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1.1 COMMITMENT

“We work with the people not out of pity but out of respect for their potential for growth and development, both as individuals and as communities” (Yen, 1920).

This statement is interlocked in the notion of community development. We as researchers and scholars have a shared responsibility to others and to the world, namely to have a keen interest in the welfare of people. This felt responsibility has resulted in a commitment to do research together with communities in need. There are so many needy people in the world, which are in an extremely vulnerable position, encountering great difficulties to break out of the deprivation trap. Deprivation in this study is seen in the context of health and nutrition. People are deprived of being healthy for various reasons. In South Africa, these reasons usually relate to poverty, unemployment, and previously being underprivileged (UNDP, 2000). There is also a close link between poverty, unemployment and nutritional problems. Nutritional problems can be seen on a continuum ranging from severe malnutrition and hunger to marginalised micronutrient deficiencies and perceptions of food insecurity with various causal factors involved (Latham, 1997:9). The immediate causal factors are related to low frequency of feeding, low density of consumed staples and disease particularly malaria, diarrhoea, and intestinal worms. Other underlying causes are poor household food security, inadequate maternal and childcare, insufficient health services, an unhealthy environment, lack of education and information and poverty (Latham, 1997:9; UNICEF, 1992).

People have a right to adequate food, and to be free from hunger. The right to adequate food is firmly established worldwide as a fundamental human right and implies access to adequate food at all times. This right is a distinct part of the right to an adequate standard of living, with the ultimate objective to achieve nutritional well-being. This right is articulated in Article 11 from the ‘International Code of Conduct on the Human right to adequate food’ (CESR, 1997:10). It also states that every individual should strive, “by teaching and education, to promote respect for the right to adequate food, helping to secure the universal and effective recognition, implementation and observance of this right, both among individuals and communities”.

The realisation of the right to adequate food and nutrition is oriented to the eradication of poverty and the satisfaction of basic needs. The concept ‘poverty’ is used here to refer to the inability of an individual, a community or household to meet its basic needs satisfactorily. Basic needs are those necessities that are essential for survival as a human being. Essentially these
are adequate and nutritious food, clean air and water, culturally and climatically appropriate clothing and shelter (Burkey, 2000:3). One of the consequences when basic needs are not met is manifestation of malnutrition. Malnutrition, however, is not only a food-related problem. Other important aspects include sanitation, education and care. Malnutrition has far-reaching implications such as growth retardation in infants and young children, impaired resistance to infections, impairment of mental development, reduced educational capacity, and increased morbidity and mortality (FAO, 1997:2). Improvement of the nutritional conditions of people is therefore an investment, which can help raise the productive capacity of both present and future generations.

Considering every human’s fundamental right to adequate and sufficient food, nutrition and well-being, the question that comes to mind is who should take responsibility to execute this right. At the World Summit for Social Development, 1995 (UNDP, 2000), the South African government committed itself to enhance social development and eradicate poverty. The statement was also made that, in fact, all societies need to be involved in social development. The University of Pretoria also places a high premium on involvement in the community and community-related projects (UP, 2002), implying that its researchers also have a commitment to serve the community in ways that are contributing to their well-being in a meaningful way. My standpoint is therefore taken from a research and academic view that more research activities should be employed towards reaching needy people. This does not imply conventional research in the sense of only understanding and describing phenomena as they occur or as they are experienced by people, but research where change is implied. Such research should be attached to intervention that can lead to improvement of the conditions of needy people.

### 1.2 RATIONALE

The rationale of this study was embedded in the declaration of ‘The International Conference on Nutrition’, convened by the Food and Agricultural Organisation of the United Nations (FAO) and the World Health Organisation (WHO) in Rome in 1992. Delegates at this conference addressed nutrition education and the promotion of appropriate diets and healthy lifestyles as a priority issue to approach existing nutrition-related problems. Nine priority themes were identified in the Plan of Action for Nutrition for alleviating malnutrition and hunger (FAO, 1998; FAO, 1997; Latham, 1997:9), namely to:

- improve household food security
- protect consumers through improved food quality and safety
- prevent specific micronutrient deficiencies
- promote breastfeeding
promote appropriate diet and healthy lifestyles
prevent and manage infectious diseases
take care of the economically deprived and nutritionally vulnerable
assess, analyse and monitor nutrition situations
incorporate nutrition objectives into development policies and programmes.

