

# 5<sup>th</sup> IFHE-AFRICA REGIONAL CONFERENCE

Papers from the Conference Held at the  
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UNIVERSITY OF BOTSWANA

Department of Family & Consumer Sciences  
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## About the Conference

Dumelang! The 5<sup>th</sup> IFHE-Africa Regional Conference was the third conference hosted by the Department of Family & Consumer Sciences, University of Botswana. The Aim of the Conference was to bring together national, regional, and international professionals and stake holders to exchange ideas, experiences, achievements as well as research and development in the area of Family and Consumer Sciences (FCS), and related disciplines.

**Theme:** The Family in a Changing World: Challenges and Opportunities

### **Sub-themes:**

1. Quality of Life
2. Cultural Issues/Studies
3. Innovations and Technology
4. Gender Issues
5. Education
6. Entrepreneurship

### **Conferences Objectives**

1. To share information about the family in a changing world.
2. To sensitize the public/professionals/organizations on the potential contribution of FCS to the family and community.
3. Examine the role of FCS in stimulating technological, innovative and sustainable development.
4. To explore challenges faced by modern families and identify viable/sustainable solutions.
5. To deliberate on the strengths and opportunities available to families regionally and internationally.
6. To facilitate international networking on issues affecting families worldwide.

## Defining the Sub-Themes

### **Sub-theme: Quality of life**

Quality of life is multidimensional and unique to each person. Quality of life is a concept that encompasses a broad spectrum of issues leading to people's satisfaction, social status, and physical well-being. Quality of life in terms of individuals and families' might refer to meeting the basic needs, healthy life, life skills, decent standard of living, wealth, employment, education, recreation, leisure time, etc. Issues discussed and examined in this plenary session were those empowering individuals and families to improve their quality of life or those that are barriers to the improvement of their quality of life.

### **Sub-theme: Culture**

Culture defines past, present, and future beliefs, norms, institutions behavior patterns, of nations, communities, families and individuals. Culture defines way of life for people and represents our parenting skills, food, housing, and clothing. Understanding the context of cultural influences and decision making process is important in improving quality of life. Thus culture is a starting point to appreciate and understand how families think, behave and process issues (goals and values) that can be important to pass and share knowledge with and contextualize problem solving skills for families. Issues covered were; decision making processes, education, gender, problem solving skills, family dynamics, parenting etc.

**Sub-theme: Innovations and Technology**

In today's world, technology is influencing all spheres of life. Individuals and families are mostly consumers of different products and services which are manufactured or facilitated by use of some form of technology. It was therefore important during the conference to examine the impact of technology and innovations on various aspects of family life. This included the role of technology in relationships, consumerism, family functioning or well-being, etc. and use of the specific innovations.

**Sub-theme: Gender Issues**

Gender is a broad concept that includes roles of males and females in the family system; functionality and adaptability of male and female family members to different roles in the household; changes in the understanding of the roles. Gender also impacts the quality of life of individuals, families and communities.

**Sub-theme: Education**

Education is core to both the advancement and acquisition of skill and knowledge. Family and Consumer Sciences (FCS) education empowers individuals to manage challenges of living and working in a diverse and constantly changing global society because of its focus on home, families and work as well as their interrelationships. Family and Consumer Sciences education therefore plays a meaningful role in the development of skills and attitudes that enable individuals and family make better decisions to improve their quality of life. It was important that during the conference we examine and share the impact FCS Education has had in our regions locally and internationally, in terms of informing policy on the betterment of individual, family and community. Topics interrogated but not limited to skills development, poverty eradication, the Millennium Development Goals and Botswana's Vision 2016 and others.

**Sub-theme: Entrepreneurship**

Entrepreneurship has increasingly become a central agenda issue in research and socio-economic development throughout the world as a platform for adapting to the rapidly changing world and the shrinking employment opportunities. Governments, donor agencies, private sectors and researchers have relentlessly promoted entrepreneurial endeavours over the years, with preferential treatments accorded the small business sector on the premise of poverty eradication, reduction of social and economic disparities, fostering sustainable growth and social justice. However, in many African economies, a vibrant business sector able to contribute effectively to quantity and quality jobs is yet to be established. The session during the conference, therefore, showcased international experiences on best entrepreneurial practices known to have propelled some enterprises to realize their expected potential. In particular, it focused on the role of different stakeholders including entrepreneurs themselves, the regulatory systems, competitive environments and entrepreneurship in the field of Family and Consumer Sciences in life transformation.

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## An Evaluation of Food Labels and Students' Interpretation and Use of Food Labels

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The trend of consumers' healthier lifestyles in South Africa influences their interpretation and use of food labels but the extent to which consumers interpret and use food labels can be debated. Therefore, this study aimed to evaluate students' interpretation and use of food labels as well as food labels according to the new South African food labeling regulation. Due to scarcity of research in this area, a quantitative research survey was designed. Students from the University of the Free State, Bloemfontein in South Africa were used as a study population. A template was also designed to evaluate 35 different food items for correct labeling according to the new South African food labeling regulations. The study revealed that respondents were aware of label information, but interpreted and used it negatively. They perceived the date mark as the most important and country of origin as the least important label attribute. The most used source of food label information is magazines and television while the least used is the radio and the internet. The results also revealed that majority of the products were labeled correctly with a few exceptions. The results of the study indicated a lack of knowledge of the information conveyed with food labels and it emphasize an urgent need for consumer education in this regard. Future research can be aimed at the other South African consumers of different educational backgrounds apart from the university students, in view of the interpretation and use of food labels.

**Keywords:** Consumer education, Consumer rights, Consumer protection, Food labeling, Food regulations

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### Introduction

Recently, there is a trend towards healthy eating, which lead to consumers becoming more aware of food labels. This trend has highlighted the importance of food labeling and has also influenced consumers to make good and informed food choices (Coulson, 2000). Furthermore, food labels act as source of information that aid consumers to understand product attributes, help sell the product (Cheftel, 2005 and Peters-Teixeira & Badrie, 2005) and forming quality expectations which influence their purchasing behaviour (Grunert, 2002). The importance of food labeling is to act as product communication which allows consumers the chance to vigilantly consider the options of making food choices (Silayoi & Speece, 2007). Food labels also act as a link between the producer and the consumer,

(Prathiraja & Ariyawardana, 2003). However, Coulson (2000) stated that, it is unclear if consumers understand and use food labels properly.

The use of food labels is growing and consumers' use of nutritional knowledge and healthy eating patterns is improving (Leathwood, Richardson, Strater, Todd & Van Trijp, 2007). Although there is growth in use of food labels, there will always be those consumers that do not read labels. Consumers just become aware of them without any extensive interpretation (Higginson, Rayner, Draper, & Kirk, 2002). According to Singla (2010), the consumers' understanding of food is lessened by the complex array of information on pre-packaged food which distances the consumer from the knowledgeable sources of

food information. Even though consumers say that they use labels, there has been evidence that labels may not be used, and that they may be misunderstood (Grunert & Wills, 2007).

