

## **The Rural Research Capacity Building Program 2008-2010 Intake**

### **Final Report**

***“It’s growing food but it’s also growing community.”***

**A QUALITATIVE STUDY ON THE PERCEIVED EFFECTS OF  
PARTICIPATING IN A COMMUNITY GARDEN**

#### **Principal Researcher:**

Maryann Anderson, B Soc Sci, MEd  
Health Promotion Officer  
Population Health  
Clinical Support Division - Northern  
31 Uralba St.  
Lismore, NSW 2480  
Ph: (02) 6620 7668; Fax: (02) 6622 2151  
Email: [maryann.anderson@ncahs.health.nsw.gov.au](mailto:maryann.anderson@ncahs.health.nsw.gov.au)

## Acknowledgements

This report would have been impossible without the support of the Lismore Community Garden (LCG) Project Staff and the Northern Rivers Social Development Council (NRSDC) who provided the funding through the Department of Health and Ageing Funding for the transcription of the interviews.

I am deeply grateful to the Clinical Education and Training Institute (Rural Division) or CETI NSW (formerly *Institute of Rural Clinical Services and Teaching (IRCST)*) who funded my time to conduct the evaluation as part of the requirements under the Rural Research and Capacity Building Program (RRCBP). I will forever be indebted to Dr Emma Webster of IRCST whose constant support and confidence in us, the candidates, was undoubtedly the buoy that kept us afloat over the 2 years and further. Many thanks too to David Schmidt, RRCBP 2008 intake, who provided significant feedback for the final report.

I am also grateful to Dr Avigdor Zask of the North Coast Health Promotion Unit's Research and Evaluation team, who provided much needed advice and feedback along the formidable yet rewarding path to research, Denise Hughes (RRCBP 2009 intake), and Jillian Adams (Nutrition and Physical Activity Coordinator), who were my critical friends. Special thanks is due to Chalta, a friend and an esteemed colleague whose expertise and support in Endnoting among others, was my crutch without which I would have been helpless. Staff members at the Lismore Base Hospital Library were very helpful in providing me access to the literature and other resources.

A special thank you is also due to Uta Dietrich, Health Promotion Director, and Ros Tokley, Tobacco Coordinator, who gently pushed me to aim for the stars and the reward of completing the report.

I take my hat off to the Rainbow Region Community Farms Inc (RRCF) Committee people, past and present members, who supported the evaluation and research processes from the beginning. In their own selfless ways they continue to inspire others, including myself, with their dedication to the environment and community-building. I take pride in my association with these people who devote their personal time and resources for a commendable cause. They have given me a real sense of hope in the contribution the ordinary person can make for the betterment of the community.

Finally and most especially, I am forever beholden to the interview participants who gave up their personal time to participate in the study and the exceptional small group of study participants that provided invaluable feedback for my final report. I am humbled by the fact that you opened your hearts and minds about this project which you take so much pride to be part. For trusting me with your most private feelings and frustrations, hopes and dreams, I thank you from the bottom of my heart.

Lismore Community Garden photos



*\*Thanks to the Rainbow Region Community Farms, Inc for the pictures*

## TABLE OF CONTENTS

<b>Content</b>	<b>Page</b>
<b>Glossary</b> .....	5
<b>Abstract</b> .....	6
<b>Executive Summary</b> .....	7
<b>1. Introduction and Background</b> .....	9
1.1 Context.....	9
1.2 Background.....	10
<b>2. Aims of Research</b> .....	11
<b>3. Literature Review</b> .....	11
3.1 Search strategy .....	11
3.2 A Brief History of Community Gardens.....	11
3.3 Benefits of Community Gardens.....	12
3.3.1 Nutrition and physical activity and health.....	12
3.3.2 Social connectedness and community building .....	13
3.3.3 Therapeutic and health benefits.....	13
3.3.4 Environmental benefits.....	14
3.4 Motives for participating in community gardens.....	14
<b>4. Study Design and Method</b> .....	14
4.1 Rationale for selection of method.....	14
4.2 Ethics Approval.....	15
4.3 Recruitment of participants.....	15
4.4 The interview process.....	15
4.5 Observation of garden activities.....	15
4.6 Researcher's involvement with other aspects of the LCG.....	16
4.7 Analysis.....	16
<b>5. Results and Discussion</b> .....	17
5.1 Study Population.....	17
5.2 Themes and sub-themes.....	17
5.3 Challenges in the garden.....	27
<b>6. Study Limitations</b> .....	28
<b>7. Conclusion</b> .....	29
<b>8. Recommendations</b> .....	29
<b>9. References</b> .....	31
<b>10. Appendices</b> .....	34

## **GLOSSARY OF ACRONYMS USED**

<b>ACFCGN</b>	Australian Community Farms and Community Gardens Network
<b>DoHA</b>	Department of Health and Ageing
<b>IRCST</b>	Institute of Rural Clinical Services and Teaching
<b>LCG</b>	Lismore Community Garden
<b>LGA</b>	Local Government Area
<b>NCHP</b>	North Coast Health Promotion
<b>NRSDC</b>	Northern Rivers Social Development Council
<b>RRCF</b>	Rainbow Region Community Farms, Inc.

## Abstract

**Background:** The Lismore Community Garden became a reality in late 2009 with funding from the Commonwealth Department of Health and Ageing. Its aims were to improve community nutrition practices, increase knowledge on healthy eating and health, strengthen community connectedness and create education and employment opportunities. Other objectives included the demonstration of organic gardening practices and the establishment of backyard and neighbourhood gardens. The LCG is now being independently managed by the Rainbow Region Community Farms (RRCF), Inc., a not for profit organisation run by volunteers. This research study contributed to the overall evaluation of the funded project.

**Aims:** The main purpose of this research study was to understand the perceived effects of participating in the garden in terms of health and nutrition, social connectedness and food access. It also aimed at finding out the motives which inspired the gardeners to join the garden.

**Method:** This study utilised the semi-structured interview method of inquiry and observation of garden activities. Interviews were conducted between March and May 2010. Interview transcripts were analysed and coded for key themes.

**Results:** Eleven garden volunteers were recruited and interviewed, seven of whom were males and four were females, whose ages ranged from 27 to 66 years old. Five recurrent themes were identified from the interviews, including: 1) *Growing the garden takes time*; 2) *The garden stimulates sharing and reciprocity*; 3) *Learning occurs in the garden*; 4) *The garden has a number of positive effects*; and 5) *The garden is an oasis*.

**Conclusions:** The garden impacted differently on the study participants. Some already developed new friendships and others were still making new ones. Other participants were already using the garden produce; others thought that the garden was not producing enough to take home. Others considered the garden as a venue for sharing backyard produce. Some thought the garden fulfilled a social purpose for them while for others; the gardening took precedence over the social activities. Despite these different perceptions, all agreed that the Garden was a positive experience for them. This study demonstrated that the LCG is a useful avenue for building community and for reinforcing principles of sustainable environments.

**Implications for practice:** This study has demonstrated that the LCG is working towards the building and strengthening of the social fabric of the community. It can also become the hub of non-gardening activities for the community, activities that could form the core of community cohesion whilst fostering positive physical and mental health. Gardening administrators and policy makers that are considering the investments on community gardens may find the study outcomes useful in the decision-making process.

**Key words:** community gardens, social connectedness, community-building, health and nutrition

## Executive Summary

Community gardens have a critical part to play in community health, community-building, social cohesion, the environment and food security. In numerous parts of the world where the community garden movement is growing, the building of relationships within the garden network as well as outside plays a vital role next to food production.

This study of the LCG in North Coast NSW is part of the evaluation of the Commonwealth Department of Health and Ageing-funded initiative from 2007-2010. The LCG embarked in July 2010 as a financially-independent entity managed by the RRCF, a not for profit organisation run by volunteers.

The main purpose of this research study was to understand the perceived effects of participating in the garden in terms of health and nutrition, social connectedness and food access from the perspective of the participants. This study also aimed at finding out the motives which inspired the gardeners to join the garden.

This study employed the semi-structured interview method of inquiry. Eleven interviews were conducted over six weeks with seven males and four females. Five of the interviewees were RRCF Committee Officers and six were non-committee members. The interviews were enhanced by observation notes. A thematic analysis was done to examine the transcribed discussions.

The study described the positive benefits of involvement and the challenges encountered in the LCG. In spite of its limitations, this study corroborates the evidence in the literature.

The recurrent themes that were discerned from the data were as follows:

- 1) Growing the garden takes time.** Findings suggest that intended outputs (e.g. produce, relationships, sustainability, and involvement of marginal groups) of the community garden were minimal as of the time of the interviews. The gardeners stated that actual growing of the garden takes time, not unlike developing social relationships which cannot be rushed. It was also acknowledged by the participants that the garden was not yet impacting on their health and nutrition because the garden was still in its developmental stage.
- 2) The garden stimulates sharing and reciprocity.** The nature of community gardens engenders the act of sharing and reciprocity amongst the participants within and outside the garden. Not only food is shared but knowledge, skills, recipes, and decisions that impact on the garden are shared and exchanged as part of the social organisation of the garden.
- 3) Learning occurs in the garden.** Fortuitous learning in many aspects had been occurring in the garden. Whether it was through formal processes (organised workshops and information sessions) or through observing, talking, listening, working together, socialising over a cup of tea and exchanging stories and food preparation, learning was a by-product of the social activities in the garden. The garden was also an avenue for learning skills and knowledge that will be useful in setting up other gardens and improving their own gardens.
- 4) The garden has a number of positive effects.** Perceived effects included making social connections within the garden and the potential for continuing those newly made connections outside the garden. The participants believed that the garden could be a vehicle for community building as it facilitated emotional, mental and spiritual wellbeing and healthy nutrition. It gave the gardeners a sense of purpose, particularly for those who felt isolated and insular.

**5) The garden is an oasis.** The participants described the garden as an oasis, a place that evokes and fosters positive feelings, thoughts and ideas. It has the potential for becoming the hub of community social activities, in addition to the gardening aspect.

### **Conclusions and recommendations:**

The garden impacted differently on the study participants. Some already developed new friendships and others were still in the process of making new ones. Other participants were already using some of the garden produce for their household consumption; others thought that the garden was not producing enough to take home. Others considered the garden as a venue for sharing and exchanging backyard produce, but not as a source of fruit and vegetables for their own consumption. Some perceived the garden as fulfilling a social purpose for them, much more than the gardening aspect. Learning from others was a fortuitous outcome of participation in the garden activities for some whilst others envisaged the garden as a venue for them to share their skills and knowledge. Despite these different perceptions, all agreed that the Garden was a positive experience and a special place for them.

It is imperative that initiatives such as community gardens such as the LCG are explored further and supported as these serve as viable mechanisms for building community at the same time reinforcing principles of sustainability for the environment. Whilst not all gardens, like the LCG, could adequately address food insecurity in the community, it offers opportunities that could lead towards the improvement of the health and nutrition of the gardeners, if not the community at large.