Global commitments were also made in the Rome declaration at the World Food Summit in 1996 and renewed in 2002, which included the vital role of women in nutrition and food security, the need for nutritionally adequate and safe food for all and the highlighted need for attention to nutritional issues as an integral part of addressing food security. Attention should also be given to improving the quality of diet, access to potable water, health care, health education and sanitation. They also recognised the importance of interventions to relief micronutrient deficiencies (FAO, 2002; FAO, 1996).

Commitment 2 from the World Food Summit in 1996, declares the following: “We will implement policies aimed at eradicating poverty and inequality and improving physical and economic access by all, at all times, to sufficient, nutritionally adequate and safe food and its effective utilization” (FAO, 1996). A specific objective was set in the document to promote and support community-based food security and nutrition programmes that encourage self-reliance, utilising participatory planning and implementation processes. This specific objective is seen as the foundation on which any community-based research project should be built.

Seventy percent (70%) of the world’s poor live in rural areas (World Bank, 2004). The World Bank’s approach to rural development focuses on improving the well-being of rural people by building their productive, social and environmental assets. The World Bank’s rural development strategy, ‘Reaching the Rural Poor’, as announced at the ‘World Food Summit: five years later’, includes focusing on the poor, promoting broad-based rural economic growth and building alliances with stakeholders. It aims, among other things, to bring services like health, education, sanitation and water supply to the rural poor (US Department of State, 2002). The rural development strategy for Africa rests on four pillars: making governments and institutions work better for the rural poor; promoting widely-shared growth; enhancing management of natural resources; reducing risk and vulnerability (World Bank, 2002a).
1.3 THE NUTRITION SITUATION IN SOUTH AFRICA

About 14.3 million South Africans are vulnerable to food insecurity (Stats SA, 2000). Data from the most recent ‘National Food Consumption Survey’ (NFCS) (Labadarios, 2000) shows that one out of five children (21.6%) in South Africa are stunted. The most severely affected children live on commercial farms with a stunting prevalence of 33.3%, compared to those living in urban areas with a prevalence of 17%. On commercial farms, 13% of children are severely stunted (< - 3SD) compared with 5% in urban areas. The national prevalence of underweight is 10% with 5% of children living on commercial farms being severely underweight as compared with a prevalence of 1.5% nationally. Vorster et al (1997:31) also indicate that rural black children are the most vulnerable group in South Africa.

The mean intakes of children aged 1 - 9 years are very low compared with the Dietary Reference Intakes (NICUS, 2003) for the following nutrients: calcium, iron, zinc, vitamins A, D, E, C, B6, riboflavin and niacin. The (NFCS) report also states that the greater majority of children in the country consume a diet deficient in energy and of poor nutrient density (Labadarios, 2000). The literature review of Vorster et al (1997:31) also concludes that rural black children have low mean energy intakes. Protein intakes seem adequate, but the quality of the protein is questionable.

Dietary intakes of economically and socially deprived communities consist mostly of plant-based staple foods (maize, bread or rice), with fruits, vegetables and animal products seldom being consumed, predisposing these communities to low micronutrient intakes. The average number of food items procured by the lower income households (< R1 000 per month) surveyed during the National Food Consumption Survey, was 8 and varied from 4 in the Free State to 13 in the Western Cape indicating widespread food insecurity. This was confirmed by results on the Hunger Scale questionnaire, which showed that food insecurity ranged from 48 - 91, 40 - 84 and 26 - 66% at the level of the household, the individual and the child, respectively. The foods most frequently consumed by the low income households were maize (83%), salt (63%), white sugar (62%), tea (51%), fat (poly-unsaturated fatty acid oils) (42%), white rice (36%) and white bread (35%) (Maunder et al, 2000).

1.4 CHALLENGES FOR RESEARCHERS IN SOUTH AFRICA

Challenges are stated with regard to the current (2004) nutritional situation as known in South Africa. Community-based programmes to improve food security needs to be developed with an increase emphasis on improving dietary diversity and micronutrient content. Local production of
fruits and vegetables can potentially provide households with direct access to micronutrient-rich foods. Food production programmes are also more effective when combined with promotional and educational activities. Nutrition education and the promotion of appropriate diets and healthy lifestyles are seen as a priority issue to address existing nutrition-related problems (FAO, 1998; FAO, 1997; Latham, 1997:9).