On the first of March, 2010, South African passed the new food labeling regulations for the food industry to implement on 01 March 2011. The act comprise of 54 regulations and six annexure and want the food industry to supply the label information that is comprehensible and conspicuous in order to avoid misleading the consumers. The new regulations, stipulate that food labels must be in English and where possible in any other South African official languages, the product name, producer name and address, country of origin, batch number, date mark, list of ingredients, Quantitative Ingredient Declaration (QUID), storage instructions, pictorial representation, food additives and allergens, nutritional information and nutrient claims be labeled (General Notice Regulations 146, 2010).

Consumers demand detailed, accurate and accessible information on food safety and quality covering nutritional content, ingredients and health claims, production and expiry dates, storage and cooking instructions (Ali & Kapoor, 2009). According to Tawfik (2010), younger consumers read food labels that would help them lose weight especially on products claiming to be low in carbohydrates or low in fat as well as when buying new food products. Cowburn & Stockley (2005) affirmed that, consumers with special needs related to diet and health, read food labels more, in these cases males read nutrition labels only. Female consumers use nutrition labels and ingredient lists more than their male counterparts who read ingredient lists (Drichoutis, Lazaridis & Nayga, 2006) and perceiving nutrition information as a most useful source of information (Nayga, 2000). The reasons male consumers indicated for not reading nutrition labels is lack of time, size of print on packages, lack of understanding of terms and information not considered accurate to them (Cowburn & Stockley, 2005). Therefore, for consumers to understand information provided on food labels, they have to read and interpret it correctly (Cowburn & Stockley, 2005).

However, previous studies in five European countries revealed that food labels may be of little use due to lack of knowledge and low ability to interpret them (Pieniak, Verbeke, Scholderer, Karen Brunsø & Olsen, 2007). The use of food labels has been examined previously in UK and it is evident that there is little guidance in understanding and encouragement in consumer's reading (Coulson, 2000) and utilization of food labels (Norgaard & Brunso, 2009). However, research done in Canada on food label use focused mainly on adult consumers and none specifically among the university student consumers (Smith, Taylor & Stephen, 2000) and none in a South African context. Therefore, it is evident that research focusing on evaluating students' interpretation and use of food labels as well as food labels according to the new South African food labeling regulation has not been done. Thus, the objectives of the study were to determine the use of general information on food labels by university students, whether university students know the meaning of all items on a food label, the importance attached to the various details included on a food label and whether the food labels comply with the new South African food labeling regulations.

### **Method**

A quantitative research design was used in this study. In order to reach the objectives of this study, a sample of 152 male and female university students from the residences of Bloemfontein campus of the University of the Free State in South Africa were recruited to participate in the study. A sixty-seven item self-administered questionnaire with both opened and closed-ended questions was used for data collection and took approximately 20-30 minutes to complete. All the questions were tabulated and coded for easy administering and analysis. A pilot study was conducted using students in the Department of Consumer Science, University of the Free State in Bloemfontein, South Africa to serve as a guide to help formulate the relevant and most applicable questions in order to achieve the objectives of the study. A template was also



designed to evaluate 35 different food items for correct labeling according to the new South African food labeling regulations.

Collected data was analyzed using Statistical Package for Social Sciences (SPSS) software, version 17.0 for windows. Cross tabulation was done for gender with all the questions except for question 1b and a Pearson Chi-square test was used to determine the level of significance.

### **Results and Discussion**

The majority of the respondents (80.6% female and 76.6% male) purchase their own food and 92.5% males and 91.2% females prepare their own food though the residences have cafeteria facilities where the students can purchase prepared food. These situations differ from a normal household as all students in a residence do food purchases as individuals and not for families and probably select all their meals from the cafeteria. More male respondents (60.8%) read food labels as compared to the female ones (50%). This contradicts with Jay et al. (2009), in a study carried among the Northern American university students that indicated that 71% of male students did not use food labels when they purchase food products. Furthermore, (59%) male respondents and 44.8% females find food labels easy to understand. Only 33.3% male and 27.9% female respondents read it because they have special needs. A significant difference between the male (46.8%) and female respondents (27.9%) did occur with regard to the respondents reading food labels for detailed information.

#### ***The understanding of food label symbols/logos***

The results revealed clearly that the rBST free symbol does not carry any useful information for the respondents as they do not know the meaning of it. Only 3.7% males and 8.9% females knew that the symbol indicates that the cows have not been given the hormone to increase their milk production and the milk product is tested to be free of the rBST hormone (Clover, 2010). Similarly, respondents also revealed that they do not know the meaning of the saturated fat index symbol.

Only 20.3% females than 4.9% males knew it but 38.3% males and 34.8% females thought they knew but answered incorrectly. On the other hand, 9.4% of the respondents do know the meaning of the Bfs/ucD Milchik certification symbol which is religion. Once again, very important information in terms of health from the Guideline Daily Amounts (GDA) symbol not understood by the respondents (51.0%) while another 40.3% had it wrong and only 8.7% gave the correct meaning.

Furthermore, the results show that (45.0% males and 39.1% females) did not know what the South African Bureau of Standards (SABS) approved symbol mean. The Heart Mark symbol is considered a very well known symbol, was correctly interpreted by 44.3% (37.5% male and 52.2% female) respondents, 28.9% said that they did not know it while 26.8% thought they knew but answered incorrectly. However, the allergy warning symbol which means that a product that contains milk, wheat and gluten substances must be labeled with it and consumers allergic to these substances must not consume the product (Lapid, 2008) was not known to 54.7% of the respondents while another 13.5% interpreted it wrongly. The results further show that Low GI+ symbol was not known to 58.4% (66.3% male and 49.3% female).

The results obtained on the understanding of the symbols/logos are alarming but not completely unexpected as other research (Higginson et al., 2002) also stated that consumers' are often merely aware of food labels without extensively interpreting them. The female respondents tend to understand the meaning correctly more often while the male respondents more often interpreted the meaning incorrectly. These results show a serious need for information to consumers, new food labeling law would be of very little value if the consumers are not supplied with the information. Rayner, Boaz & Higginson (2001) stated that, consumers actively look for symbol/logo on food labels while gathering information about the product in order to evaluate. Cornelisse-Vermaat et al. (2008) also noted that, consumers understand a well detailed food label when symbols are supplied

with sufficient information. Therefore, these symbols should be applied with more detailed information for consumers to interpret it correctly or educational material on the meaning of food labels should be made available to consumers.

#### ***The importance of food label symbols/logos***

The majority of the respondents reveal that they perceive the green dot (28.2%), vegetarian (26.7%), certified 100% organic (30.0%), high in dietary fibre (31.3%) symbols very important, they were undecided on the importance of symbols such as the EcoCert (28.7%) and the antioxidant (26.7%). Products with the EcoCert symbol are of good quality and organically produced (EcoCert Professionalism and Services, 2010). The results lead to the assumption that the students do not consider these symbols important. It may be because they do not care or it may be because they do not know the meaning.

