on mutual respect and caring empathy” (Campbell & Scott-Kassner, 2006, p.293). Two simple, yet effective, actions a choir director can implement to demonstrate his “respect and caring empathy” for choir members, are to personally greet each one as they arrive before rehearsal begins (Lieber, 2002, para. 1), and to use positive, friendly social mannerisms, such as smiles and laughter, in all interactions (Ghiora, 2010, para. 3). Displaying
physical and verbal communications of friendliness generates a foundation of good rapport from which to deliver the content of choral rehearsals and it promotes a sense of support, enjoyment and comfort within the choir.

One effective technique for quieting a talkative choir during rehearsals is for a director to be what Hopkins calls “the strong, silent type”. This method is successful because, Hopkins explains, “you don’t undermine your authority by shouting or, worse, pleading with the choir to be quiet”, but she warns that a director may initially feel disconcerted as it can take a few moments to be effective, yet one must persist; after repeated use, the time required to evoke silence will shorten (2012, para. 6). Securing quiet attentiveness of choir members can be achieved in a calm and patient manner, in alignment with the goal of maintaining an air of comfortable friendliness within the choir.

Table 1 (below) depicts the authors’ interpretation of how a choir rehearsal session could be structured. The schedule allocates time for components that have been discussed above, such as proper vocal care and relaxation within a structured agenda, in order to promote socialising.

<table>
<thead>
<tr>
<th>7:00 pm</th>
<th>Pre-rehearsal socialising</th>
<th>Doors open; allow 15 minutes for everyone to arrive and chat with each other before commencing any singing Director can personally welcome each member</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:15</td>
<td>Warm-up exercises</td>
<td>Begin rehearsal with 15 minutes variety of both physical and vocal warm up exercises, including short warm-up songs</td>
</tr>
<tr>
<td>7:30</td>
<td>Singing instruction</td>
<td>Spend 20 minutes learning one or two new songs</td>
</tr>
<tr>
<td>7:50</td>
<td>Half-time break, socialising</td>
<td>Allow 10-15 minutes for members to interact and perhaps have tea, coffee and a light snack</td>
</tr>
<tr>
<td>8:05</td>
<td>Singing instruction</td>
<td>Work for 15 minutes on a song that is new or continued from a previous week’s rehearsal</td>
</tr>
<tr>
<td><strong>8:20</strong></td>
<td>Announcement mini-break</td>
<td>Take 5 minutes to share any news or announcements</td>
</tr>
<tr>
<td><strong>8:25</strong></td>
<td>Cool down singing</td>
<td>Spend 10 minutes singing one or two familiar songs as a fun and easy cool down exercise</td>
</tr>
<tr>
<td><strong>8:35</strong></td>
<td>Post-rehearsal socialising</td>
<td>Allow 15 minutes for socialising prior to locking up so a relaxed, non-rushed feel is maintained</td>
</tr>
<tr>
<td><strong>8:50/8:55 pm</strong></td>
<td>Lock up</td>
<td>Lock doors after all members have departed</td>
</tr>
</tbody>
</table>

The total amount of time allocated for singing (depicted in the non-shaded rows of Table 1) in the above two-hour plan is only 60 minutes, in line with Peckham’s recommendations.

In the course of this study it has become apparent that the most important factors for creating and leading an enjoyable, inclusive community choir do not include the singing ability of choir members or the choir director. Instead, the literature indicates that the key ingredients for a happy and musically cooperative choir include the director spending time planning each rehearsal session; using a variety of warm-up exercises and song arrangements with which to engage the choir; being familiar with harmonic parts; initiating personal contact with each member; employing patient pauses and eye contact to manage choir chatter, and ensuring break time for socialising. These suggestions can serve as clear guidelines to support a new choral leader in the creation and maintenance of a non-auditioned community choir that will yield an enjoyable musical and social experience for all involved, characterised by a sense of mutual support and cooperative participation.

References
Hall, J. (2013). *How to teach a choir song: the basics; tips for teaching gospel choir songs by ear.*
Singing together: guidelines for setting up a community choir

Student researcher reflections

By conducting this piece of research I learned what resources exist to support choir directors, and gained a very practical understanding of how to prepare for, facilitate, and manage a community choir. I am interested in facilitating women’s vocal groups in the near future and will be able to draw upon the knowledge and tools I learned through completing this research.