Nutrition education is also mentioned as an important part of improving household food security. If nutrition education programmes are to be effective in South Africa, it must be tailored to the current prevailing consumption patterns and the desired changes there-in, including the improvement of the nutrient density of children’s diets as well as food hygiene and feeding practices (Labadarios, 2000). Interventions should be comprehensive, community-based, integrated, multidisciplinary and multi-sectorial (Gibney & Vorster, 2001). Swart et al (2000) also recommend that programmes should be appropriate for the prevailing socio-economic conditions, planned with the main focus to raise awareness of the importance of correct nutrition, the widespread low micronutrient intakes of children, their effect on children's growth and development, as well as the specific measures that need to be implemented to attend to micronutrient deficiencies. Furthermore, interventions need to be targeted to include the caregivers of the children, particularly those subgroups with poor nutritional status, the poor, those with low educational levels, and those living in the rural areas and on commercial farms specifically (Labadarios, 2000).

A challenge to researchers will be to design, implement and evaluate interventions specifically with the aim to address nutrition-related problems in rural communities in South Africa. Effective and successful interventions, however, cannot be done without a sound situation analysis carried out first. More specifically then, researchers need to get acquainted with communities, conduct needs assessments and plan action accordingly. Another challenge will be to adopt research approaches that will be conducive to human and social development. Such approaches include the promotion of full participation and empowerment of people in all intended activities. Researchers should be explicitly committed to conducting research that will benefit the participants; either through direct intervention, or by using the results to establish the actions to be taken for changing the situation.

1.5 PERSONAL VIEW

This thesis is meant to be a showcase of the research work that I did from 2000 until 2004. It also shows my development as a researcher and scholar. It emerges from a somewhat different level and angle than what I have ended with. The reasons why I got involved in this research
study were numerous. First I did it to expand my academic career, but I also had an intrinsic interest in community nutrition. Linked up with that is an altruistic commitment to disadvantaged people in South Africa. I have done this study with empathy for the participants and to make a true contribution to their development. I further more do not want this thesis to be in an intellectual vacuum, gathering dust at a library shelve, but that it should have meaning. It was therefore also intended to be a reference guide for the postgraduate students of the Department of Consumer Science, interested in nutrition and community work. At the time I did my studies there were about 12 students enrolled with these interests and I wanted to leave them a resource book to use as guide for their studies as well. I hoped that it will be useful for them and that they will carry on their studies with the same enthusiasm and dedication as I did.

The scope of readership was novel and experienced scholars, academics and researchers. This market niche implied certain shared knowledge and assumptions on research methods, however this statement is not assured. I therefore wanted the thesis to be a comprehensive report on the full range of resources that I have used, my acquaintance with it and how I have managed to merge the theory with pragmatic work. As Blaise Pascal wrote (Auden & Kronenberger, 1981) “Words differently arranged have a different meaning and meanings differently arrange have a different effect”. The thesis might therefore perhaps be seen as tedious to some readers.

The literature was used as thinking and writing tool and therefore it is interweaved throughout the thesis. The writing activity as such was also an analytical task. Writing was a vital way of thinking about the research study and the findings, which taught me to think about data in new and different ways. Thinking about how to present data also forced me to engage in cognitive, intellectual accounts with meanings, understandings and experiences present in the data. I did not want to relegate the thesis to an apparently mechanical and minor aspect of the research as writing up. Writing has actually deepened my level of analytic endeavour.

1.6 COURSE OF THE STUDY

The research study took up the challenges mentioned in 1.4, by conducting a small-scale case study to devise a model suitable for nutritional interventions in rural communities on commercial farms. This model was theoretically validated with current findings on the local situation and was adapted along the research process. Validation was therefore an ongoing, emerging process based on applied evaluative research to conform for implementation in other communities on commercial farms. Validation was further extended through external
evaluations and comparisons with findings from other studies found in the literature. The flexibility implied in the model allowed modifications to be made where needed and, as a result, the model became more focused.

The model was not an exhaustive mapping of different theoretical perspectives, but a visual presentation of the process to follow in order to design, implement and evaluate community-based nutritional interventions. It is a framework for the process wherein action can be taken methodological and systematic. It is not a recipe for action, but a guide to stimulate further intellectual cognitive activity. It is also not meant to constitute a final mould of steps, activities and techniques, but it rather offers a glimpse of an intervention in process. Some of these ideas might be discarded in future time and others modified; others might be developed and documented more fully. The process is therefore considered never complete.