#### ***The use of the glycemic index foundation for South Africa (GIFSA) logo***

Only 2.5% of the male respondents and 14.5% of the females knew the meaning of the glycemic index logo. Most of the respondents (55.6%) indicated that it is difficult to understand. Fifty percent of them were undecided whether the specific product would be healthy to them, a clear indication that they did not understand the meaning of the symbol. Most of the respondents (59%) indicated that they never use this symbol.

#### ***The importance of the food label attributes***

Respondents perceived the storage instructions (78.7%), cooking and preparation instructions (77%), date mark (76.4%), price (64%) and brand name (63.7%) very important and were undecided on the importance of environmental information, the manufacturers name and the country of origin. This result is supported by Insch and Florek (2009) by stating that consumers pay more attention to label aspects such as brand and price than to country of origin where they pay less attention. It could be assumed that the respondents do not value the manufacturer name and contact

details on food labels when they purchase products though the new South African food labeling regulations wants the food manufacturers and producers to avail that to the consumers. The results also show a prominent of the respondents answered that date mark is very important to them; female respondents gave even higher priority to this answer with 87% than male respondents 67.1% in agreement with the results of other (Mcilveen & Semple, 2002).

According to Verbeke and Ward (2002), expiry date was seen as the most important label aspect since they use it as a guarantee of the freshness of the product. Similarly, Sanlier & Karakus (2010) stated that consumers look at expiry date of the product with the aim of buying products that are fresh. This result concur with Cheftel, (2005) when stating that, consumers often wish that food labels must indicate the durability date after opening the food package as well as the recommended storage conditions.

#### ***The use of common food label information***

Respondents revealed that during the purchasing of dairy products (73%), meat and fish products (58.3%), canned foods (48.1%), frozen foods (46.7%) and ready made foods (34.6%) they only look at use-by-date while on biscuits they look at both the use-by-date (26.7%) and kilojoules (25.9%). This shows that consumers are more aware of the safety and healthiness of the products and the use-by-date is considered the most important aspect of the labeling although it is not equally important for all food products. This result is supported by Verbeke & Ward (2006) when they said that more respondents categorised the expiry date as the most important information they look for on meat product. The results also coincide with those of Tessier, Edwards & Morris (2000) who stated that, the respondents indicated that they look for use-by-date as the most important label information on ready-made foods and perceived use-by-date as important on biscuits products. The assumption could be that, consumers are more concerned with the freshness of the food hence perceive use-by-date as important.

### **Sources of food label information**

The question asked the respondents to indicate whether a specific source provided them with understandable food label information. The sources of food label information indicated by the most respondents were magazines (84.6%), television (80%), doctors (77%), books/leaflets (74.8%) and parents or other relatives (74.1%). These results concur with that of Van Dillen, Hiddink, Koelen, De Graaf, and Van Woerkum (2003), who revealed that, relatives and magazines are often used as sources of label information. The assumption of these results is that respondents are more concerned with what they eat in order to maintain healthy bodies. The results are also substantiated when it is mentioned that mass media is considered as the most vital source of information with regard to food quality and safety (Pieniak et al., 2007). The least used source of information is the internet (51.7%) and the radio (51%).

For the male respondents the least used sources of information was internet (42.5%) while for the female respondents it was radio (44.9%). The internet, source of information on which there was a significant difference between the male and female respondents with ( $p=0.016$ ). This result contradicts with that of Van Dillen et al., (2003) that stipulated that, the internet was perceived as the most important source of information among the youth. This result was surprising as university students have access to the internet and they are able to browse for any information they deem necessary.

### **Product evaluation according to the South African new food labeling regulations**

The results of this study revealed that majority of the products are labeled according to the new South African food labeling regulations with a few exceptions. According to Ali and Kapoor (2009), consumers demand detailed, accurate and accessible information on food labels that shows nutritional content, ingredients and health claims, production and expiry dates, storage and cooking instructions. Therefore, products manufactured and imported to South Africa must be labeled

according to the new South African food labeling regulations. The results show that most food manufacturers comply with the food labeling regulations so as to provide the necessary information to the consumers.

### **Conclusion**

The study has indicated that consumers are frequently exposed to food labels. During this exposure, consumers become merely aware of food labels and at times find food label information very difficult to interpret and use. Food products manufactured in South Africa and those imported to the country are labeled according to the new South African food labeling regulations with a few exceptions. It was also observed that the respondents are aware of food label and perceived it as important since it acts as a communication tool between food manufacturers and the consumers. Respondents often did not know the meaning of a specific symbol or logo. The results are highly alarming and this proves that consumers merely become aware of food labels but not necessarily interpret them correctly. The respondents revealed that they found the GI logo very difficult to use as well as not credible and do not know if the product bearing the logo is healthy to use. These results also indicated that the new food labeling regulations is of little value if the consumers are not educated on the meaning of food label information.

The date mark, price, cooking/preparation and storage instructions, brand name, product mass/volume and ingredients list were mostly perceived important. This might indicate that consumers are more aware of the healthy eating and want to make proper food choices during product purchasing. Respondents also revealed that during the purchasing of dairy products, canned foods, frozen foods, meat and fish products, prepared foods and biscuits they only look at use-by-date. This shows that consumers are more aware of the safety and healthiness of the products since they won't buy products that have expired. The most used source of food label information by the consumers is the television, magazines books/leaflets, parents or family members and

health clubs. The least used source of information is the radio, internet and the newspapers. This proves that various sources consumers have the right to be informed and this should be the mandate of the food industry and the Department of Consumer Education to educate consumers on the food labeling regulations and the new label information that effected as of 01 March, 2011. By means of the results, consumers' interpretation and use of food labels as well as evaluation of food labels with regard to the new South African food labeling regulations, as stated in the objectives of the study, were determined.

In general, the current food label interpretation of South African university consumers from the Free State Province can be regarded as negative. These findings improve on the lack of available data on South African consumers' interpretation and use of food labels. However, further research regarding consumers' interpretation and use of food labels and evaluation of food labels according to the new South African food labeling regulations is needed, considering the new food labeling regulations.

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## The Impact of Caregivers' Level of Nutritional Knowledge on Children at Early Childhood Development Centres, Gutu District-Zimbabwe

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The purpose of this study was to evaluate the caregiver's level of nutritional knowledge and its effects on pre-scholar dietary intakes of child feeding schemes of Early Childhood Development Centres in Gutu district, Zimbabwe. Nutritional knowledge of ECDC caregivers is of great importance as pre-scholars spend most of their day time at school; therefore the study examined the level of caregiver's nutritional knowledge and its impact on the development of pre-school children. A quantitative approach was adopted in which a cross sectional survey research design was used. The sample consisted of twenty five (25) teachers and twelve (12) Teachers-In-Charge (T.I.Cs.) who were systematically sampled from a population of eighty (80) teachers. Questionnaires were used to collect data from teachers and oral interviews were used to gather data from the teachers-in-charge. Data were presented in tables and graphs and analysed using the Computer Statistical Package (SPSS) and evaluated using the ECDC nutritional guidelines. Results showed that the levels of nutritional knowledge of ECDC teachers and T.I.Cs were generally very low, as they lacked in-depth knowledge of nutrition in relation to pre-scholar developmental needs. The study recommends that teachers and T.I.Cs should receive training to that effect and colleges and universities should improve their course content to include in-depth knowledge of pre-scholar nutritional needs and eating behaviours.