## ***1. Introduction and Background***

### ***1.1 Context***

The Lismore Community Garden Project, aptly titled *Growing Together*, was a Federal-funded initiative aimed at establishing a community garden in Lismore from 2007-2010. After two years searching for a suitable site and addressing Council requirements, the Garden was formally launched in June 2009 and opened to the public after four months. The formal working bees commenced in early December 2009. Funding concluded in June 2010. As of the time of writing, the LCG remains open and supported by a small group of volunteers under the management of the RRCF, a not for profit organisation that was formed in 2006 by a small group of community people. The RRCF's main goal is to establish a network of community gardens in the Northern Rivers of New South Wales that adhere to sustainable practices.<sup>1</sup>

From March 2007 to June 2010, the LCG project was a partnership between the Northern Rivers Social Development Council (NRSDC), which was responsible for the management of the funding up to June 2010, the Lismore City Council (LCC), which is providing the land on a Deed of License arrangement, and the RRCF. The North Coast Health Promotion (NCHP) supported the project from 2007-2010 by conducting the evaluation of the project as part of the requirements for the funding body. The evaluation component also became the subject of interest for purposes of the Rural Research Capacity Building Program. Currently, the NCHP continues to provide advice, support and resources.

With the invaluable assistance of local horticulture and permaculture\* experts, fortuitous funding from the Commonwealth Department of Health and Ageing (DoHA), and the commitment of agencies such as the NRSDC, LCC, NCHP and business sponsors, the LCG came to fruition. As part of the funded component of the project, a Project Coordinator and a Site Manager were employed to implement the program but whose roles as paid workers ceased after June 2010.

The stated objectives of the LCG project were to:

- 1) *Establish a self-sustaining, large scale, state-of-the-art, water conserving community farm*
- 2) *Improve community and family eating habits and nutrition choices*
- 3) *Increase community knowledge of nutrition and the effects of nutritious foods on general health and its impact on chronic diseases.*
- 4) *Promote local health and fitness*
- 5) *Strengthen community capacity and connectedness and*
- 6) *Create education, employment and work experience*

An evaluation report<sup>2</sup> which addressed the above objectives and other serendipitous yet favourable outcomes, was written in June 2010 and subsequently submitted to the Commonwealth DoHA as part of the funding requirements. The findings from the interviews presented here also informed the evaluation report.

---

\*Permaculture is defined as: a system of design for sustainable human habitat — an approach to ecologically sustainable development which can be used by individuals, communities, business and government”.<sup>3</sup>

## ***1.2 Background***

The American Community Garden Association defines a community garden as ‘*a single piece of land gardened collectively by a group of people*’.<sup>4</sup> Community gardens function publicly and are often held in trust by nonprofits or government bodies.<sup>4</sup> There are several types of community gardens including shared and allotment gardens and a combination of both. The LCG has both shared and allotment garden beds.

According to Glover (2004), in his study of social capital and the lived experiences of community gardeners in Canada, community gardens result from, as well as serve as, a source of social capital.<sup>5</sup> The term 'social capital' refers to the “institutions, relationships, and norms, that shape social networks, foster trust, and facilitate coordination and cooperation for mutual benefit.”<sup>6</sup> An important element of social capital is the network of relationships between individuals and groups.<sup>6</sup> The LCG is the outcome of three years of collaboration of a network of organisations and individuals that have significant social capital. Likewise, it can also serve as a source of social capital amongst the volunteers that have joined since the Open Day, the supporters and sponsors who have partnered with the garden to support it.

The RRCF's first community garden initiative was established in the outskirts of Lismore on private land which was leased for the purpose. It was set up with the intention of tapping into the Work for the Dole scheme of the government where Work for the Dole clients worked as gardeners for the RRCF. Produce from the garden was sold to visitors at below-market prices and gardeners were given a box of fruit and vegetables at the end of the day.

The Local Government Area (LGA) of Lismore in the North Coast area of NSW comprises of its urban geographical catchment and rural areas including four rural outlying villages and six suburbs. It has an estimated residential population of 42,210 as of 2006 (the last ABS census collection), a majority of whom live in the urban areas. Aboriginal and Torres Strait Islander people make up 3.7% of this population compared to 2.3% in Australia. In 2006, there were 48.7% males and 51.3% females. More than a third (34.6%) were less than 24 years old, 40.6% were between 25-54 years and the rest were 55 and over, indicating a predominantly younger population. The median age was 38 years.<sup>7</sup>

There is significant disadvantage in the Lismore LGA. In 2006, the unemployment rate in the LGA (9.2%) was well above the state average (5.9%).<sup>8</sup> The median weekly individual income for the Lismore LGA is \$200-\$299, compared with \$300-\$399 for NSW.<sup>9</sup> The median weekly household income is \$500-\$599 compared with \$800-\$899 for NSW.<sup>9</sup> There are more single parent families (20.9%) in the LGA compared to NSW (15.5%).<sup>9</sup>

In terms of health behaviour indicators such as fruit and vegetable consumption, The NSW Population Health Survey of 2008 showed that less than a seventh (14.1%) of North Coast residents eat the recommended daily amount of vegetables, slightly higher than overall NSW adults (10.2%).<sup>10</sup> Only slightly more North Coast adults (59.4%) ate the recommended daily serves of fruit compared to overall NSW adults (56.8%).<sup>10</sup>

In the North Coast a significantly higher proportion (7.5%) of adults experienced food insecurity, when compared to the overall adult population (5.1%).<sup>11</sup> Food security is defined as the “ability of individuals, households and communities to acquire appropriate and nutritious food on a regular and reliable basis, using socially acceptable means.”<sup>12</sup> Food insecurity or lack of access to healthy food is also attributed to socioeconomic status whereby those in the most disadvantaged quintile are more likely to experience food insecurity. Higher food insecurity, high disadvantage and low socioeconomic status contribute to poorer health and nutrition and reduced access to essential health services.<sup>10</sup>

## **2. Aims of Research**

The primary aim of this research study was to explore the perceived effects of participating in the garden on the participants' lives. The research question serving as the framework for this study was "What are the perceived effects of participating in the garden on the participants' health and nutrition, social connectedness and food access?"

The study objectives were:

- 1) To review the evidence on community gardens
- 2) To determine the motives that led participants to be involved in the LCG
- 3) To assess the participants' subjective experience of being a participant
- 4) To understand the perceived effects of participating in the community garden
- 5) To document the challenges faced by the gardeners
- 6) To provide recommendations to policymakers.

## **3. Literature Review**

### **3.1 Search strategy**

A variety of databases was used to gather the evidence about the use of thematic analysis, community gardens, food security, social connectedness and community building from the literature. The Clinical Information Access Program (CIAP) and its various databases using the NCAHS platform, was the primary source of the literature, as well as Open Access Journals on the Internet. Grey literature was also sought on Google and Google Scholar on the Web. Secondary sources were found using references of primary sources (original research works). The Lismore Base Hospital Library catalogue was also used to source books and reports.

The literature is replete with anecdotal and qualitative evidence on the impact of community gardens whilst there is meagre evidence on quantitative measures on the effects of community gardens. The reasons behind this, some of which have been noted by some researchers<sup>13, 14</sup> include:

- 1) Except for social capital, it is difficult to measure in quantifiable terms some of the indicators of participation such as social connectedness, community-building, and psychosocial impact.
- 2) The lack of standardised evaluation tools to measure dietary intake pre and post garden participation as these could also be influenced by food habits, cultural practices, current food access, storage and handling.
- 3) The gardeners' subjective experiences are better captured using their own words and expressions.

### **3.2 A Brief History of Community Gardens**

This section briefly covers the origins of community gardens worldwide.

The establishment of community gardens was a response by communities to food shortage resulting from the ravages of past world wars. The concept was later abandoned when people became more affluent.<sup>15</sup> Concern about the environment in the early 70s, and more recently, awareness of the effects of the globalisation of food on the climate has again instigated gardening in neighbourhoods and communities.<sup>15</sup>

The history of community gardens in Australia dates to the 1970s in Victoria and many of these gardens still exist today. Other Australian states followed and established community gardens

usually on public housing lands as part of community renewal programs.<sup>15</sup> The Australian City Farms and Community Garden Network (ACFCGN) was formed in 1996 by Dr Darren Phillips with the purpose of supporting community gardens that were sprouting around the country.<sup>15</sup> It was also established to facilitate seed exchange, waste management and resource and skills-sharing among the member gardens. Today, this network plays a significant role in the development of community gardens around the country.

The advent of community and neighbourhood gardens in the Northern Rivers occurred in the 1970s but the uptake was slower over the subsequent decades than it has been in more recent times. The Lismore Community Garden is the first community garden within the town limits. Neighbourhood gardens were established prior to the LCG within Lismore but these only benefited the nearby streets. There is also evidence that other gardens outside Lismore but within the Northern Rivers are in the process of being established. Discussions have been taking place due to the growing awareness at both levels of community and policymakers of the intrinsic and extrinsic values of community gardening.

### **3.3 *Benefits of Community Gardens***

#### **3.3.1 *Nutrition, physical activity and food security***

Most of the quantitative evidence on the effects of participating in community gardens, such as nutrition and physical activity outcomes, comes from overseas. In one of six sites evaluated as part of a community and school gardening program in California, self-reported before and after surveys with participant students demonstrated that fruit and vegetable consumption improved from 3.44 to 3.78 servings per day and physical activity sessions increased from 4.9% to 5.2% per week. In another site involving ethnically diverse groups, consumption of fruit and vegetables improved among 35% of gardeners from 3 to 3.71 servings per day. Intention to improve eating habits was also reported by 86% of 228 participants who attended nutrition education classes in another garden site.<sup>13</sup>

Data from a cross-cultural random phone survey conducted among adults in Flint, Michigan revealed that they were more likely to consume fruits and vegetables 4.4 times a day if they participated in a community garden than if they did not (3.3 times). Almost one third (32.4%) of respondents from gardening households had an average intake of fruit and vegetables of at least 5 times daily compared to 17.8% from non-gardening households. Generalised linear models and logistic regression models were used to assess the relationship between community garden participation and fruit and vegetable consumption.<sup>16</sup>

The impact of the community garden on dietary intake, psychosocial health and community participation was measured in a case control study done by Blair and colleagues in Philadelphia. Their study revealed that gardeners significantly ate more vegetables and consumed less milk products, sweets and sweet drinks than non-gardeners.<sup>17</sup>

In terms of the impact of participating in the garden on physical activity, the findings from studies showed dissimilar outcomes. In some studies, the stories of garden participants revealed that the garden has had an impact on physical activity through working at the garden.<sup>17-21</sup> On the other hand, other studies demonstrated that the participants mentioned less frequently the impact of gardening on exercise levels because to them, 'exercise' meant a strenuous, physically demanding and un-enjoyable activity, which gardening did not invoke.<sup>3, 22, 23</sup> This perception implies that they considered gardening as a pleasant and relaxing activity.