Discussing my initial research topic idea with my supervisor helped me to clarify the parameters of my topic so I could satisfactorily address the aims within the essay word limit. Once I had written the first draft, I submitted it to my supervisor and requested further guidance in a one-on-one meeting about several portions I wondered whether to expand upon, exclude or adjust. She offered clear answers to my questions that enabled me to “tidy up” the essay and increase its efficacy.
Strategies to encourage Maori to “aukati kai paipa” (quit smoking)

Yonni Paul (BSE*) and Hennie Pienaar (MSc)

Aim/purpose: The aim of the research project is to investigate different quit smoking strategies which include: plain packaging, price increases of tobacco and quit smoking campaigns. The purpose of this study was to find out if these strategies will be successful in encouraging Māori to quit.

Method: The type of research undertaken was a Māori smoking cessation research project using both qualitative and quantitative methodologies incorporating questionnaires (hard copy and online) and semi-structured interviews. The 28 participants of this study were all of Māori descent and were recruited from the Invercargill area. Five interviews were conducted, and the remaining 23 participants completed either an online or hard copy questionnaire.

Results: The results showed that 69.6% of the questionnaire participants said that pictorial health warnings did not contribute to their attempts to quit smoking. However the research also found that a significant majority of the participants (65.2%) felt that tobacco price increases contributed to their attempts to quit smoking.

Conclusion: Findings of this study show that the pictorial health warning images may not be as effective as previous studies have shown, with the results supporting the claims that the affordability of tobacco products in New Zealand is a major deterrent to smoking. To further strengthen these findings, more research with a larger sample population is required.

Key words: aukati kai paipa; Māori health; smoking cessation; quit smoking.

INTRODUCTION

“Worldwide, tobacco use causes more than five million deaths a year and current trends show that tobacco use will cause more than eight million deaths annually by 2030” (King, 2013, para. 14). “Smoking causes about 25 percent of all cancer deaths in New Zealand and one out of every 10 deaths worldwide” (King, 2013, para. 13).

In New Zealand, smoking is the largest cause of preventable death and disease and is the leading cause of cancer, heart attacks, strokes and other serious respiratory and cardiovascular diseases (Ministry of Health, 2012, p.1). Due to the magnitude of harm, suffering and loss of life smoking causes, the government is committed to reducing these statistics by making the prevention of smoking a “priority issue for the nation’s public health” (Ministry of Health, 2012, p.1). The government’s long term goal is to make New Zealand smoke free by 2025. One of the proposed measures the government has put in place in order to discourage smoking is to introduce plain packaging for tobacco products (Ministry of Health, 2012, p.1). The government has increased the price of tobacco products and plans to introduce plain packaging alongside quit smoking support services such as ‘Quitline’. These quit smoking messages are aimed directly at Māori, for example: “getting whānau aboard the waka this matariki – encouraging whānau members to quit together” (Quitline, 2013b).

The purpose of this study is to find out if these methods will actually motivate Māori to quit smoking. The primary researcher has chosen this topic because he is Māori and cares about the health and wellbeing of his people. As a past smoker the researcher understands how difficult it is to quit and, with this research, wishes to investigate what strategies will encourage Māori to “aukati kai paipa” or quit smoking.

METHODOLOGY

The type of research undertaken was a Māori smoking cessation research project using both qualitative and quantitative methodologies incorporating questionnaires (hard copy and online) and semi-structured interviews. The research project was conducted through the Sport and Exercise Department at the Southern Institute of Technology, Invercargill. The researcher aimed to have a minimum of 20 questionnaires completed and to conduct five semi-structured interviews. Ethics approval (11 August 2013) was granted prior to the commencement of research.
Strategy to encourage Māori to “aukati kai paipa” (quit smoking)

Posters and flyers advertising the research project and requesting participation were placed on notice boards at the following locations in Invercargill:

- Kohanga reo and day-care centres (three)
- Nga Kete Matauranga Pounamu Charitable Trust (Māori health provider)
- Southern Institute of Technology including the student lounge and cafeteria, Tauira Tautoko and other campus notice boards (including the Downtown campus).

The researcher also relied on word of mouth to gain participants and in addition sought people at the main campus of Southern Institute of Technology to see if there were Māori volunteers who wanted to participate.

Questionnaires were chosen because they allowed the researcher to contact a large sample of the population at a low cost, and were simple and quick to complete. The online and hard copies of the questionnaires were constructed using Survey Crafter. Imagery was also incorporated into the questionnaire. Before hard copies of the questionnaires were handed out a pilot test was conducted to see if any adjustments needed to be made. Changes were then made in consultation with the project supervisor. All data collected from the questionnaires were analysed using Survey Crafter and Microsoft Excel.