**Keywords:** Caregiver, Nutritional knowledge, Dietary intake, Pre-scholar, Developmental needs.

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### Introduction

There are theoretical ideas and empirical evidence attesting to the importance of a key aspect of the experience of children that has a determining impact on their survival and healthy development. The main aspect is their day-to-day interactions with their intimate and regular caregivers. Crucial to the child's survival and healthy development is the provision of food, proper child care, stimulation and discipline (Ritcher, 2004). Health and nutrition needs of pre-scholars have been always taken care of by the family. However, with the emergence of Early Childhood Development Centres (ECDCs) this task has been taken over by the schools since children spend most of their time at the learning centre; thus this study sought to evaluate the level of nutritional knowledge of caregivers.

All the child's physical and psychological needs should be met by one or more people

who understand what children, in general, need and what a child, in particular, wants. The child's growth, in all aspects of health and personhood, depends on the capacity of adults, in whose care the child rests, to understand, perceive and respond to the child's bids for assistance and support (Ritcher, 2004; Rolfes, DeBruyne, & Whitney, 1998). Of significance in the provision of adequate nutrition is the caregivers' knowledge of nutrition and food preparation skills. The knowledge required includes energy and nutrient needs during childhood, eating behaviours of pre-scholars in relation to developmental milestones and preparation and serving of children's meals. Such knowledge enables the caregivers to determine what a child eats and thus affects a child's nutritional status and development.

Provision of good nutrition is critical to support the development of a child; therefore caregivers in ECDCs should have high levels of

nutritional knowledge and develop correct nutritional and hygiene practices to foster this development (Tuttle, 2000). Thus the word *caregiver* as used in this paper denotes the people who look after infants and young children at pre-schools and ECDCs attached to primary schools.

Knowledge of the relationship between nutrition and learning is important for people who care for children (National Food Service Management, 2001) and also the knowledge of the interrelationships between nutrition and child development is that which matters most. Nutrition application in the life cycle helps reduce developmental risks and problems. Research has shown that most caregivers lack knowledge on the nutritional needs of developing pre-scholars. This was evidenced by ECDCs and parents' nutritional practices that did not take heed of the nutritional needs of pre-scholars (UNICEF, 2008).

Inappropriate food choices due to lack of knowledge and or cultural influences contribute to nutrient inadequacies in many populations (Bruce & Meggitt, 2002). These inappropriate food choices negatively affect the pre-school children as it results in nutrient inadequacies, which impact on child development. UNESCO (2005) in their EFA Global Monitoring Report stressed the importance of appropriate food choices, correct feeding habits and correct health practices in schools. Pre-scholar malnutrition can be a result of unsuitable foods, poor food preparation, poor timing and emotional disturbances (Berk, 1999; Roland, 2009) hence the importance of nutritional education for caregivers.

Nutritional knowledge in planning of pre-scholar meals and snacks is important since it determines what children eat. Research has shown that most ECDC caregivers lack knowledge of the adverse effects of food additives and preservatives. According to Bruce and Meggitt (2002), food additives have been found to contribute to pre-scholar behaviour problems, for example, hyperactivity, temper

tantrums or sleeping problems. Nutritional knowledge is also important in food handling practices. Caregivers should follow safety procedures to avoid contamination and food borne illnesses (Good Food Handling Practices, 2006). Good food presentations and hygienic handling practices help reduce food refusal by pre-scholars.

The aim of the study was to establish the impact of the level of nutritional knowledge of ECDCs caregivers in the district. The following objectives guided the study;

- (a) Establish care givers' level of nutritional knowledge and nutritional training in relation to pre-scholar needs.
- (b) Find out the effects of caregivers' level of nutritional knowledge on pre-scholar developmental needs.

### Method

In this research, which assessed and evaluated ECDCs care-givers level of nutritional knowledge, a quantitative approach was used. The descriptive and inferential methods were used, because they enabled the researcher to yield data that could be statistically manipulated (Best & Kahn, 1993; Boyle & Morris, 1999). A cross-sectional survey was used as it was found to be the most suitable in collecting data in the four (4) clusters using semi-structured questionnaires and structured oral interviews. This design allowed the researcher to deal with a sample large enough to make statistical comparisons and which could be used to represent the population statistically.

Examples of core questions asked were questions on level of nutritional knowledge which were asked in a Likert scale manner which ranked the knowledge on planning, cooking and serving of pre-scholar meals as well as hygiene practices. Questions like health or nutritional problems that arise due to inadequate feeding were asked to establish effects of caregivers' level of knowledge on pre-scholar developmental needs.

**Population, sample and sampling procedure**

The target population was the forty-five (45) ECDCs in the eight (8) clusters of Gutu District which had a population of eighty (80) ECDC teachers, forty-five (45) teachers-in-charge (here after referred to as T.I.Cs) who were the ECDC caregivers and managers respectively. Cluster sampling and stratified random sampling was used to select the sample. Out of eight (8) clusters, four (4) clusters were randomly selected and used for the study. The schools in the four clusters were further sampled using the stratified random sampling technique, which subdivides the population into groups according to their specific characteristics to get a more accurate representation (Gall, Borg, & Gall, 1996). In this study, stratified random sampling was found to be the best to use since ECDCs in the district have different methods of providing meals for their children.

The three food provision patterns used were (a) ECDC with food provided by donor agents and prepared at the centres (b) ECDCs where parents contribute foodstuffs and/or money and meals are prepared at the centres (c) ECDCs with pre-scholars who brought food from home (lunch boxes). The chances of differences in ECDC care-givers level of nutritional knowledge were very high since the nature of meals is determined by the socio-economic status of the parents as well as ECDCs methods of food procurement. In each of the four clusters, three (3) pre-schools under each method of food provision were selected, thus twelve (12) ECDCs were under study. Twelve (12) T.I.Cs and all the twenty-five (25) teachers of the twelve ECDCs automatically participated in the study.

**Data analysis, presentation and interpretation**

Data was analysed to answer the research objectives. The data collected were coded, processed and analysed using the Computer

Statistical Package (SPSS). Both descriptive and inferential statistics were used in the data analysis as this authenticated the results (Kendrick, 1997). Frequencies and percentage totals for responses were calculated.