Some studies showed that participants did not always benefit from the community garden produce. For the Northey City Farm in Brisbane, compared to social networking which was realised to a

greater extent among the small sample of gardeners studied, food self-reliance was not yet attained as of the time the study was conducted. Food self-reliance was defined in the study by Gelsi (1999) as “the ability of the local community to identify and mobilise idle resources to provide for all of one’s food and energy needs.”<sup>24</sup>

Similarly, the evaluation of the Gilles Plains Community Garden Project in South Australia also showed that the participants were not able to benefit from an adequate supply of fresh fruit and vegetables at the time of the evaluation because the gardens were not producing high quantities. On the other hand, they mainly gained social, physical and personal benefits. The garden was albeit recognised for the nutrition education opportunities provided that aimed at increasing the nutrition knowledge of families and individuals that could lead to the improvement of eating habits.<sup>18</sup>

In another food garden project in Johannesburg, the evaluation revealed that the impact on community food supply, access and intake could not be measured a year after commencement of the garden because of the low production initially.<sup>14</sup> In addition, the difficulty in measuring the nutritional impact of the garden on the participants was also recognised due to many factors affecting nutritional quantity and quality of garden produce, storage and processing, food distribution and current food habits.<sup>14</sup> Conversely, the project participants reported improvements in skills and self-confidence in gardening activities and in the preparation and knowledge of the medicinal properties of some herbs.<sup>14</sup>

Contrary to the presumption that community gardens were reaching those in need and addressing food insecurity, one study in a poverty-stricken area of Toronto in Canada, revealed that those who were experiencing food insecurity were less likely to participate in community gardens despite their access to such programs.<sup>25</sup> Economic issues that trigger food insecurity were not always addressed through initiatives such as community gardens.<sup>25</sup> Notwithstanding the inability of some community gardens in addressing food access and security, other beneficial activities such as the sharing of recipes, food know-how and the exchange of home grown vegetables take place among the gardeners.<sup>15, 17, 19, 26</sup>

Not all community gardens can address food access or food security as the above studies showed. The Lismore Community Garden is an example of a garden which did not address food security but it met other objectives as this research study will later demonstrate.

### ***3.3.2 Social connectedness and community building***

Studies have confirmed that community gardens were found to be ideal environments for fostering positive interactions among people of varying ethnicities and backgrounds that would not normally socialise with each other.<sup>5, 15, 19, 26</sup> They also found that community gardens have been found to reduce isolation from the community, contribute to community cohesion, community-building, crime reduction, and neighbourhood transformation. Similarly, gardens were regarded as a third place, a public space and escape from urban turmoil.<sup>3, 5, 15, 18-20, 23, 24, 26-33</sup>

### ***3.3.3 Therapeutic and health effects***

The therapeutic impact of gardens and the practice of horticulture, either as a group or an individual activity have also been documented. Gardeners who were interviewed stated that gardening was stress-relieving, relaxing, and it increased self-esteem, hence, contributing to good mental health. Moreover, as a result of the social connections the individual makes in a community garden, the garden positively impacts on the person’s mental and psychological wellbeing.<sup>15, 28, 29, 34-43</sup>

The introduction of community and home gardens has also been found to reduce diabetes as demonstrated in a study of the Navajo people in the United States, a group of people who were

experiencing increasing rates of diabetes in the population owing to changing lifestyles and diets. The production of fruits and vegetables closer to home enhanced the consumption of healthier diets, increased physical activity, and improved household income facilitated by the sale of surplus in local markets.<sup>22</sup>

A study of the effects of working in natural and green spaces showed that being outside in natural light improves one's moods. As a natural setting for human activity, gardens help in the enhancement of mental health because these facilitate the person's contact with nature, which has been proven to be beneficial for the individual.<sup>28, 38, 39, 44, 45</sup>

### ***3.3.4 Environmental benefits***

Previous studies suggest that community gardens are beneficial for the environment. In the USA, community gardens were created in the wake of urban degradation of inner city residential areas.<sup>30, 37</sup> Not unlike the American experience, the beginnings of community gardens in Australia are partly attributed to the need to improve the urban environment and for more sustainable practices in food production. Community gardens were recognised for their contribution to the regeneration of unused or under-used public land that might otherwise have been accessible for less desirable purposes.<sup>3, 15, 19, 24, 27, 30, 35, 46</sup>

### ***3.4 Motives for participating in community gardens***

Motives for participating in community gardens encompass environmental reasons such as applying and learning sustainable practices, creating an extension of the backyard garden, growing space for those with none at home, and access to nature. Other gardeners' reasons for participating in community gardens included the need to maintain social contacts, health factors, access to food, and physical activity. Others motives were more altruistic in nature including the alleviation of food shortage in the community.<sup>3, 23, 33</sup>

At times, the administrators' and the gardeners' perspectives of the program goals varied. Two studies have documented such discrepancy. D'Abundo (2008) in her study of Community Garden Education Programs in North Carolina, showed that the programs were created to address obesity but the participants' experiences focused on wellness, community development, and food sustainability.<sup>47</sup> In an earlier study by Gelsi (1999), it was revealed that the organisers assumed that the community garden improved the environment and the community's health, and led to empowerment but the benefits from the gardeners' perspective included personal and psychological outcomes.<sup>24</sup>

## ***4. Study Design and Method***

### ***4.1 Rationale for selection of method***

This study utilised the semi-structured interview method of inquiry. The choice of a qualitative method to assess the effects of the garden from the participants' perspectives was mostly guided by the literature on community gardens and the limited standardised tools for measuring the impact of community gardens in quantitative terms. The complexity of using standardised tools for Culturally and Linguistically Diverse groups for participants whose first language may not be English also served as a barrier to the use of the quantitative method. Due the perceived inequality in social standing between the researcher and the marginalised groups, there was also the probability for the latter to feel coerced into participating.

## ***4.2 Ethics Approval***

Ethics approval for this research project was sought and granted in May 2009 from the North Coast Area Health Service's Human Research Ethics Committee (Number 463N). Originally, six focus group discussions as well as ethnographic observation during the garden activities were planned. Due to the delay in the commencement of the project and the less-than-expected number of garden participants from which to recruit, it was decided to conduct one-on-one semi-structured interviews. The questions originally planned for the focus groups were slightly modified to suit individual interviews. Ethics approval was sought and granted for this amendment of the study method.

## ***4.3 Recruitment of participants***

The recruitment of participants for the interviews was done at the garden. A poster (Appendix D) was displayed in the garden to expedite recruitment. Gardeners who approached the table set up for purposes of recruiting were asked if they were interested in participating in the interviews. Word-of-mouth led to further participants volunteering for the study. Participants had to meet certain criteria including: 1) being 18 years of age or older; 2) having participated in the garden; 3) being available for an interview between April and May, and 4) consent for the interview to be recorded (but de-identified).

If the volunteers expressed interest and met the criteria, they were given the Statement of Participant Information (Appendix A), a Consent Form (Appendix B), and a reply paid envelope to allow them to peruse the information at home before deciding to participate. Two (2) returned their signed consent forms in the mail while the others signed and returned their consent forms at the garden. After reaching data saturation, recruitment was terminated after the 11<sup>th</sup> interview.

## ***4.4 The interview process***

At the onset of the interviews, confidentiality clauses and the opportunity to decline or discontinue participation were reiterated. The interviews ranged from half an hour to an hour and a digital recorder was used to record the interviews. All of the interviews were conducted in a variety of settings in the community. These settings were primarily the participants' choices, including outdoor and indoor cafés at quiet times, an interview room in the local health centre and at the garden. Among those who preferred to be interviewed at public places like the local cafés, they expressed willingness to be interviewed despite concern for the lack of privacy. Part of this candidness could be attributed to the subject matter (the LCG) with which they were proud to be associated. The recorder that was being used was adjusted so it only picked up the interview and not other patrons' conversations. The researcher ensured that she and the interviewee were not within earshot of other patrons.

An interview guide (Appendix C) was used as a framework. The interviews were digitally recorded and transcription was out-sourced to a Brisbane company. The transcriber was able to note and document verbal expressions when possible. The transcripts were returned to the researcher as Word files. Participants checked written transcripts for accuracy. One participant requested changes to the transcript to obscure the identity of people discussed during the interview.

## ***4.5 Observation of garden activities***

During the time of recruitment on some Saturday working bees, minimal observation of garden activities took place. Notes were recorded in a notebook and aspects that were observed included task delineation, socialisation processes and non-garden activities, and the process of welcoming of visitors into the garden by the garden staff. Whilst talking to some participants for the purpose of recruitment to the study, a verbal disagreement between some volunteers who were within audible

range was noted. It was also observed after garden hours that passers-by tended to drop in when there were no gardeners around and lingered around the garden beds but did not pick any of the plants.

#### ***4.6 Researcher's involvement with gardening and other aspects of the LCG***

It is necessary to mention that the researcher was obliged to participate in the Project Advisory Committee as part of her Health Promotion Officer role and as the Evaluator of the program. Hence, she found it necessary to bracket her ideas of gardening, the information she heard at Committee meetings and the friendships she already had with some of the garden volunteers and staff prior to the research study, some of whom also volunteered to be interviewed.

Although not an expert gardener, the researcher dabbles in ornamental and vegetable gardening at home and sources some of her vegetable needs from her vegetable patch. Moreover, she has always felt a connection with natural green open spaces, having spent much of her childhood in a similar setting. This predilection has more than likely provoked interest in the experiences of the gardeners in the LCG, leading to this research study.

#### ***4.7 Analysis***

The transcripts were read and coded by hand on the margins of the transcripts. These codes were transferred into pieces of paper that were laid out on the kitchen table.<sup>20</sup> The pages of the transcript from where the codes were lifted were also noted on the pieces of paper to enable reference to the participants' particular quotes for future use in the report. The codes were then re-arranged into sub-themes according to similarity and frequency of utterances and then sub-themes collated and arranged into major themes as per thematic analysis informed by Aronson (1994)<sup>48</sup> and Braun and Clarke (2006).<sup>20</sup>

Particular features that were looked at included impact of participating in the garden, interviewees' motives for participating in the garden, and the meaning of the garden in terms of health and wellbeing, social connections, access to the produce and impact on their own gardens where applicable.

In order to engage the interviewees again in the analysis stage of the study for purposes of the CETI report and to improve method rigour, they were offered the opportunity to peruse the first and second draft of this research report and provide comments. Five of the study participants responded to my request for feedback and a majority agreed to the themes, findings and interpretation. Some gave additional comments to further clarify the quotes from the transcripts and these were incorporated in the revised version. This method is also called 'member-checking', a practice used by other researchers of community gardens such as Baxter and Eyles (1997) in Wakefield.<sup>35</sup> The researcher's mentor was provided a copy of the series of drafts for comments. These processes served to check and confirm the findings as interpreted by the researcher.

The researcher is not a neophyte researcher inasmuch as she has worked overseas 20 years ago as a research assistant in the company of more skilled researchers conducting ethnographic studies of indigenous communities. The opportunity to participate in the analysis of findings from these ethnographic studies was nevertheless limited. In another period of more recent work experience, focus groups were also conducted as part of the evaluation of programs and needs assessments and analysed the findings from the focus groups using crude thematic analysis.

## ***5. Results and Discussion***

Findings from this study and findings from other studies are presented throughout this section.

### ***5.1 Study Population***

The interview participants included RRCF members as well as non-RRCF garden volunteers. The interviews were conducted over eight weeks, from March until May 2010. A total of 11 interviews were conducted; seven of the participants were males and four were females. Except for one, interviewees were of Anglo-Saxon descent and all participants spoke fluent English.

Five of the participants were Volunteer Site Coordinators at the time of the interviews. Five study participants were office bearers of the RRCF Committee and six were non-officers at the time of the study. The five committee officers were not necessarily the Site Coordinators. The youngest participant was 27 and the oldest was 66 years old, with a median age of 59 years. Seven lived in town and four lived out of town.