Five semi-structured interviews were conducted in the Tumu Tumu room at Tauira Tautoko, which allowed the participants to express their views and opinions in their own terms in a comfortable and familiar (cultural) environment. Upon arrival, the interview participants were greeted and thanked for taking part in the research project. Informed consent was gained and concerns addressed prior to conducting the interviews. The audio recordings from these interviews were then analysed for common themes.

Research Limitations

- **Time constraints.** Although the response rate for the questionnaires was met (20 participants), to gain a greater response the research would need to be conducted over a longer time period.
- **Networking.** As the researcher is not from the Invercargill area it was difficult to gain research participants as he was relatively unknown, and thus friends and acquaintances were relied on for networking opportunities.

**Geographic location.** The research could have been extended to other areas of New Zealand, and not just confined to Invercargill, which would have gained a greater response rate.

**RESEARCH**

A total of 28 participants took part in this research project. Twenty three completed either hard copies or online versions of the questionnaire, and five people took part in semi-structured interviews. The results of the questionnaires and interviews are included in this section.

**Questionnaire Results**

All of those who participated in the research identified themselves as Māori, with 78% of the participants being current smokers and 22% past smokers. As shown in Table 1 (below) the majority of the participants started smoking between 18 to 25 years of age.

<table>
<thead>
<tr>
<th>Age when started smoking</th>
<th>Frequency</th>
<th>Percentage of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-25 years</td>
<td>19</td>
<td>82.6%</td>
</tr>
<tr>
<td>25-35 years</td>
<td>2</td>
<td>8.7%</td>
</tr>
<tr>
<td>35 years or older</td>
<td>2</td>
<td>8.7%</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>100%</td>
</tr>
</tbody>
</table>

Figure 1 shows the factors that influenced participants to start smoking. Friends were the biggest influence, followed by ‘other’ reasons, peer pressure and parents; with stress and relatives being the least influential.

**Figure 1:** Factors that influenced participants to start smoking.
Other noted influences included:

- being allowed to smoke
- boredom
- curiosity
- domestic violence
- the ease of access
- personal image e.g. wanting to be “cool” like mum and people on TV.

Table 2 shows how long the participants have been smoking, or how long they previously smoked for before they stopped. The largest group of participants (39.1%) had smoked for 15 years or more.

Table 2: How long participants have or did smoke for?

<table>
<thead>
<tr>
<th>How long smoking</th>
<th>Frequency</th>
<th>Percentage of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10 years</td>
<td>8</td>
<td>34.8%</td>
</tr>
<tr>
<td>10-15 years</td>
<td>6</td>
<td>26.1%</td>
</tr>
<tr>
<td>15 years or longer</td>
<td>9</td>
<td>39.1%</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>100%</td>
</tr>
</tbody>
</table>

The number of cigarettes current smokers consumed per day, or past smokers previously smoked, is shown in Table 3. Over half of the participants smoked between five and ten cigarettes per day.

Table 3: How many cigarettes smoked per day?

<table>
<thead>
<tr>
<th>Cigarettes smoked per day</th>
<th>Frequency</th>
<th>Percentage of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-10</td>
<td>12</td>
<td>52.2%</td>
</tr>
<tr>
<td>10-15</td>
<td>10</td>
<td>43.5%</td>
</tr>
</tbody>
</table>

With regards to the type of cigarettes smoked, four of the participants smoked hand rolled, eight smoked tailor-made, and 11 smoked both hand rolled and tailor made cigarettes.

Table 4: Amount spent on cigarettes per week.

<table>
<thead>
<tr>
<th>Cigarette spend per week</th>
<th>Frequency</th>
<th>Percentage of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$20-$30</td>
<td>6</td>
<td>26.1%</td>
</tr>
<tr>
<td>$30-$50</td>
<td>13</td>
<td>56.5%</td>
</tr>
<tr>
<td>$50 or more</td>
<td>4</td>
<td>17.4%</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>100%</td>
</tr>
</tbody>
</table>

Addressing smoking cessation, 21 of the 23 participants had attempted to quit smoking before, with only two never making any attempt. The number of times they had tried to quit smoking is represented in Figure 3 (below). The chart shows that most of the participants had attempted to quit at least one to three times. Ten percent of the participants had attempted to quit smoking six or more times.
Strategies to encourage Maori to “aukati kai paipa” (quit smoking)

Figure 3: The number of times participants have attempted to quit smoking.
The health warning images shown on tobacco products contributed to 30.4% of the participants attempting to quit, however the images had no effect on 16 (69.6%) of the participants.