**Findings**

Findings on the care givers' level of nutritional knowledge and nutritional training in relation to pre-scholar needs indicated that:

- Eighty percent (80%) of the ECD teachers were not trained on the nutritional needs of pre-scholars.
- Twenty percent (20%) of the respondents received training on ECD specialisation and above half of the teachers and T.I.Cs were trained before ECD specialisation was introduced in teacher training programmes.
- The findings on nutritional knowledge on meal planning, cooking and serving of pre-scholar meals indicated that the eighty percent (80%) of ECDC teachers have inadequate nutritional knowledge and very few teachers (20%) have this knowledge.
- Findings regarding knowledge of eating behaviours show that only twenty percent (20%) have correct and adequate knowledge while sixty percent (60%) have inadequate knowledge and twenty percent (20%) lack this knowledge.
- On the food safety and hygiene aspects, the findings show that eighty percent (80%) of the teachers were aware of the pre-scholar health and safety needs and twenty percent (20%) had inadequate knowledge.

The findings on nutritional knowledge on meal planning, cooking and serving of pre-scholar meals in the above table indicate that the majority of ECDC teachers have correct general nutritional knowledge but lacks in-depth knowledge and very few teachers lack this knowledge.



Table 1  
*Teachers' Level of Knowledge on Meal Preparation, Cooking and Serving of Pre- scholar Meals*

VARIABLE	Frequency n=25	Percent
Meals should be adequately cooked especially meats should be thoroughly cooked		
Adequate knowledge	15	60
Limited knowledge	6	24
Not knowledgeable	4	16
Different methods of cooking help in variation of texture, colour and flavor		
Adequate knowledge	13	52
Limited knowledge	11	44
Not knowledgeable	1	4
Children between 2-5 years naturally lose appetite		
Adequate knowledge	3	12
Limited knowledge	13	52
Not knowledgeable	9	36
Pre -scholars appetites are aroused by attractive meals		
Adequate knowledge	13	52
Limited knowledge	11	44
Not knowledgeable	1	4
Meals should be served punctually and regularly		
Adequate knowledge	11	44
Limited knowledge	14	56
Meals should be served under scrupulous hygienic environment		
Adequate knowledge	14	56
Limited knowledge	11	44
Good practice to prepare most favourite foods		
Not knowledgeable	9	36
Limited knowledge	9	36
Adequate knowledge	7	28
Pre-scholars do not need chewy foods		
Not knowledgeable	1	4
Limited knowledge	9	36
Adequate knowledge	15	60

**Nutritional knowledge of teachers-in-charge**

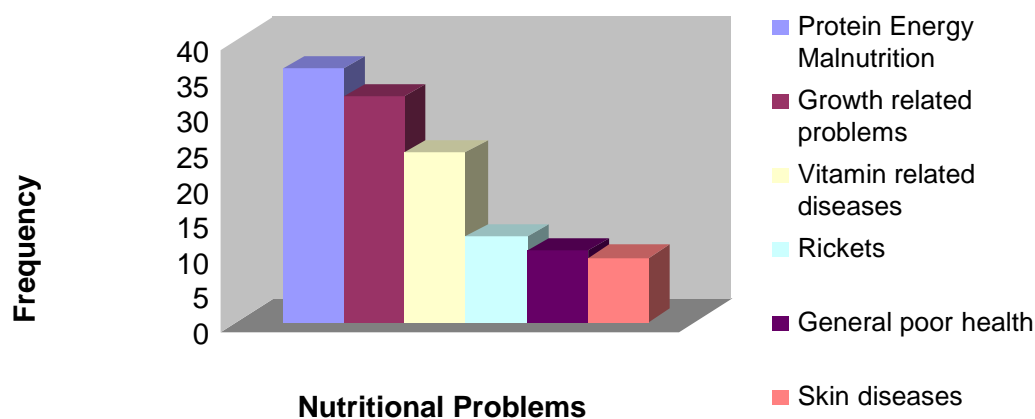
T.I.C.s responses to questions on nutrition, health and child development indicated that most of them had limited knowledge. The responses were rated using a scale ranging from poor to best explanations. Three T.I.C.s gave explanations which were classified as the best indicating they know the relationship between nutrition, health and child development. Seven had explanations rated as good, one had a satisfactory explanation and

one had a poor explanation indicating that he/she had low level of nutritional knowledge.

Findings from Figure 1 show that teachers and T.I.Cs both have the knowledge that pre-scholar develop nutritional problems if not well fed as correct answers were given and could identify specific nutritional problems such as protein energy malnutrition but most of them lack in-depth knowledge in regard to this aspect.

Figure 1

*Trs and T.I.Cs. Responses on Nutritional Problems that Arise Due to Incorrect Diet.*

**Discussion**

Findings from the respondents' profile indicated that all respondents were primary school trained teachers, but less than half of them were trained for ECD. This means the rest were practising basing on their general knowledge on child development related aspects.

The majority of the teachers and T.I.Cs were not trained for pre-scholar nutritional needs during their training which may be because some colleges and universities did not offer nutritional training to their students. Findings regarding meal planning show that teachers had minimum knowledge on meal planning and lacked in-depth knowledge in some aspects, for example, the need for the inclusion of chewy foods in pre-scholar diets. Findings on knowledge of eating behaviours show that some teachers support bad feeding habits

since they agreed to practices that are contrary to the expected or recommended pre-scholar feeding habits, for example, allowing children to talk during meal times.

Lack of knowledge and inadequate nutritional knowledge led to such ill nutritional practices, thereby affecting the pre-scholar development. Pre-scholars, if not well fed do not participate well in class and in play thus affecting their physical, psychological, emotional and social development. UNESCO (2004), for the Consultative Group on Early Childhood Care and Development and many other researchers reported that there are low levels of knowledge concerning the pre-school age eating behaviours in many countries. This therefore means low levels of knowledge affect the quality of service in ECDCs.

Pre-scholars spent more than half of their days' time at school, so at least one third of days' daily nutrients requirements should be met during mid-morning tea and lunch. On the food safety and hygiene aspects, the findings reflect that the majority of teachers were aware of the pre-scholar health and safety needs, though people are aware of correct safety and hygiene practices, effort should be made to encourage use of knowledge into practice Tassani (2000). Findings regarding teachers and T.I.C.s knowledge on nutritional problems show that they are generally aware that children develop nutritional problems if not well-fed. Correct examples of nutrition-related problems were cited, which indicate that they had a general idea that if children are malnourished, their normal growth and health is affected.

### Conclusions

The levels of nutritional knowledge of ECDCs caregivers were generally very low; thus they lack in-depth knowledge of nutrition in relation to pre-scholar developmental needs. There maybe an explanation to this since they were trained before ECDC specialization programmes were introduced in colleges and universities. Their lack of in-depth knowledge was an indicator of compromised nutritional practices. The correct knowledge on nutritional problems and learning difficulties gives hope on their ability to help children get out of these problems.

### Recommendations

The following recommendations were based on the findings of the study in the hope that they will help improve ECDCs nutritional and hygiene practices as well as provide practical solutions to the problems that confound the effectiveness of ECD programmes on nutrition and child development.

1. It is recommended that all ECD teachers and T.I.Cs who were trained before ECD specialization must be in-serviced for ECD so that they acquire correct nutritional knowledge in relation to ECD.