As of June 2010, a total of 56 people were registered in the Garden Registration book although it is known that some gardeners have not registered at all. Not all the people registered have returned to the garden since the Open Day. The average participation rate on weekends was 20 gardeners although this ranged from as few as five people on one weekend to as many as 22 people on another weekend, both confirmed through observation by the researcher and perusal of the registration book. There were one or two people working in the garden during the week, and more often than not, these were Volunteer Site Coordinators.

Recruitment of non-Anglo participants was limited due to time constraints, language barriers, and the lack of gardener participation by volunteers from multicultural and Aboriginal and/or Torres Strait Islander communities at the time of recruitment.

Of the 11 study participants, only one had ever volunteered in a community garden project in another town. Interestingly, all of the interviewees grew up in homes where a vegetable patch in the backyard was the norm. During the interview period, they either had a backyard garden in their own homes or were in the process of setting one up. Prior to their involvement in the LCG, all 11 participants had previous knowledge about and have visited community gardens in other towns.

They were all committed practitioners and advocates of organic gardening, the main principle to which the LCG adheres. Six were involved in the core group that first met in 2006 and ran the subsequent community consultations. The rest have been involved for less than a year. Except for two participants who were undergoing university or TAFE tuition at the time of the interview, the rest have completed higher degrees, implying a demographic of well-educated gardeners.

### ***5.2 Themes and sub-themes***

After an analysis of the transcripts, five themes and sub-themes were discerned. Throughout this section, direct quotes from the transcripts highlight the participants' interpretation of their experiences in their own words.

The five themes are:

- *Growing the garden takes time*
- *The garden stimulates sharing and reciprocity*
- *The garden is a place of learning*
- *The garden has positive effects*
- *The garden is an oasis*

## **5.2.1 Theme - *Growing the garden takes time*** **Sub-themes**

### **5.2.1.1 Actual growing of the garden takes time**

The participants were asked the impact of participating in the garden on their food access, social connections, and health in general. Many of them said that the garden has not yet had that much impact on them. Others revealed the differences, albeit minor. Some described the garden as a work in progress and a process which takes time.

*“It’s a slow process and I’m not interested in rushing along and getting things all up and running straight away. I think it’s a work in progress...and there’s no need to rush.” (Chris)*

*“It’s a sort of a growing thing so you can see the garden is growing, the plants are growing but there are going to be a lot more beds in there.” (Marv)*

*“Well, it’s the interaction with other people which is the main thing at the moment because the garden is only just getting going. There’s not a great deal of garden there, yet... I mean, it’s only early days. There’s nothing miraculous in the world. I mean, everything takes time but it certainly.... I think it’s stimulated interest.” (Mel)*

### **5.2.1.2 Building social relationships and a community in the garden take time.**

The title of the DoHA-funded aspect of the LCG project is considered a pun because it implies growing a garden is similar to the process of developing relationships and growing as a community. Time is an essential element in the development of social relationships and networks.

*“The motto of the garden is ‘Growing together’ which is kind of a bit of a pun as well and ‘Demonstrating Sustainability’ so growing together certainly is quite easy to accomplish. You can either grow plants together and you can grow together even through conflict so I don’t think there’s any problem there. Sustainability has yet to be demonstrated because obviously sustainability requires a much longer time.”(Erin)*

*“...Everything takes time and particularly with a community garden where everybody has got to learn. They’ve got to learn to get along with the other people that come along...”(Mel)*

On the other hand, other gardeners have already started to gradually befriend new people, people they would normally not have met outside the garden.

*“I’ve met a couple of people there whom I’d like to maybe spend a bit of social time elsewhere other than just the gardens with but I’m seeing how it develops.” (Mel)*

Among the key target groups of the LCG project were the marginalised groups in the community, including Aboriginal people and people from other cultures. It was observed during the time of recruitment and interviews that there were no participants from the Aboriginal community and only a handful from other cultural groups. When queried, the interviewees explained that it would take time before marginalised people feel comfortable enough to get involved.

*“They’re probably very shy about the whole thing. I think it will take a little time to get to know them maybe better and get them to know us a bit better.”(Leigh)*

*“ I think one has to be very careful and consider how one approaches the indigenous people because essentially questions of stolen land..you know you can’t approach them as if they’re just another group because essentially they have myths and legends surrounding this whole area, that go a back a long time and really have to have a place of honour, I think, in the garden.” (Erin)*

*“Unfortunately we haven’t been at the stage yet where many have been able to make it down, but I think if you keep your mind as open as possible in terms of what groups can come down then there’s a possibility of those making groups making it, yeah.” (Kim)*

In a similar study of community gardens, Glover (2004) referred to the perceptions of the community gardeners in New York whose lived experiences he studied. They acknowledged that it takes time before marginalised communities feel able to participate in the community project. According to Glover's interviewees, they perceived that the participation in the garden program by the African Americans in the neighbourhood was minimal because of the underlying tense relationships in the community between the white people and the other groups. The community garden was seen as "the white folks' project". Nevertheless, the core members of the project were working towards addressing the racial divide.<sup>5</sup>

### **5.2.1. 3 Making an impact on health and nutrition practices of participants takes time**

Some participants also acknowledged that they were already eating healthy food and participation in the garden served to affirm their way of living but it has not yet made a huge impact on their health and wellbeing in general.

*"Not huge changes...I think being involved with this initiative or project has reaffirmed these ideals of good living and makes me think about it more often and I have learnt about different plants...So in that way it's good but I think it's still a progress that I'm in at the moment, process. So I've still got a little while to go." (Kim)*

There is a discrepancy in the gardeners' perceptions of food access in the garden. A number reported that they were already able to pick some vegetables and herbs for their own use but others claimed that the garden has not had much impact yet on their food access or consumption.

*"Well, the garden, of course, isn't producing a great deal yet. It will take a time before there's enough excess for a start and it's a big enough scale. The only thing I'll have a nibble at some of the herbs there whenever but I do that all the time in the garden wherever I am, virtually wherever I go, I'm forever picking at things and tasting things. I've always lived a fairly active outdoor life and lots of walking, lots of ... I ride a pushbike, yeah. (Mel)*

*"And it's early days. The crops haven't been in long enough for it to be producing heaps of food yet." (Sam)*

*"Usually there's a little bit of harvesting going on, on the weekend and people take some stuff home. There's not a great deal to take home. Mostly herbs and eggplants and stuff like that, but not a lot of, pardon me, extremely nourishing food." (Erin)*

The findings indicate that the participants were aware of the garden's early stage of development, and were not yet expecting substantial outputs, but were happy with what they were gaining at the time of the interview. Moreover, they were optimistic that the garden would benefit them in terms of food production and formation of future relationships. They were also conscious that the development of connections both within and outside the garden was not to be hurried and when they do occur, these pave the way to more enduring relationships.

## **5.2.2 Theme - The garden stimulates sharing and reciprocity**

### **Sub-themes**

#### **5.2.2.1 Food exchange is a significant part of the garden**

A noteworthy view by participants is that the garden was an avenue for reciprocity. Reciprocity is defined as 'a mutual exchange of privileges'.<sup>49</sup> In the garden, it meant the exchange of produce from backyard gardens, recipes, cooking skills and knowledge, and offer of labour for a bit of vegetable and herb harvest at the end of the day.

*"...in my religion, I believe in balance giving and receiving...So if you do some digging and you grow plants, you're putting in effort and it's coming back to you or you grow stuff and you sell it and you get money for it. It's*

*just like balance, giving and receiving, if we put in an effort and we get something back or we bring stuff that we've grown, other people bring stuff that they've grown. You take from the garden and you bless the garden but you give it food and water and it gives you food and the sun, everything..." (Kerry)*

The exchange of crops from their own backyard gardens with the other participants in the garden was already taking place. A vegetable swapping table was set up in the garden for surplus.

*"We're hoping to do our first vegetable swap this Saturday, 'cause there's quite a few tomatoes and lettuce, and eggplant there, and we'll bring carrots and whatever we can find from the garden, and hopefully we'll have a swap going." (Leigh)*

*"Well, I've been giving my stuff, well, I haven't had a lot, so I've just given it to local people, neighbours, but yeah, I'll be getting a few broccoli and stuff and I'll bring them in (to the garden).....yeah, well, yeah, every week somebody brings something." (Kerry)*

In addition to the garden being the centre of fruit and vegetable exchange, participants envisaged the garden as the centre for the celebration of food harvest, and preparation and consumption of food, not unlike the experiences of Brisbane's Northey Street City Farm gardeners.<sup>24</sup> One of the LCG study participants hoped that this will happen.

*"I know that's part of the vision is to be able to share the food around." (Sam)*

The same optimism was shared by another participant.

*"I was really interested in getting the shared lunches and the sharing food happening. That was one of the things I really wanted to see." (Toni)*

After the completion of the interviews, shared lunches, feasts and other non-gardening occasions that featured shared food preparation, contribution of home cooked meals and collective consumption were observed. These were practices that were similarly observed by researchers in other community gardens to contribute to the gardeners' 'sense of belonging' and 'sense of community'.<sup>5, 15, 18, 24, 26</sup>

Most of the participants believed that the garden and its produce were there to be shared, for both gardeners and non-gardeners. Passers-by were encouraged to pick what they want, whether or not they are gardeners. According to the gardeners, it was a common perception in the community that unless people contributed something to the garden, they were not entitled to the produce. Some of the quotes from the interviewees illustrated this perception.

*"There's so much growing there I encourage people to take some but people are funny you know. You think people would come and steal the produce but they never do. No one even takes it and I say to them 'take some herbs'. There's basil, parsley, coriander. No one ever takes anything. Unless they've actually contributed and helped grow it and some of the people that are participants take some but people off the street never walk up to the garden and pluck some coriander and take it home." (Erin)*

*"People come into the garden just to look and quite often we'll say to them, "Pick something to take home with you," because we've got so much stuff there at the moment, it needs picking, it needs harvesting. And quite often that is their response. They say, "Oh no, but we haven't done any work," or, "We'll have to come and do some work before we pick something," and they feel quite uncomfortable." (Toni)*

A study by Lackey (1998) established that gardeners perceived the community garden as a 'locus for food sharing and alleviating hunger in the community'.<sup>50</sup> The participants in Lackey's study said that they did not participate in the garden to cultivate for their own consumption. Instead, they were doing it to donate their time and produce from the garden to the underprivileged in the community.<sup>50</sup>

Following a similar principle, one of the plans of the LCG was to supply the local Soup Kitchen and food-deprived groups in the community with some of the garden produce in due course.

Interestingly, it was observed in the garden that at times the Soup Kitchen provided the gardeners with its surplus bread. This act from an organisation that relies on charity to feed its needy clients indicates a reciprocal sharing of food.

### ***5.2.2.2 Skills and experiences are shared in the garden***

The desire to share their own skills was not only prevalent among those interviewed, but among other gardeners as well. Sharing one's skills was seen to have a positive impact not only on the beneficiaries but the provider as well. It was discerned from the interviews that one of the volunteer gardeners, who was also a trained Tai Chi leader, was teaching free Tai Chi once a week at the garden for both gardeners as well as non-gardeners. Another gardener also gave a free singing lesson one weekend at the garden because music was one of her interests. Another lady prepared and cooked food in the garden. One of the interviewees wanted to provide talks about the environment to engage the young people.