Results shown in Figure 6 (below) illustrate that half of the participants did not receive help from a cessation support agency and had quit on their own.

**Figure 4:** The extent to which health warning images contributed to participants’ attempts to quit smoking

The results in Figure 5 show that a significant majority of the participants (65.2%) felt that price increases of tobacco contributed to their attempts to quit smoking, in comparison to 34.8% who felt it did not contribute to their attempts to quit.

**Figure 5:** The extent to which tobacco price increases contributed to participants’ attempts to quit smoking.

**Figure 6:** The extent to which participants received help from support agencies, or quit on their own.

Other support agencies that the participants listed as assisting with smoking cessation are shown below in Table 5.

**Table 5:** List of other support agencies used by participants.

<table>
<thead>
<tr>
<th>Support agency</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nga Kete Matauranga Pounamu Charitable Trust (Nga Kete)</td>
<td>4</td>
</tr>
<tr>
<td>Awarua Health</td>
<td>1</td>
</tr>
<tr>
<td>Friends and family</td>
<td>1</td>
</tr>
<tr>
<td>E smoke and hypnosis</td>
<td>1</td>
</tr>
</tbody>
</table>
Interview Feedback
When asked “What do you think will help you and other Maori to quit?” the participants answered with the following responses:

- Stop selling them.
- Ban them completely. Price rises just going to make families miss out on other things and get poorer. The addiction is a mental thing as well as physical. Sport and exercise would also help.
- Ban them; make them more expensive.
- Constant feedback on how bad it is and how we could die leaving our families heart broken.
- Electronic cigarettes: healthier option, no fumes or toxins.
- Go to the gym and adopt a healthy lifestyle.
- Group support, having contact with people that I have stopped smoking with, activities.
- Health issues, being able to see what smoking does to our bodies.
- Illegalise smoking/selling tobacco.
- Increasing prices for tobacco.
- Keep raising the price and keep advertising it. The recent ads on television are scary to watch and I’m like: “eeuw yuk, this is disgusting”.
- Mana aroha connection.
- More support and services available.
- Not sure. More willpower.
- Role models.
- Sports and family.
- Support systems i.e. whanau and friends that are non-smokers. Assistance to conquer addictions/addictive personalities
- Take them off the shelf. Raise the price. Educate expectant mums as to what they will be feeding their babies via a smoke.

DISCUSSION
Plain Packaging
The main objective of this research study was to find out what strategies would encourage Māori to quit smoking. One of the strategies investigated in this study was the government’s proposal to introduce plain packaging in alignment with Australia, which is the first country in the world to have legislated tobacco plain packaging (Ministry of Health, 2012, p.7).

Currently, pictorial health warning images cover 30% of the front of the pack and 90% of the back of the pack, with recent research showing that using these visual images are an effective warning (Hoek et al., 2010, pp.861-862). However, in contrast to the study conducted by Hoek et al. (2010), the results presented in Figure 4 show that 69.6% of the questionnaire participants said that pictorial health warnings did not contribute to their attempts to quit smoking. In addition four of the five interviewees also stated that the health warnings did not contribute to their smoking cessation efforts. This study shows that the pictorial health warning images may not be as effective as previous studies have shown, but further research and a larger sample base is required to investigate this further.

Price increases
Another strategy the government is implementing to reduce smoking rates, is increasing tobacco prices. According to Thompson, O’Dea, Wilson and Edwards (2010) the affordability of tobacco products in New Zealand is one major determinant of the prevalence of smoking (p.74). The increase in tobacco prices reduces both the popularity of smoking and tobacco consumption for those on lower incomes (Thompson et al., 2010, p.74). It was also found that tobacco tax increases have had a major impact; for every 10% increase in price, tobacco consumption falls by approximately 5% with many smokers quitting and others reducing their tobacco consumption (beehive.govt.nz, 2012, para. 6-7). The results shown in Figure 5 seem to support these findings with 65.2% of the questionnaire participants saying that the price increases of tobacco had contributed to their attempts to quit smoking. Most of the interviewees (60%) also noted that increasing the price of tobacco products would encourage Māori to quit, however to further strengthen these claims more research with a larger sample base is required.