2. Colleges and universities are also encouraged to include in-depth ECD nutritional training in their programmes to fully equip teachers with the knowledge and skills needed in ECD service provision. Findings of this study and many others done in other countries show that ECDCs do not meet standards of recommended nutritional practices. This was due to lack of in-depth nutritional knowledge, lack of facilities and resources. It is therefore recommended to have ECDC practitioners trained on the expected standards on each aspect of nutritional and hygiene practices.
3. Nutritionists and health professionals should help by compiling ECD nutritional guidelines, which should be supplied to all ECDCs. These guidelines would be used as an assessment and monitoring tool. ECDC practitioners need to be taught on improvisation of resources to help meet the standards.

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## Prevalence and Predictors of Protein Energy Malnutrition Among Children in Osun State, Nigeria.

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In Nigeria protein-energy malnutrition (PEM) is still a major public health problem. This study determines the prevalence and predictors of stunting, wasting and underweight in children 0-24 months in Osun State, Nigeria. A multistage cluster and random sampling techniques was used to select 450 mothers from rural and urban communities. Information was collected on maternal caring practices, child personal and maternal socio economics characteristics. Anthropometric measurements were used to assess the nutritional status of children. Results presents as stunting (58.2%), wasting (23.8%), and underweight (7.8%). In the rural communities children that were wasted were 9.7%, stunted (62.8%) and underweight (28.3%) as compared to urban which presents as stunting (56.5%), wasting (7.1%) and underweight (22%). Results also revealed that more males (63.8%) than females (53.8%) were stunted ( $p=0.001$ ). In the urban and rural communities stunting increased with age and it started early during the first six months especially in the rural areas. Wasting was found to be low amongst children from the higher social class households (15.4%) as compared to lower class (25.1%) and middle class (23.4%). Predicting factors for stunting were antenatal care, maternal caring practices, hygiene, and lactation management. Wasting was predicted by external exposure of the mother, household possession, number of complementary foods and snack consumed by the child. However underweight was determined by social interaction, number of complementary food and external exposure. In conclusion efforts for redressing child under nutrition especially stunting should focus on factors associated with care of children by mothers. It is recommended that mothers should be educated on causes and consequences of protein energy malnutrition in children

**Keywords:** Children, Stunting, Wasting, Underweight, Predictors and mothers

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### Introduction

**D**uring the first two or three years after birth, children in developing countries grow more slowly than those in wealthier regions of the world. It is difficult for them to regain the lost growth potential in later years, especially if they remain in the same environment (Allen & Gillespie, 2001). A newborn Nigerian baby has a 30-times higher chance of dying before the age of 5 years than a baby born in the developed, industrialized countries (UNICEF, 2001). According to the 2008 NDHS, 41% of children under five are stunted, or too short for their age, this indicates chronic malnutrition. The process of becoming stunted due to chronic under nutrition begins at birth, or even

before, and continues during the first three years of life. The stunting that occurs during these early years cannot be restored thereafter. The proportion of children underweight provides the commonest indicator of malnutrition. Being underweight, even mildly, increases risk of death and inhibits cognitive development in children, leading to less fit and productive adults; moreover it perpetuates the problem from one generation to the next, through malnourished women having low birth weight babies (ACC/SCN, 1996).

Malnutrition can lead to a permanent negative impact on quality of life (Sandoval-Priego et al., 2002). Infants and young children

who are malnourished demonstrate developmental delay in achievement of motor skills, delayed mental development, and may have permanent cognitive deficits. The degree of delay and deficit depends on the severity and duration of nutritional compromise and the age at which malnutrition occurs (Blossner, 2005; Heywood et al., 1991; Mendez & Adair, 1999).

In many developing countries the number of malnourished children in urban areas is increasing both in absolute numbers and as a proportion of all malnourished children (Haddad et al., 2000). The NDHS 2008 report revealed that Children's nutritional status has changed very little in Nigeria since the 2003 NDHS and other studies have reported an increase in the prevalence of stunting in Nigeria (Ogunba, 2004).

### **Objectives of the study**

The objective of the study is to determine the prevalence and predicting factors influencing the incidence of stunting, wasting and underweight in children 0-24 months.

### **Methods**

The study was carried out in Osun State of Nigeria among 450 women that have children between the ages of 0 -24 months selected using multi stage random sampling procedure. Structured interview were constructed to elicit information about socio economic characteristics of mothers and the personal characteristics of their children, hygiene practice of mothers, social interaction and source of lactation training for mothers, care external exposure and frequency of consumption of complementary foods and snacks. Parental household possessions were used to determine socio economic status of respondent. The highest score of possession was 6. Score between 1-2 was low socio economic level while the score between 3-4 was middle and 5-6 was high. Data collected

were analyzed using descriptive and inferential statistics. Correlation analysis was carried out to find out the relationship between maternal characteristics and child nutritional status, while regression analysis was used in predicting and writing the equation for the dependent variable. The weights and heights of the children were obtained during the period of study. The nutritional status of children was determined using anthropometric data that were provided through the measurement of child's height, and weight in relation to the child's age. The nutritional status was determined by calculating the Z score and it was compared with the WHO/National Center for Health Statistics (NCHS) reference population Z score where less than - 2 indicate malnutrition in a child.

## **Results**

### **Characteristics of children**

The sex of the children as presented on Table 1 shows that 55.8% of the children were female while 44.2% were male. Majority (33.7%) of the children were between the ages of 0 - 6 months, 24.7 % are children of 7 - 12 months of age, while children between the ages of 13 – 18 months and 19 - 24 months were 18.6% and 22.9% respectively.

### **Maternal characteristics**

As presented on Table 1 mean age of mothers was  $30.5 \pm 6.4$ , mean number of children in the household was  $2.63 \pm 1.3$  while the mean household size was  $4.78 \pm 1.4$ . About 38.8% of mothers have tertiary education and only 0.7% had postgraduate degrees. Majority (52.4%) are petty traders while 10.4% are not involved in any income generating activities. Mothers belonged to various associations which include religious associations (54.7%), thrift societies (25.6%) and social club (25.8%). Only 0.8% of mothers had never travelled outside their Local Government Areas; however 76.4% have travelled out of their state of origin.