*“So there's this enormous potential there.. that excites me as well...and I myself would like to give some talks on various aspects about the environment. And particularly to enthuse young people, because we need to be moving in a new direction... 'cause we've got to build the idea in the minds of young people how important the environment is and the growing of their own food.”(Marv)*

*“ (Community gardener) who does Tai Chi on Tuesday mornings. Having spoken to him a few times I get a real sense of this is a contribution that he's very keen to make, not just because people appreciate it, but because tis' very good for him, and I think that's part of the magic of a community garden; it creates an opportunity where people can contribute and it's good for them, and it's good for the community.” (Kelley)*

### ***5.2.2.3 There exists a culture of helping within the garden***

A number of participants mentioned their desire to help people in the garden as well as outside the garden, in their personal lives. This included helping friends and family set up their own backyard gardens at a later stage.

*“We had a friend of ours come down, (friend named) who's got severe disabilities because of arthritis and she wants to get a garden going in her (backyard). ...so my brother and I, maybe we're gonna try and get a few other people to go up and assist her in getting her gardens...I don't see why we can't help them, because this garden is the community garden for Lismore...backyard gardens that are part of the community.”(Marv)*

*“ And we're thinking maybe even older people who can't even look after their own garden, we could sort of try and help or offer advice. So there's a lot of potential for the gardening to grow, not only in terms of, you know, vegetables and plants but in terms of friendship and social interaction” (Leigh)*

While at the garden, they also offered their own garden equipment such as their mower and the use of their own vehicle to run some errands related to the garden.

*“So, I've been bringing my mower in most weeks and using it and whipper snipping, but my ute's always been commissioned into work; cart stuff, so if something needs to be picked up, quite often (Gardener named) will give me a buzz and I'll ... all sorts of things like that. When I come here I get involved with whatever jobs are doing. Mowing, raking, basically any of the jobs I help out on.”(Jamie)*

Most tasks are shared and self-initiated. During one weekend working bee, it was observed that the gardeners were self-organised with the garden tasks. A number of volunteers picked up tools from the shed and proceeded to weed, water, and mulch according to their preferred task and/or the task that needed to be done. The gardeners were generally flexible such that they were willing to do what needed to be done.

*“Normally, in the garden, I would go and find out what needs to be done. A lot of the times there's watering or planting, mowing the lawn and planting, planning on structures, garden structures and paths, and things like that, which I like to get involved in.” (Leigh)*

On the other hand, some female participants observed that there was a tendency for the male gardeners to focus on heavy tasks such as building and construction in the garden whilst the female gardeners did most of the planting, weeding, mulching and composting. The others were happy with this arrangement but some female participants were not in favour of the perceived gender split and the tasks would be shared.

*“ Well, there’s one time I did complain where I said there was more men than women; and I felt out of it because the guys were all talking to each other and there weren’t many women there that time. And I just felt the odd person out. And, of course, I don’t have a lot of strength and I can’t do a lot of things that the guys do, so we do need men but still they were like a men’s club.” (Kerry)*

Many studies have documented similar features of community gardens. In addition to food sharing and ideas for propagation (e.g. seeds), these places are also settings for the exchange of stories, memories, culture, interests, knowledge and skills, recipes and tool.<sup>19,35,41,50-53</sup> Just like most community gardens, this culture of sharing is prevalent in the LCG, a feature which is one of the prerequisites to social engagement and community building.<sup>35, 46</sup>

### **5.2.3 Theme - Learning occurs in the garden**

#### **Sub-themes**

##### **5.2.3.1 Learning by observing, listening and talking with others**

Participants reported that one of the motives for joining the garden was to learn new skills as well as share their own knowledge base. The gardeners perceived that learning continuously occurs in the garden, echoing what other studies have revealed<sup>26, 36, 43, 47</sup> The skills learnt in the garden included food preparation practices of other cultures and general food and nutrition knowledge acquired during the Community Dietitian’s talks at the garden. The participants mentioned these workshops where they gained useful information they intended to apply in their own lives.

*“I was here on the Saturday for a cooking workshop with (person named). Just a cooking of okra which is a vegetable they use in Sierra Leone or Africa. Well, a vegetable that I’ve never used so that was good.” (Kim)*

*“It was a lady who came from the Health and although I was busy doing other things at the time, I overheard quite a few things which made me think...about healthy eating and questioning my knowledge, and my self-confidence about what I eat.” (Leigh)*

For some, the garden was the setting for learning from other people’s experience and knowledge about gardening. They learned from watching other gardeners perform their tasks in the garden and talking to those who they believe have more experience in gardening.

*“I’ve got a lot of learning to do. Cause there’s a lot of people there with experience and knowledge, and you remember their little habits. Like (another gardener) is a good one. He takes a long time to just straighten the tomato plants and make them look good, and that sort of thing, which I never bother about.” (Leigh)*

##### **5.2.3.2 The garden can be a model for other gardens**

Many also believed that the main purpose of the garden was to educate and inspire other people to be self-sufficient in their own backyards and neighbourhoods while applying the principles of sustainable gardening. It was recognised as a possible model for other community or neighbourhood gardens.

*“So I see the community garden is very much a pioneering and a model. It’s not just big enough to substantially contribute to meeting people’s foods.” (Kelley)*

*“..that’s good for those people too, because they can learn, they can learn what they don’t know and if they’ve got an interest in gardening, it can help them with their own gardens”. (Mel)*

### **5.2.3.3 The participants learn sustainable practices and teach others their experiences**

Some participants framed the learning process that was taking place in an environmental context. The impact of the garden revolved around the skills learnt on organic gardening principles, some of which have already been implemented in their own gardens while others have the intention of applying what they have learnt.

*“I suppose I’ve got a much better understanding of organic gardening principles, and I’m learning more and more. And I’m being able to use a lot of the little things, hints and tips that I’ve picked up in my own garden, so I’m gradually getting better at, my home garden’s getting better as well; so I’m learning lots of things.”(Jamie)*

Some initiatives were purposely organised and implemented as part of the plans to increase people’s skills and knowledge on sustainable practices such as seed saving workshops, the use of bio-char, mulching, composting and no-dig gardens. The teaching of sustainable practices at the garden has impacted on some participants.

*“..with my own garden, I guess to grow more, and more things and to buy less, and less things. I really actually hate buying vegetables now, I find it really hard to do. I can’t buy anything that’s wrapped in plastic at all. It just doesn’t even look like food anymore.”(Toni)*

This study on the LCG is consistent with the findings in other studies that learning is a continuous process in the garden, as it is in life outside the garden.<sup>26, 36, 47</sup> Much of this education transpires as a result of the practice of sharing skills and knowledge among the participants. The participants’ perceptions of the learning processes occurring in the garden highlight the role of the community garden in teaching skills such as sustainable garden practices, good nutrition, and growing their own food for personal consumption that may assist the community to become healthier, more self-reliant and empowered.<sup>36, 53</sup>

## **5.2.4 Theme - The garden has a number of positive effects**

### **Sub-themes**

#### **5.2.4.1 The garden has impacted on gardeners’ social connections**

One of the most commonly mentioned benefits of participating in the LCG was the social connections being made in the garden and diminishing feelings of isolation. Just like other studies on community gardens<sup>4,8,9,10,12,16,17,25,28,41,47</sup> participation has facilitated social interactions amongst the gardeners and with the community in general.

*“It’s engaged me with the Lismore society. I don’t feel so disconnected. I feel...a bit more part of it.” (Leigh)*

*“..I’m pretty insular and don’t normally go out of my way, like, I don’t go out dancing or socialising generally and I’ve never done that; and the community garden is probably one of the first times I’ve sort of actively got involved in the community.” (Mel)*

Some participants also observed the effects of the garden on other gardeners who they perceived were normally isolated.

*“I get the feeling that a lot of people that come to the garden are probably not that social...probably don't mix that easily..outside of the normal, social set or social circles. And I think they feel like they found a place in the garden where they can be themselves and be accepted for who they are.”(Toni)*

Several participants accepted that the garden had a dual purpose, that is, a focal point for social interactions as well as a vehicle for the gardening activity itself. Not unlike other studies on community gardens,<sup>3, 5, 13-15, 19, 24, 26</sup> the LCG was a prime setting for these functions.

*“I think gardening's important although personally it's not my biggest passion. I think more of the social side is important and whether people really, really enjoy the gardening or just want to get together, interact and create social networks, I think both are just as important.” (Kim)*

*“Gardening is a product; it's not the end. The end is building community for me, so the food is a product. The nutrition, the way of life and so on; they're the products, but the real action is building community.”(Kerry)*

*“... it is such a place of growing in so many ways. It's growing food but it's also growing community. I'd love to see the gardens flourishing and people being really involved with the gardens...I'd like to see people flying kites there, and people busy in the garden, other people cooking...” (Toni)*

*“....So when I've reflected on my time at the garden, I'm not the person who wants to get there and really do something. [Laughs] I'm the person who wants to get there and see who else is there and chat with them, them, them and them, and really I don't do anything. [Laughs] I just go round talking and going, “Oh do you want some lettuce seeds or ...?” so I've never, I can't say I've never planted anything because I have planted the odd thing here and there. But I, when I compare my input with other people I see who are, who, some people come every Saturday and they, and they just want to plant, and that's what they do, the whole time. Other people just want to water. Other people just want to dig or do physical stuff and I just want to talk really [laughs].”(Chris)*

This penchant of some participants to attend the garden activities for the social aspect is also a bone of contention for others who feel that the same people do the work whilst others prefer to chat.

*“Sometimes the people who come to work are not happy about the people who come to chat. I feel that all can contribute something but often it's the few that do most of the work.” (Kerry)*

Parallel to studies by Gelsi (1999)<sup>24</sup> and D'Abundo (2008)<sup>47</sup> mentioned earlier, the findings of this study demonstrate that the gardeners' motives for participating varied. For some, they preferred the social aspect of the garden whilst others were more inclined to work and the others did a bit of both socialising and gardening during their time in the garden.

#### **5.2.4.2 Impact on food access**

Views differed whether the planned garden was big enough to address the nutrition needs of those most in need or not at all. Only a handful of the participants believed that it was going to be adequate whilst the others disagreed. When asked whether the garden was big enough to feed some people who are not able to buy their own, one participant, Kerry said: *“Yeah, there's plenty of space.”* On the other hand, Kelley disagreed,

*“I'd be surprised if there were many people who got a lot of their food requirements from the garden. I think it's (LCG) mainly going to be a demonstration for what can be done.”*

For others, especially during the latter period of interviews, they were already able to harvest some vegetables and take some seeds home.