The aim of the study was not to strive for external validity (generalise the findings to other rural communities) but to internalise the process of research (specifically Participatory Action Research) within a rural community, contributing to the body of knowledge on the relevance and success of interventions in rural communities within the realms of health and nutrition. This process provided opportunities for the research team to learn more about implementing PAR in rural communities, to learn from the community itself and applying that knowledge into a constructed model for future projects.

**1.7 OUTLAY OF THE THESIS**

I want to introduce this thesis to you by summarising each consecutive chapter.

**Chapter 2** departs with the underlying philosophy, which originates in the ideology of community development. PAR is evident as paradigm with various theories intertwined such as community-based participatory research (CBPR), critical social theory, adult education theory and evaluative research. These theories were reflected in the design, implementation and evaluation phases of this study.

**Chapter 3** follows, reflecting on the research proposal and how it evolved into the research plan. The study was planned according to four incessant phases, namely needs assessment, design, implementation and evaluation. The research aim and more specific goals and objectives are also addressed. The content part of the study was grounded in the field of ‘nutrition’ with the applied concept of ‘nutritional intervention’. Conceptualisation was done to clarify the intended meaning of all the relevant concepts. A discussion on the study population
and sample, methodology and delimitations followed. Ways and methods used to enhance the quality of the research process, as well as the research results were applied throughout the study, but were for practical reasons dealt with in Chapter 4.

The first phase, situation analysis, are presented in Chapter 5. This phase included describing the community, identifying particular nutrition problems, translating those problems into addressable needs, and establishing a basis for the designing of a suitable intervention. This chapter was published (Green, Botha & Schönfeldt, 2004), and therefore include aspects of the background of the study and the approach that was followed. Some of the methodology, as mentioned in Chapter 3, is also repeated. The particular designing phase are described in Chapter 6. The aim of this phase was to design a needs-based, participatory-action orientated intervention in order to address the assessed needs which were identified as (1) poor hygienic and sanitary conditions and practices, (2) perceived food insecurity, (3) insufficient dietary diversification, and (4) insufficient food coping strategies. A decision was made to give priority to the hygiene and sanitation conditions in the community. Three steps were followed, namely to develop goals and objectives, construct a facilitation plan and to formulate an evaluation plan.

Chapter 7 explains the process followed during the implementation of the designed intervention. It included three steps namely: preparing of the team, participants and ambience; conducting, coordinating and integrating the facilitation plan and action strategies (including the mobilising of resources, application of strategies and the integration of the programme with different other services in the area; revising and adapting the facilitation plan. Chapter 8 includes reflections on evaluation, with specific reference to application within the nutritional and sanitation context. These reflections were used to set up an evaluation plan (indicated in Chapter 6) and to apply the plan within the context of this particular study. The plan briefly positioned criteria, indicators and methods for both the process and the outcomes of the intervention. The evaluation plan was implemented through actions of gathering and reviewing information and reflecting on the results. The chapter concludes with indications on how feedback on evaluation results was given to the community and reported to other researchers.

In Chapter 9, I felt it necessary to reflect on the originally stated aim of the study, the goals of the intervention, the approach used and ultimately the findings and outcomes. Some personal views were also included. The constructed model is depicted in Chapter 10 as a visual representation of the process to follow in order to design, implement and evaluate community-based nutritional interventions in rural communities on commercial farms. Modifications to the
model were done in accordance with feedback from the participants, outcomes of impact evaluation, expertise and recommendations of external evaluators and other stakeholders.

**Chapter 11** concludes with comments on the value of the study and further insights that were gained. The insights led to a list of lessons learned and recommendations for future application and research.

Additional notes on this thesis are as follows:

An adapted version of the Harvard referencing style was used, as recommended and applied by the Department Consumer Science. The method of citing electronic works also fitted in with this style. If a particular reference consisted of more than three authors, the Latin abbreviation, *et al.*, was used, even when the reference was used for the first time. If no page number was cited, the implication is that reference is done to the source as an entity. Sources from the Internet also do not have any page numbers.

All quotations were done in ‘Lucida Calligraphy’-font, using quotation marks. Various techniques were used to isolate or emphasise certain terms within the text; namely either inverted commas or *Italics*. If any categorisation was implied, the word was also printed in bold (e.g. 3.6.1; 5.3.4). *Italics* were used when words from a different language were included (e.g. Sotho, Latin). Inverted commas were used when a term was used unconventionally. Abbreviations that were used throughout this study were taken up in a Glossary.