Table 1  
*Selected Children, Maternal and Household Characteristics*

Variables	Urban %	Rural %	Total %
Sex of children(percent)			
Male	43	47.8	44.2
Female	57	52.2	55.8
Number of children(percent)			
1-2	52.7	39.1	48.8
3-4	39.5	49.5	36.0
>4	7.8	16.4	15.3
Mean number of children	4.68±1.3	5.07±1.5	4.78±1.4
Mother's age (mean)	30.4±6.1	31.1±7.2	30.5±6.4
Mean household size	2.54±1.3	2.92±1.4	2.63±1.3
Mothers education(percent)			
None	5.6	0.0	4.2
1-6(primary)	22.8	48.6	29.3
7-12(secondary)	37.7	42.5	38.8
13-18(tertiary)	32.9	8.8	26.8
>18(postgraduate)	0.9	0.0	0.7
Mother's occupation(percent)			
Artisans	6.8	3.5	6.0
Trading/Business	50.7	57.5	52.4
Civil Servant	28.5	7.0	23.1
Others	2.9	23.1	8.1
Housewives	10.9	10.6	10.4
Social interaction(percent)			
Religious Association	56.4	49.5	54.7
Farmers Cooperative	3.6	13.3	6.0
Thrift Society	25.4	25.7	25.6
Descendant Union	16.0	29.2	19.3
Social Club	27.8	19.5	25.8
Trade Union	17.8	12.4	16.4
External exposure(percent)			
Never travel	0.0	0.8	0.2
Within Local Government Area	0.0	2.6	0.6
Outside Local Government Area	1.7	0.0	1.3
Outside the state	72.4	88.5	76.4
Outside the country	10.9	7.9	10.2
Household possession(percent)			
Mobile phone	38.7	6.2	30.7
Building	25.2	22.1	24.4
Refrigerator	45.1	15.9	37.8
Television	84.6	32.7	71.6
Radio	95.5	9.2	94.7
Car	35.9	1.5	29.8



Table 2  
*Maternal Caring Characteristics and Frequency of Feeding*

Variables	Urban	Rural	Total
<b>Source of lactation training</b>			
Radio	46.6	40.7	45.1
Television	30.0	8.0	24.4
Older mothers	30.3	45.1	34.0
Friends and Neighbours	22.8	32.7	25.3
Bulletins	15.1	3.5	12.2
Health workers	64.1	59.3	62.9
Magazines	16.3	4.4	13.3
<b>Antenatal care visit</b>			
1 <sup>st</sup> Trimester	43.3	29.4	40.3
2 <sup>nd</sup> Trimester	53.2	62.4	55.2
3 <sup>rd</sup> Trimester	3.5	8.2	4.5

Table 3  
*Complementary Feeding and Age of Children*

Variables	0-6months		7-12months		13-18months		19-24months	
	%		%		%		%	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
<b>Number of complementary foods (24 hours)</b>								
One	21.4	33.3	37.6	66.6	21.4	0.00	21.4	0.00
Two	26.1	12.5	26.1	31.2	26.1	37.5	21.7	17.5
Three	22.0	4.3	27.1	26.0	22.0	30.4	28.8	39.1
Four	18.5	26.3	18.6	21.1	27.1	21.1	45.8	52.6
<b>Number of snack (24 hours)</b>								
Zero	73.9	100.0	17.3	0.00	4.3	0.00	4.3	0.00
One	14.3	0.00	31.4	60.0	22.8	10	31.4	30.0
Two	6.2	8.5	25.8	34.2	31.2	31.4	36.6	25.7
Three	12.5	0.00	12.5	0.00	37.5	0.00	37.1	100.0
Four	11.1	0.00	22.2	0.00	22.2	33.3	44.4	66.6
<b>First complementary food</b>								
Pap	20.5	18.8	27.9	30.4	24.7	20.2	26.8	30.4
Fortified pap	13.0	14.2	26.0	42.8	34.7	28.4	26.0	13.0
Beans	18.1	0.00	27.2	42.8	18.1	14.2	36.2	42.8
Amala	33.3	0.00	16.6	16.6	33.3	33.3	16.6	50.0
Infant cereal	44.4	0.00	0.00	0.00	11.1	0.00	44.4	0.00
Custard	31.2	0.00	43.7	0.00	6.2	0.00	18.7	0.00



**Maternal caring characteristics and frequency of feeding**

Result on Table 2 revealed that majority (62.9%) of mothers obtained information on child feeding from health workers, radio (45.1%) and other sources such as television and bulletins. Most (55.2%) of the mothers do not attend ante natal care until the second trimester of pregnancy, 72.5% feed between 2 and 3 complementary foods in a day and 42.6% give their children snacks. More than 70% of mothers introduced cereal pap from maize as the first complementary food.

**Complementary feeding and age of children**

Results revealed that children below six months of age received complementary foods. Some of these children received up to four meals/day in both the urban (18.5%) and rural (26.3%) communities.

Most of the children received three meals per day. However when compared with other age group, most of the children between the ages of 19-24 months received four meal/day.

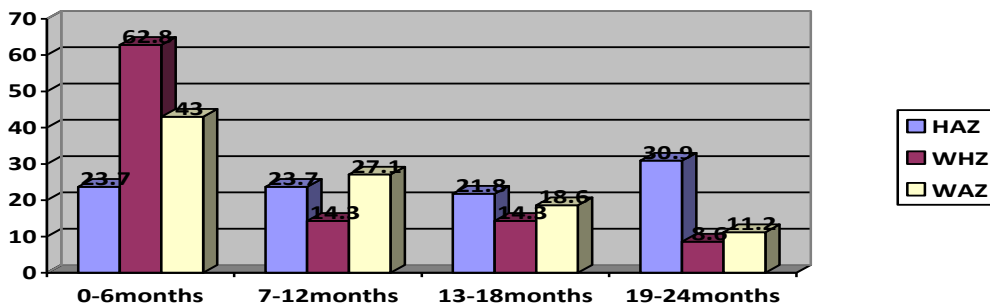
**Child nutritional status**

Results revealed that most of the children were stunted (58.2%), followed by wasting (23.8%) and underweight which was (7.8%).

**Child nutritional status by age group**

Stunting presents as 23.7% in infants' ages 0-6 months and 7-12 months of age and for 13-18months and 19-24 months as 21.8% and 30.9% respectively. Children that were wasted 62.8%, 14.3%, 14.3% and 8.6%) and underweight (43.0%, 27.1%, 18.6% and 11.2%) for the different age groups.

Figure 1  
*Child Nutritional Status by Age Group*

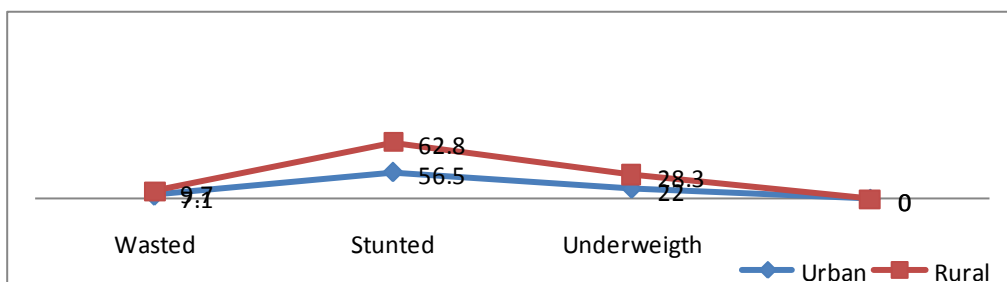


**Child nutritional status by residency**

Data presented on Figure 2 revealed that PEM in children were more prevalent in the rural setting than the urban communities.