*“There has been a little bit of harvesting, especially of late, going on from the garden or the backyard demo area. So I have taken a couple of things...pick some herbs and Asian greens and stuff like that for my own consumption.”(Kim)*

*"...I've taken seeds from the community garden of varieties that I didn't have or I hadn't seen before. Those little freckle lettuces, I've got them in my garden now." (Chris)*

*"I made a hamburger because I'm not a vegetarian but I had on it, little cherry tomatoes from the garden, rocket from the garden, coriander and parsley from the garden and it was absolutely a joyous thing." (Erin)*

#### **5.2.4.3 The gardens facilitate a spiritual connection with the earth**

According to the gardeners, their involvement in growing plants and the consumption of what they have grown also contributed to their feelings of well-being and spiritual connections with the earth. The gardeners of Port Melbourne Community Gardens in Kingsley's study (2009) also referred to similar spiritual experiences felt within the garden and their delight in growing because they were 'in touch with nature'.<sup>23</sup>

*"That's why a community garden is so good because you come along and you're just doing some work but it's more..it's recreational aspects, which is the important thing... You're socialising but just the mere thing of being with somebody else and doing a useful task, creating a garden is good for the soul as they say." (Mel)*

*"I do like being involved with gardening and digging into the ground, and just smelling the smell of earth and all natural things, I do like that and it really makes me, always makes me feel good." (Leigh)*

*"For myself it's a lovely sense of achievement to feel that you are participating in something that's growing and coming alive and that you can actually take the food home and eat it."(Sam)*

#### **5.2.4.4 The garden has therapeutic benefits**

The LCG is also recognised for its therapeutic benefits, a manifestation of the findings from other studies.<sup>15, 22, 28, 29, 34-43</sup> One participant, Toni, related that going to the garden and participating in Tai Chi once a week at the garden assisted in the recovery from a health problem more quickly than it would have been otherwise. The garden also gave Toni a sense of purpose during her recovery time.

*"So it was really therapeutic from that point of view. 'Cause I was doing Tai Chi as well, which really helped. And I wouldn't have done that if I wasn't involved in the garden." (Toni)*

Some studies of gardens that were created specifically for patients with cancer and in another area, for patients with mental health issues, elucidated the positive effects of the gardens on the healing process and quality of life.<sup>29, 41, 53</sup>

#### **5.2.4.5 The garden has impacted on other people's (passers-by) awareness**

Comparable to other community gardens elsewhere, the LCG has created awareness among the wider community like passers-by who stop and ask about the garden. Some go to the extent of asking of how they could be involved, as noted and reported by the study participants. This is the beginning of interaction and community engagement, according to Bartolomei et al (2003)<sup>19</sup> and Wakefield (2007).<sup>35</sup>

*"So the good thing too, is a lot of people go past all the time, so they see things happening. And quite often people have been, walked off the, whatever they're doing, off the road to come and talk to us to say, "Well, what's this?" and, "How can we get involved?"(Leigh)*

*"Like there's been a couple of days there where ... one day, a man was just walking past, he came over, he was a man in his late 50s and had a bit of a talk to him and he went away, about half an hour later he came back with his (laughs) motor mower and started helping with the mowing. So we're picking up some people, just passers-by, and we are getting people coming in, putting their names down and so we're attracting people, passing by."(Marv)*

These assertions by the participants in this study of the LCG echo what other studies have demonstrated that community gardens are breeding grounds for social connections that lead to social capital and community-building.<sup>14, 15, 19, 23, 29, 33, 35, 46, 51</sup>

### 5.2.5 Theme - *The garden is an oasis.*

Oldenburg(1982) in his discourse asserted that people create places which are neither their home (the “first place”) nor their workplace (the “second place”) but a setting which contributes to their ‘wholeness’ and ‘sense of belonging’ because of the informal relationships they form within these places.<sup>31</sup> He coined the term “*third places*” to refer to these settings. Community gardens, in general, have been classified as third places because these meet the criteria for third places through its informal, relaxed, and enabling nature.<sup>31</sup> A shared purpose by users of gardens is to hang out, have a cup of coffee or tea and talk to others who are present in the garden, which is what the gardeners of the Northey St City Farm have also said.<sup>3</sup> In the same way, the LCG gardeners related to the garden as a third place albeit the concept may not have been articulated as such. Their description of the LCG and the gardeners was consistent with the criteria for third places.

*“..An aspect of that community is for it to be recreational, casual, to not have a specific routine so that people can do what they like, sort of thing.” (Leigh)*

*“Nobody actually stresses out here and you can come down and have a cup of tea and this and that...” (Jamie)*

*“I just like the company there and all the people are very friendly and there’s young and old people there. I find it very enjoyable just to be, it’s a happy place to be.”(Marv)*

*“..a peaceful little place where people could enjoy the nature and the garden and perhaps participate but not feel that they have to participate. Play.” (Erin)*

The garden has also been likened to an oasis from urban turmoil.<sup>17, 32, 46</sup> Interestingly, one of the study participants, Erin, used the same term ‘oasis’ to describe the LCG. When queried, Erin has not read any literature on community gardens prior to the interview.

Marv, one of the study participants provided the following as an after-thought as part of feedback to the first draft. Marv’s description of the LCG sums up the meaning of the garden to the participants as a special place, an oasis.

*“From a bare bit of open parkland, we are creating a new environment. Volunteers seem to feel good about what they are doing. It is a natural setting being created by us and a special place different to the rest of the city. After participating in the Lismore Community Garden, you feel a connection and sort of pride. This is a special quality of the garden which can be promoted and developed in many ways. It has become a place that allows people to just be themselves and be comfortable doing that with others.”(Marv)*

The significance and implication of third places on community and individual health is now being widely appreciated. Jeffres et al (2009) found out through a national survey in the United States the places Americans identified as third places in their communities which foster community and enhance the participants’ quality of life.<sup>54</sup> Among the 21 most common third places cited by respondents, parks and outdoor recreation was the fifth most commonly mentioned.<sup>54</sup> The findings suggest that natural settings also play a vital role as third places. Frumkin’s (2003)<sup>45</sup> study of the evidence of healthy places and their association with health outcomes reinforces the importance of natural contact on health, a finding that is also supported in other studies.<sup>15, 28, 34, 38-40, 42</sup>

### 5.2.5.1 *The garden can become a focal point for the community*

The LCG participants believed that the garden can be the avenue for non-gardening activities that will complement the garden activities that are already occurring. One participant's comment resonates the other study participants' aspirations:

*"... to see people flying kites there, and people busy in the garden, other people cooking, people working on art projects, and people working with kids, and education. A happy, busy, beautiful place where everyone just feels really safe and welcomed.. everyone!"*

The on-going non-gardening activities in the garden contribute to community-building, social cohesion and people's enjoyment. The pursuit of these events is just as vital, if not more important than gardening activities, as these promote participation in broader issues, interaction, reciprocity, and social capital amongst the participants.<sup>15, 24, 35</sup> This is particularly valuable for those who may feel alienated in the community but are able to connect with others in a safe and inclusive environment.

*"It will be good to get the garden at a stage where we can hold different activities, events and more cooking and activities for people that may not really have a strong passion in gardening but will enjoy other social activities that might be related to nutrition and healthy food or fitness or whatever. I think the garden has a big opportunity to be quite a diverse site or hub, yep."*

### 5.3 *Challenges in the garden*

Some studies have also found conflicts and tensions that arise in community garden projects implying that this is typical of community gardens particularly in their early stages of development.<sup>5, 19, 26</sup> At the time of the interviews in the LCG, some participants readily confessed that there was an existing degree of tension and verbal disputes were occurring among some volunteers for various reasons. This was personally observed in the garden. Details of the conflicts will not be reported here because this study does not focus on group dynamics but it is worth noting that one of the causes for the tensions was the different purposes for volunteering by the gardeners and disagreements about how some aspects of the garden should be run. A study participant later clarified the challenges as part of this person's feedback to the final report

*"The usual sort of problems of founding organisations has been encountered. For example – differences of opinion amongst members, drop off in numbers of volunteers from the initial high numbers in the first six months of operation, concerns about where do we go from here, how do we promote and build more public interest, etc. Personality differences and differences in approach have occurred, which to some degree is undermining the morale and effective participation of some members." (Marv)*

The key findings from the study of the Lismore Community Garden participants highlight the value of this particular community garden, which in some ways also reflect the findings which other researchers found in other community gardens. Gardeners have different motives for participating in the LCG, not unlike the experience of gardeners in other community gardens.<sup>24,47</sup> Some volunteered to contribute to the physical work of setting up the garden; others seized the opportunity to meet and connect with other people in the community to reduce their own feelings of isolation while others wanted to do both.

Not all of the LCG study participants felt significant impact from participating in the garden activities as of the time of the study and they acknowledged that the garden was only beginning at that stage. For some they perceived the garden as having had an impact on their social connections, while others were considering the possibilities of building community within the garden. Some were already reaping benefits from some of the herbs and vegetables while others did not think the garden was sufficient to meet their own nor the community's food requirements.

A number of the gardeners recognised the learning and modelling opportunities the garden offered for themselves as well as the rest of the community. Demonstrations on sustainable practices such as bio-char, organic principles of planting, mulching and no-dig gardens were identified as valuable for the current gardeners and future generations.

The gardening and non-gardening activities that were taking place in the garden were perceived to be fostering reciprocity and a mutual sharing of food, skills and knowledge on food preparation, sustainable gardening practices, recipes, nutrition tips, and home produce. Just as important, the LCG participants referred to the garden as a special place that provoked positive thoughts and feelings and it reinforced their spiritual connections with the earth.

## **6. *Study limitations and strengths***

Interviews were conducted after the garden had been running for only three months. It is reasonable to expect that this impacted on the responses of some of the participants, including access to the limited produce, connections they have made (or have not made yet) in the garden, and other activities that were run in the garden.

Moreover, those who were involved in the first stages of the garden development were those who formed the core group initially. Hence, it is also likely that this was the group of people who were more environmentally conscious; more educated and informed, led healthier lifestyles, were more articulate and felt less isolated in the community. It is not surprising that some of these people volunteered to participate in the interviews. The views of other gardeners who attended the working bees less frequently and those who were less inclined to participate in interviews were not represented in this study.

Since the interviews were done as part of the evaluation component and the participants were aware that their responses would inform the final report to the funding body, they could have been inclined to offer responses that they believed could expedite further financial support.

Ideally, more intensive field observation and note-taking could have confirmed some of the participants' comments. Due to the garden holding its normal working bees on Saturdays only during the time of the interviews, this was not feasible due to the researcher's personal circumstances.

The findings from the interviews cannot be generalised to other participants in the garden nor with the wider community as this is only a snapshot of what actually occurs in the garden. This study only looked at the experiences of a majority of Anglo Saxon, English-speaking volunteers. Only one study participant was from a non-Anglo background. A more diverse picture about gardening experiences from the perspective of other groups of people could have emerged otherwise.

Feedback on the first draft of the report from a few study participants was also not forthcoming because of recent changes in the garden's social structure and dynamics. This group of participants admitted that they were not willing to participate in the feedback process.

Despite these study limitations, this study has its strengths too. It is the first evaluation research conducted on the LCG. It could serve as the basis for the conduct of future evaluations of the garden. The findings from this study and future evaluations of the garden could inform the development and improvement of the garden for the benefit of the volunteer gardeners and those members of the community who are yet to be engaged. The study findings and methods used were consistent with the findings of similar studies on community gardens. For garden administrators and policymakers,

it is a window to the perceptions of the participants and the meanings they prescribe on their experiences in the garden.