Smoking cessation programmes
Results from Figure 6 show that only half (50%) of the questionnaire participants had received help from either Quitline, Aukati Kai Paipa or other support agency. The fact that only 50% of the participants received assistance from a support agency could be related to earlier research studies that have shown that Māori tend to underuse primary healthcare and other support services when compared with non-Māori New Zealanders (Tane, 2011, p.74). This may indicate that more emphasis needs to be placed on educating Māori on what services are
available, raising awareness of these services and making it easier for Māori to access them. This was also a theme within the interviews, as two of the participants commented on the need for further education and information. The research has uncovered that the Aukati Kai Paipa provider in Invercargill, Nga Kete Mataranganga Pouamani Charitable Trust (Nga Kete), was the most used support service (used by eight participants), followed by Quitline (utilised by seven participants).

Other strategies to encourage Māori to quit smoking

**Health and education.** Some of the research participants were concerned about the health effects of smoking. They believed that seeing what smoking does to their bodies, as well as more information on the effects of second hand smoke, would provide a good incentive to encourage Māori to quit. They also felt that adopting a healthier lifestyle, for example going to the gym or playing sport, could be a useful strategy to quit.

**Ban cigarettes.** There was a general feeling that cigarettes should be banned completely; that they should be taken off the shelf. Many commented that increasing the price of cigarettes would encourage Māori to quit, however it was also noted that price increases could have a negative impact on families, with more strain placed on their limited incomes. It seems that increasing prices would not be enough, as to quit smoking requires willpower. The addiction to smoking is a “mental thing”, and Māori need assistance to conquer these addictions.

**Whānau and friend support.** When participants were asked what they thought would help them or other Māori to quit smoking, several commented on the need for more on-going support and support systems such as non-smoking whānau and friends. Aukati Kai Paipa may be an effective strategy to meet these needs as the programme provides whānau with a range of interventions such as motivational counselling, ongoing support and a reduction plan to identify coping skills to overcome smoking triggers to address nicotine dependence (Tane, 2011, p. 74). It was also noted by participants that quitting in a group rather than alone would be more beneficial, as they could provide support to each other. Another suggestion was to use a role model: someone to look up to who is respected in the community. Smoke free campaigns such as “Smoking not our future” feature New Zealand celebrities, many who are Māori, who endorse smoke free lifestyles (Smoking Not Our Future, n.d.) and may assist younger Māori to quit smoking. Quitline has also targeted quit smoking messages directly at Māori, for example “getting whānau aboard the waka this matariki – encouraging whānau members to quit together” (Quitline, 2013b) as it realises that whānau are an important aspect in getting Māori to quit smoking.

**CONCLUSION**

The results from this study conclude that pictorial health warning images shown on tobacco products may not be an effective strategy to encourage Māori to quit smoking, thus further evidence is required to enhance the reliability of these claims. The small sample size of this study was a limitation that may have affected the accuracy of the results therefore further investigation is required. This study did, however, support earlier claims from previous research that affordability of tobacco products in New Zealand is a major deterrent for smokers (Thompson et al., 2010, p. 74) with 65.2% of the questionnaire participants saying that the price increases of tobacco had contributed to their attempts to aukati kai paipa. This therefore may be an effective strategy but further investigation is required with a larger sample size.

Research studies have shown that Māori tend to underuse primary healthcare and other support services when compared with non-Māori New Zealanders (Tane, 2011, p. 74). The results of this study support this contention; only 50% of the participants received assistance from a support agency. For this strategy to be successful more focus may need to be placed on making support services easier to access and more prevalent to Māori. It was noted the role that whānau play when attempting to quit smoking; the support of friends and family is important to Māori.

Participants in this study were also able to provide their thoughts on what they believed would help Māori to quit smoking. Some of their strategies included: quitting in a group as opposed to on their own; understanding smoking ‘triggers’; exercise, and more education for Māori on what smoking does to your body. If these strategies are
to be considered for the future, further study needs to be conducted on this important topic.

References

Student researcher reflections
The student learned the importance of seeking help when needed and that failures were opportunities to learn from. The skills learned and practiced have relevance to communicating with people clearly and concisely, developing academic writing skills and using an analytical approach when reading research articles. The valued support received from the supervision process consisted of verbal discussions to formulate ideas with the help from my supervisor regarding methodology, and support when analysing the results. Through conducting this research the student not only learnt how to manage time more efficiently, but more importantly developed his own problem solving skills. The student now appreciates and enjoys the research process of gathering information and processing it for the purpose of developing relevant solutions to real issues. Becoming more proficient with the use of information technology was a great benefit of the research process. The research has made the student more aware of what is going on locally in the community especially with local Māori.
Working in a cross-medium creative partnership

Andrew Fraser (BComMus*)

In early August, one of my tutors from the SIT audio department introduced me to James Robinson, the Southland artist in residence (William Hodges Fellowship) with the intent to collaborate by hosting a mixed medium art exhibition at his residence in the old Invercargill maternity ward. We started talking and planned to host a night that would be open to the public. It would consist of the soundscape and noise art of my solo project ‘Isis Pylon’ and James’ poetry readings and spoken word. The following is a reflection on the collaborative process including the pros and cons towards working in a cross-medium creative partnership, and the lessons learnt in doing so.

After meeting James and viewing his work my first reaction was one of eagerness to get started on writing music for the night. I was thrilled at the chance to work with a renowned artist from New Zealand. James had previously worked with other distinguished musicians from the Dunedin area, such as Alastair Galbraith, and so it was very gratifying to be asked to collaborate with him. Upon planning out the night with James, my expectation of value and worth from the experience was profuse. I was very excited to be a part of not just another gig, but something that was in a multi-media format that the audience could interact with. We planned to have a collaborative mural between James and the audience painted onto the walls whilst the show was in progress. This idea served the purpose of giving the audience a chance to join the creative process.

As a musician, I am always open to collaborating with others, whether it is for a studio recording or live shows. Some of my best work has come from joining up with other like-minded artists to create something that is new and unique. I find that in this process my imagination is pushed further into territories of creativity that I could not accomplish with my own solo work. Working with James has added an extra dimension to my music as I am forced to work in and around his own creative process and adjust my own procedures to accommodate his style of performance. For example, with my own solo shows I have control of every aspect of the performance, letting myself explore areas of improvisation with my instruments. Working with James I am forced to open up the process into something more malleable that will allow him to improvise around what I am doing. For this particular show, we were able to blend my style of loop work on the guitar and glockenspiel with his spoken word readings from his journals and poems. Thus creating a form of performance where we feed off of each other’s verses and gather a momentum to take us into constantly changing moods and structures of music and words.

Aside from some occasional studio work with poets and other such artists, the collaborative process in my career as a performer has been with people that are on the same level of interest and genre as myself. In my previous collaborative work, there has always been another musician involved that understands what I am doing or about to do with my instruments. This kinship can often create familiar sounds that can go unchallenged and can often turn out to be, in my personal view, stale and uninteresting. Working with an artist such as James, who practices a different creative method, has confronted my habitual, instinctive ripostes toward performance opportunities, and brought about uninhibited transformations to my art form. This outcome is positive for my artwork because it lets me visit other creative spaces and realise the possible directions in a live performance that I may not have been aware of by myself.

After our first planning session for the night, I had realised that writing the music would not be as straightforward as I had originally thought. James had many ideas for the performance, and as he is not a musician himself, I was beginning to see the first challenge of the collaboration; organizing something that we could both follow in terms of structure and pace. This challenge led to a more organic process of creativity where we came up with the idea of turnabout verses of improvisation. This way we were able to insert specific cues in the performance to initiate transition between the poetic stanzas and audial improvisation. The idea of a natural improvisation between two artists is
Working in a cross-medium creative partnership

one that has always interested me. The process of feeding off each other’s energy on a stage in front of an audience can lead to very unexpected outcomes and fashion a radically imaginative product. In our case, we were able to expend each other’s performance in real-time and translate it onto our own individual act.

In previous collaborations in the studio with other artists there has been an absence of an impromptu, unpremeditated creative process. In the studio there is time to reflect upon who or what you are working with, and construct a plan or visualization of the final product. For example, earlier last year I worked on some studio sessions with a local painter and poet. The sessions were relaxed and we took our time to let the product form naturally in a cooperative, planned out fashion. When working with James, the product can neither be visualized nor planned; it just manifests in real-time through live performance. This unpredictability can be very rewarding in an artistic sense. The product becomes highly original and groundbreaking when there is an absence of predictability of the end product.

Working with James has taught me many things about the process of collaboration, in particular, letting go of creative control and assuming a position of partnership rather than a “king-of-the-hill” type workflow. This practice has helped me to understand my own limitations and weaknesses as well as the potential advantages in collaboration. From this experience I feel as if I am now further prepared for future ventures involving forms of artistic liaison. The experience as a whole has broadened my views of what is achievable when working with new people and I am looking forward to more of this type of improvisational collaboration in the future.