## **7. Conclusion**

The purpose of this study was to explore the effects of participating in the Lismore Community Garden from some of the gardeners' perspectives. Their comments and stories for the most part are in accord with early and current research about the positive attributes as well as the challenges of community gardens.

The garden impacted differently on the study participants. The findings indicated that it would take some time before the gardeners feel the impact on the garden on their own lives, particularly with access to the fruit and vegetables to meet their nutritional needs. Other participants were already using some of the garden produce for their own consumption; others thought that the garden was not producing enough to take home. Others considered the garden as a venue for sharing and exchanging backyard produce, but not as a source of fruit and vegetables for their own consumption.

For some, the garden was already impacting on their social connections with the other members and for the others; they were anticipating future social networking in the garden. Some perceived the garden as fulfilling a social purpose for them, much more than the gardening aspect. Learning from others was a fortuitous outcome of participation in the garden activities for some whilst others saw the garden's potential as a venue for them to share their own skills and knowledge. Despite these different perceptions, all agreed that the LCG was a positive experience and a special place for them which they called an oasis.

This research also showed that whilst it may not be able to completely mitigate food insecurity in the community, the LCG provided opportunities including the exchange of backyard produce, cooking know-how, and organised nutrition education which could assist in the improvement of nutritional skills, knowledge and behaviour. Furthermore, not unlike other studies, the LCG community garden is a viable venue for learning about environmentally-sustainable methods, such as home gardening which can facilitate the community's access to their own fresh and organic sources of food in the future.

The current demographic of garden participants shows that the marginalised sectors of the community are not yet fully engaged. While this is so, the garden offers potential for these sectors to be involved through its non-gardening activities.

## **8. Recommendations**

The findings from the study may provide useful information for local decision-makers and policymakers that are considering the support of and investment on community gardens. The information from this report can also be used to inform the development of future plans for the LCG as well as other community and neighbourhood gardens.

It is imperative that initiatives such as community gardens are supported as these serve as valuable mechanisms for building community at the same time reinforcing principles of sustainability for the environment.

The involvement of community, both in decision-making and in the celebration of the garden's achievements is pivotal in the sustainability of the community garden. Gardens that demonstrate

collaboration amongst a group of people who come together with similar objectives are on the path to building communities both within and/or extending outside the gardens.

**a) Recommendations for policy-makers and garden administrators**

- Continue to provide non-gardening but stimulating activities within the garden in order to maintain the involvement of the rest of the community.
- Maintain and support the garden as an educational venue for gardening and other environmental matters.
- Improve the engagement with marginal groups, young people, older people, people with disabilities to ensure their participation; ensure programs and activities are accessible and appropriate.
- Continue to engage other community services, organisations and the business sector and ensure that disadvantaged groups are also involved.
- Provide clear signage so the general community and workers know about the community garden and its purposes.
- Continue to provide advice and support of other local councils and current volunteers who would like to see the establishment of a community garden in their own communities or street gardens in their neighbourhood; support the formation of a regional network of community gardens.
- Implement the conflict resolution policy to abate discord in its early stages.
- Follow-up people who have initially expressed interest to be involved in the garden, in order to identify enabling factors that could encourage them to return.

**b) Recommendations for further research**

- Conduct a review report after two years because the timeframe of the evaluation in 2010 may present a diminished view of the garden's actual progress and benefits to the community.
- Study the perceptions of the impact of the garden on other sectors involved such as the community in general, sponsors and benefactors, inactive participants (those who have initially signed up for interest but did not return or volunteered for only a few times and ceased participation)
- Study the development of group dynamics as the garden grows and determine what factors make or break the groups
- Determine what factors engender volunteerism amongst the people involved in the garden and aspects that contribute to their long term volunteerism
- Develop standardised tools to measure the impact of the garden produce on food practices, food access and consumption patterns.

## 9. References

1. rrcf.org.au [Internet]. Lismore: Rainbow Region Community Farms; 2010 [cited 2010 Dec 24]. [about 2 screens]. Available from: <http://www.rrcf.org.au/>
2. Wirf L, Anderson M. Acquittal and evaluation report of the "Growing Together" project to the Department of Health and Ageing. Lismore: Northern Rivers Social Development Council; 2010.
3. communitygarden.org.au [Internet]. Australian City Farms & Community Gardens Network; 2000 [cited 2009 Apr 15]. About community gardens. An evaluation by Grayson, R. & Campbell, F.; [about 11 screens]. Available from: [www.communitygarden.org.au/about/](http://www.communitygarden.org.au/about/)
4. DO NOT USE. USE #7961 INSTEAD [Internet]. [Community gardening. Available from: [http://en.wikipedia.org/wiki/Community\\_garden](http://en.wikipedia.org/wiki/Community_garden).
5. Glover TD. Social capital in the lived experiences of community gardeners. *Leisure Sci.* 2004;26(2):143-62.
6. worldbank.org [Internet]. Washington, D.C.: The World Bank; 2010 [cited 2010 Dec 26]. Overview: social capital; [about 2 screens]. Available from: <http://go.worldbank.org/C0QTRW4QF0>
7. Australian Bureau of Statistics [Internet]. Canberra: Australian Bureau of Statistics; 2006 [cited 10 Oct 14]. 2006 Census Data by Location. Available from: <http://www.censusdata.abs.gov.au/ABSNavigation/prenav/LocationSearch?ReadForm&prenavtabname=Location%20Search&&navmapdisplayed=true&textversion=false&collection=Census&period=2006&producttype=&method=&productlabel=&breadcrumb=L&topic=&>
8. NSW Health [Internet]. Lismore: North Coast Area Health Service; 2006 [updated 2008 Mar 31; cited 2011 Apr 29]. Social determinants - unemployment by local government area; [about 2 screens]. Available from: [www.ncahs.nsw.gov.au/health-profile/index.php?pageid=2237&siteid=234](http://www.ncahs.nsw.gov.au/health-profile/index.php?pageid=2237&siteid=234).
9. Lismore City Council [Internet]. Lismore: Lismore City Council; 2004 [cited 2010 Oct 20]. Lismore Community Profile. Available from: [www.lismore.nsw.gov.au](http://www.lismore.nsw.gov.au).
10. Centre for Epidemiology and Research. 2009 Summary report on adult health from the New South Wales population health survey. Sydney: NSW Department of Health; 2010. 134 p. ISBN: 978 1 74187 540 9.
11. NSW Health. NSW Government submission to the National Preventative Health Taskforce discussion paper Australia: the healthiest country by 2020. Sydney: NSW Health; 2009. 46 p.
12. NSW Centre for Public Health Nutrition, NSW Health. Food security options paper: A planning framework and menu of options for policy and practice interventions. Sydney: NSW Health; 2003.
13. Twiss J, Dickinson J, Durna S, Kleinman T, Paulsen H, Rilveria L. Community gardens: lessons learned from California Healthy Cities and Communities. *Am J Public Health.* 2003;93(9):1435-8.
14. Wills J, Chinemana F, Rudolph M. Growing or connecting? An urban food garden in Johannesburg. *Health Promot Int.* 2010;25(1):33-41.
15. Thompson S, Corkery L, Judd B. The role of community gardens in sustaining healthy communities. *SOAC.* 2007:161-71.
16. Alaimo K, Packnett E, Miles RA, Kruger DJ. Fruit and vegetable intake among urban community gardeners. *J Nutr Educ Behav.* 2008;40(2):94-101.
17. Aboelata MJ, Mikkelsen L, Cohen L, Fernandes S, Silver M, Fujie Parks L, et al. The built environment and health. 11 profiles of neighborhood transformation. Oakland, California: Prevention Institute; 2004. 65 p.
18. Astbury B, Rogers P. Evaluation of the stronger families and community strategy - Gilles Plains community garden: a case study. Melbourne: RMIT University Circle; 2004. 39 p.
19. Bartolomei L, Corkery L, Judd B, Thompson S. A bountiful harvest: community gardens and neighbourhood renewal in Waterloo. Sydney: Department of Housing - NSW Government; University of New South Wales; 2003. 68 p.
20. Braun V and Clarke V. Using thematic analysis in psychology. *Qual Res Psychol.* 2006;3(2):77-101.

21. Park S, Shoemaker CA, Haub MD. Physical and psychological health conditions of older adults classified as gardeners or nongardeners. *Prim Health Care*. 2009;19(10):14.
22. Lombard KA, Forster-Cox S, Smeal D, O'Neill MK. Diabetes on the Navajo nation: what role can gardening and agriculture extension play to reduce it? *Rural Rem Health* [Internet]. 2006. [cited 2010 Nov 18];6(640):[about 16 p.]. Available from: [http://www.rrh.org.au/publishedarticles/article\\_print\\_640.pdf](http://www.rrh.org.au/publishedarticles/article_print_640.pdf).
23. Kingsley JY, Townsend M, Henderson-Wilson C. Cultivating health and wellbeing: members' perceptions of the health benefits of a Port Melbourne community garden. *Leisure Stud*. 2009;28(2):207-19.
24. Gelsi EJ. Gardening in the street: sociality, production and consumption in Northey Street City Farm. Vancouver: City Farmer, Canada's Office of Urban Agriculture; 1999. 54 p.
25. Kirkpatrick SI, Tarasuk V. Food insecurity and participation in community food programs among low-income Toronto families. *Can J Public Health*. 2009;100(2):135-9.
26. Urbis JHD. Community greening program evaluation: final report. Sydney: The Botanic Gardens Trust; NSW Department of Housing; 2004. 77 p.
27. King CA. Community resilience and contemporary agri-ecological systems: reconnecting people and food, and people with people. *Syst Res Behav Sci*. 2008;25(1):111-24.
28. Maller C, Townsend M, St Leger L, Henderson-Wilson C, Pryor A, Prosser L, et al. Healthy parks, healthy people: the health benefits of contact with nature in the park context. A review of relevant literature. 2nd ed. Melbourne: Deakin University; Parks Victoria; 2008. [cited 15 May 2010] 104 p. Available from <http://healthyparkshealthypeoplecongress.org/images/stories/documents/hphp.pdf.pdf>
29. Australia City Farms and Community Gardens Network. Community HARVEST [Internet]. 2004. [cited 2009 Dec 12];Winter:[about 1 p.]. Available from: [www.terracercircle.org.au/garden](http://www.terracercircle.org.au/garden).
30. Schukoske JE. Community development through gardening: state and local policies transforming urban open space. *Legislation and Public Policy*. 2000;3(351):351-92.
31. Oldenburg R, Brissett D. The third place. *Qual Sociol*. 1982;5(4):265-84.
32. Henderson BR, Hartsfield K. Is getting into the community garden business a good way to engage citizens in local government? *National Civic Review*. 2009;98(4):12-7.
33. Crabtree L. Sustainability as seen from a vegetable garden [Honours]. Sydney, NSW: Macquarie University; 1999. Available from: [http://www.thirdangel.com/sustainability/honours/honours\\_index.html](http://www.thirdangel.com/sustainability/honours/honours_index.html).
34. Nettle C. Community gardening: an annotated bibliography. Revised and expanded second edition. Australian City Farms and Community Gardens Network; 2010. 49 p.
35. Wakefield S, Yeudall F, Taron C, Reynolds J, Skinner A. Growing urban health: community gardening in South-East Toronto. *Health Promot Int*. 2007;22(2):92-101.
36. Infantino M. The lived experience of gardening among five well older women in suburbia [Unpublished dissertation]. Ann Arbor: Adelphi University, Michigan; 2001.
37. Ferris J, Norman C, Sempik J. People, land and sustainability: Community gardens and the social dimension of sustainable development. *Soc Pol Adm*. 2001;35(5):559-68.
38. Groenewegen PP, van den Berg AE, de Vries S, Verheij RA. Vitamin G: effects of green space on health, well-being, and social safety. *BMC Publ Health* [Internet]. 2006. [cited 2010 Sep 12];6(149):[about 9 p.]. doi: 10.1186/1471-2458-6-149. Available from: [www.biomedcentral.com/1471-2458/6/149](http://www.biomedcentral.com/1471-2458/6/149).
39. Morris N. Health, well-being and open space: literature review. Edinburgh: OPENspace Research Centre, Edinburgh College of Art and Heriot Watt University; 2003. 40 p.
40. Seaman PJ, Jones R, Ellaway A. It's not just about the park, it's about integration too: why people choose to use or not use urban greenspaces. *Int J Behav Nutr Phys Activ* [Internet]. 2010. [cited 2011 Jan 27];7(78):[about 9 p.]. Available from: [www.ijbnpa.org/content/7/1/78](http://www.ijbnpa.org/content/7/1/78).
41. Rappe E, Koivunen T, Korpela E. Group gardening in mental outpatient care. *Prim Health Care*. 2009;19(10):14.
42. Maller C, Townsend M, Pryor A, Brown P, St Leger L. Healthy nature healthy people: 'Contact with nature' as an upstream health promotion intervention for populations. *Health Promot Int*. 2006;21(1):45-54.
43. Federation of City Farms and Community Gardens. The true value of community farms and gardens. A summary of the findings of research carried out by FCFCG in partnership with the Regeneration Exchange at the University of Northumbria. Bristol, UK: FCFCG; 2008. 8 p.

44. Duffin C. A healthier harvest. *Nurs Stand*. 2008;22(28):20-1.
45. Frumkin H. Healthy places: exploring the evidence. *Am J Public Health*. 2003;93(9):1451-6.
46. Hancock T. People, partnerships and human progress: building community capital. *Health Promot Int*. 2001;16(3):275-80.
47. D'Abundo ML, Carden AM. "Growing Wellness": the possibility of promoting collective wellness through community garden education programs. *Community Dev*. 2008;39(4):83-94.
48. Aronson J. A pragmatic view of thematic analysis. *The Qualitative Report* [Internet]. 1994. [cited 2010 Sept 16];2(1). Available from: <http://www.nova.edu/ssss/QR/BackIssues/QR2-1/aronson.html>.
49. Merriam-Webster Dictionary [Internet]. Encyclopedia Britannica Company; [cited 2011 Feb 1]. Reciprocity; [about 3 screens]. Available from: <http://www.merriam-webster.com/dictionary/reciprocity?show=0&t=1296532457>.
50. Lackey JF. Evaluation of community gardens: a program of the University of Wisconsin Cooperative Extension. Jill Florence Lackey & Associates; 1998. 98 p.
51. Christensen P, Neil B. Feeding the cities - Case studies from Australia, Brazil, USA and Canada exploring the role of urban agriculture and rural family farms in community food security. In: Petheram RJ, Johnson R, editors. Practice change for sustainable communities: exploring footprints, pathways and possibilities. Proceedings of the APEN 2006 International Conference; 2006 Mar 6-8; La Trobe University, Beechworth, Victoria, Australia: APEN International Conference; 2006. [cited 25 Nov 2008] Available from: [http://www.regional.org.au/au/apen/2006/refereed/2/2847\\_christenson.htm](http://www.regional.org.au/au/apen/2006/refereed/2/2847_christenson.htm)
52. Lockie S. Food, place and identity: consuming Australia's 'Beef Capital'. *J Sociol*. 2001;37(3):239-55.
53. Perrins-Margalis NM, Rugletic J, Schepis NM, Stepansk HR, Walsh MA. The immediate effects of a group-based horticulture experience on the quality of life of persons with chronic mental illness. *Occup Ther Ment Health*. 2000;16(1):15-32.
54. Jeffres LW, Bracken CC, Jian G, Casey MF. The impact of third places on community quality of life. *Applied Research in Quality of Life*. 2009;4(4):333-45.

## **Statement of Information**

(Please keep for your records)

I would like to hear about your experiences as a volunteer in the Lismore Community Garden. I am recruiting volunteers for one on one interview. The interviews will provide me with information on the impact of participating in the garden on your health and nutrition, access to fruit and vegetables, and interactions with other gardeners. These information may assist decision-makers in planning for future funding and support of community gardens and similar projects in the community.

Participation is voluntary. Receipt of this invitation does not oblige you to participate. Each interview will run for an hour each. I will conduct the interview at a place and time that is most convenient to you.

If you agree to participate, please sign the form and return to me in the reply paid envelope.

If you need to know more about what this involves, feel free to contact either myself, the researcher, Maryann Anderson on 66207668, by email: [maryann.anderson@ncahs.health.nsw.gov.au](mailto:maryann.anderson@ncahs.health.nsw.gov.au) or Project Coordinator, Linda Wirf, on 6620 1815, before returning the Consent Form. I will also be at the garden in person from time to time.

You can withdraw your consent and participation at any time even during the interview, even if you have already submitted your consent, without having to justify your reasons. You will not be penalised or refused entry into the garden nor will it affect your relationship with the Project staff and other gardeners.

When I have written a report about the interviews, I will contact you and ask whether you want feedback about what I have written and ensure that it is a true reflection of the interview.

All information from the interviews will be recorded electronically. The information will be securely stored electronically (on computers) with passwords and original recordings will be deleted from the recorder. This information will only be available to me. Your name and other identifying information will not be recorded at all. I will use a pseudonym ( this is another name I will be using that is not the original name of the person) for each interviewee.

It is possible that some of your statements during the interview will be lifted verbatim (word for word) from the transcriptions and included in the final report but you will not be identified at all.

The Lismore Community Garden project is funded through the Commonwealth Department of Health and Ageing. It is a joint project between the Northern Rivers Social Development Council and the Rainbow Region Community Farms Inc. The North Coast Area Health Service (HRTON) is assisting in the evaluation of the project.

The NCAHS Human Research Ethics Committee has approved this research project. Any complaint or concern about this research project may be made to the NCAHS Human Research Ethics Committee through the Research Ethics Officer as follows:

Research Ethics Officer  
NCAHS Human Research Ethics Committee  
PO Box 126  
Port Macquarie NSW 2444  
Tel: (02) 6588 2941  
Fax: (02) 6588 2942  
Email: [EthicsNCAHS@ncahs.health.nsw.gov.au](mailto:EthicsNCAHS@ncahs.health.nsw.gov.au)

## Appendix B- Participant Consent Form

### Participant Consent Form

I, \_\_\_\_\_ (participant's name),  
of \_\_\_\_\_ (address), with phone number (if available)  
\_\_\_\_\_, agree to be interviewed as part of the Lismore Community Garden project. I  
understand that participation is on a voluntary basis and I am free to withdraw my consent from and  
discontinue participation in the study at any time, including the interview, without having to justify  
my reasons and I will not be penalised or discriminated against for having done so.

I also consent to be contacted by the Researcher by phone, if available, for more information about  
the study. I also understand that I will be contacted in the middle of 2010 so I can provide feedback  
about the draft report that will be provided to me.

I have read and understood the Statement of Information. I also understand and consent to having the  
interview being recorded electronically and identifying details will be removed.

I also agree that direct quotes may be lifted verbatim (word for word) from the interviews and  
included in the final report but the speakers, including myself, will not be individually identified. I  
also understand and agree that the results of the discussions may be disseminated to the community  
and/or published, provided that interviewees will not be identified.

I understand that this page and any of my responses during the discussions will not be linked.

Signed

Witness

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Date: \_\_\_/\_\_\_/\_\_\_

\_\_\_\_\_  
Date: \_\_\_/\_\_\_/\_\_\_

## Appendix C

### Interview questions (semi structured)

#### Introduction

Thank you for agreeing to participate in this interview. I expect this interview to go for an hour or shorter. The purpose of this interview to find out your experience in the Lismore Community Garden, what impact it has had on your life and other people, and your suggestions about how the program can be improved. The interview is going to be recorded as per consent form and is you still agreeable to and comfortable about this? I could mention your first name as I am asking you questions but in the transcript, your name will be deleted and replaced with a pseudonym. The interview will be sent to Brisbane for transcription without your name attached to it and it returns to me as a Word file. All voice recordings will be erased from all sources and the Word file will be saved on my computer with a password. No one else from the LCG project other than me will see the Word file. Also, direct quotes from this interview may be lifted word for word and included in the final report and the conference presentation but your name will not be associated with these. Are you still okay with this?

You are allowed to withdraw at anytime during the interview and the project if you wish to and you will not be asked to explain why you would like to withdraw. Withdrawal from the process will not in any way affect your on-going participation in the garden. Do you have any question?

1. *How long have you been volunteering at the Lismore Community Garden? Before the LCG commenced, did you hear a lot about it, especially at its planning stage?*
2. *What was your previous experience in community gardening? What was that like?*
3. *What led you to become involved in this garden?*
4. *What do you do while in the garden? What are your tasks? Describe to me a typical day in the garden from the beginning. What else do you do in the garden, other than tasks or work?*
5. *Who else comes to the garden?*
6. *What do the others do?*
7. *In thinking about your participation in the community garden, what differences in your life have occurred since you started volunteering?*
8. *Probe if not mentioned--*
  - a. *Health and nutrition-*
    - i. *Access to food- have you been part of any exchange of food or produce from the garden?*
    - ii. *Meeting people*

iii. *Physical activity?- Have you noticed more people riding their bikes to the garden?*

9. *How do you think the garden has had an impact on other people lives from your own observation and/or talking to people?*

10. *How did the LCG have an impact on your own garden (if existing)?*

**The following questions were also asked which informed the evaluation component of the project for purposes of the Department of Health and Ageing**

11. *What do you think are the goals and objectives of the Lismore Community garden? Do you think these are being addressed? How are these being addressed?*

12. *What are the things you like about the program?*

13. *What are the things you do not like about the program/ the garden? Do you think the location is ideal? What are the neighbours like?*

14. *What are your own plans with regards to gardening?*

15. *What would you like to see happening in the garden in the future?*

INTERESTED IN PARTICIPATING IN  
INTERVIEWS ABOUT THE  
LISMORE COMMUNITY GARDEN PROJECT?

IF YOU ARE:

- 18 YEARS AND OLDER
- HAVE VOLUNTEERED IN THE GARDEN AT ALL
- AVAILABLE FOR AN HOUR INTERVIEW IN APRIL
- WILLING FOR THE INTERVIEW TO BE RECORDED (BUT DE-IDENTIFIED)

PLEASE CONTACT MARYANN  
on Ph 6620 7668  
Mob 0414 728 059 or email  
[maryann.anderson@ncahs.health.nsw.gov.au](mailto:maryann.anderson@ncahs.health.nsw.gov.au)