Malnutrition presented as stunting (56.5% and 62.8%), wasting (7.1% and 9.7%) and underweight (22% and 28.3%) in the urban and rural communities respectively.

Figure 2  
*Distribution of Child Nutritional Status by Residency*

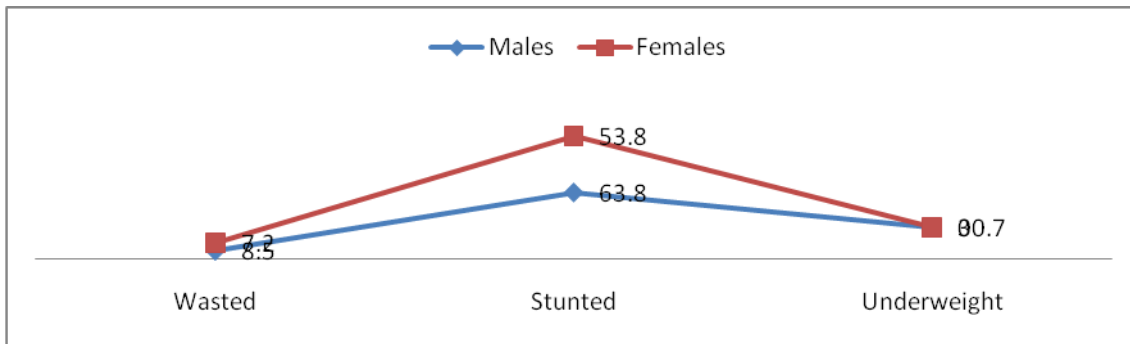


**Children nutritional status by sex**

Data as expressed on Figure 3 revealed that malnutrition was higher amongst male children as compared to their female counterpart. Nutritional status in males and females

presents as stunting (63.8% and 53.8 %), underweight (30.7% and 18.3 %) and wasting (8.5% and 7.2%) respectively.

Figure 3  
Distribution of Children Nutritional Status by Sex

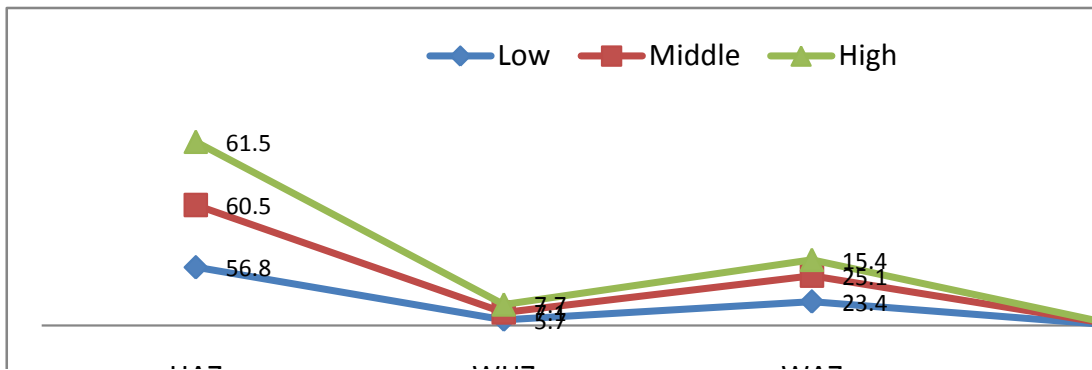


**Socioeconomic level of respondent and child nutritional status**

Data as seen on Figure 4 shows that children of high socio economic level has lower percentage of underweight(15.4%) as compare

to middle class(25.1%) and low class(23.4%). Stunting and wasting however cut across for all the socio economic groups.

Figure 4  
Distribution of socioeconomic level of women and child nutritional status



**Predictive equation for child nutritional status**

Stunting in children was strongly determined by antenatal care, mothers care for children, hygiene, and lactation management. These factors made a contribution of 25.9% variation in stunting. About 37.1% variation of wasting in children could be determined and predicted by

external exposure of the mother, household possession, number of complementary foods and number of snack consumed by the child. Underweight also could be predicted with three variables namely social interaction, number of complementary food and external exposure and it contributed only 14.0%.

**Predictive equation for Height for Age**

$$Y_1 = -3.960 + 0.097 X_1 + 0.794 X_2 - 0.884 X_3 + 0.325 X_4$$

$$F = 5.704 \quad (0.034) \quad (0.431) \quad (0.266) \quad (0.122) \quad MSR = 2.253 \quad R^2 = 0.259$$

Y<sub>1</sub> = Height for age

X<sub>1</sub> = Antenatal care

X<sub>2</sub> = Mothers care for children

X<sub>3</sub> = Hygiene

X<sub>4</sub> = Lactation management

**Predictive equation for Weight for Height**

$$Y_2 = -18.380 + 3.742 X_1 + 0.735 X_2 + 0.622 X_3 + 1.247 X_4$$

$$F = 4.061 \quad (1.370) \quad (0.287) \quad (0.360) \quad (0.592) \quad MSR = 4.112 \quad R^2 = 0.371$$

Y<sub>2</sub> = Weight for height

X<sub>1</sub> = External exposure

X<sub>2</sub> = Possession

X<sub>3</sub> = Number of complementary foods

X<sub>4</sub> = Number of snack

**Predictive equation for Weight for Age**

$$Y_3 = -4.298 + 0.166 X_1 + 0.146 X_2 + 0.538 X_3$$

$$F = 8.382 \quad (0.043) \quad (0.086) \quad (0.245) \quad MSR = 1.867 \quad R^2 = 0.140$$

Y<sub>3</sub> = Weight for Age

X<sub>1</sub> = Social interaction

X<sub>2</sub> = Number of complementary food

X<sub>3</sub> = External exposure

**Discussion**

Three years after birth, children in developing countries grow more slowly than those in wealthier regions of the world. It is difficult for them to regain the lost growth potential in later years, especially if they remain in the same environment (Allen & Gillespie, 2001). While some children are already born undernourished due to growth retardation in utero, the anthropometric status of children worsens considerably after 4-6 months, when children are weaned and solid foods are introduced. The first complementary commonly used is a cereal pap which lacks essential nutrient for the normal growth and development of the children. Study revealed the presentation of stunting, wasting and underweight in children under the age of 6 months which is as a result of the introduction of complementary foods before the age of 6 months. Thereafter stunting develops and tends to worsen until about age of two years.

Antenatal care in this study is a prediction factor in stunting. In Nigeria, 58% of women receive some antenatal care (ANC) from a skilled provider (NDHS, 2008). During antenatal care visit, messages on exclusive breastfeeding also include the timing, selection, and frequency of consumption of appropriate complementary foods. As mothers move out of their immediate environment and interact with health workers, women in the different social group information are shared which can impact and encourage adoption of appropriate feeding practices. However mothers do not adopt correct feeding practices probably as a result of lack of proper follow up by health workers. Formal and nutrition education will go a long way to impact nutritional status of children. Impact of mothers' education on nutrition status is through its ability to improve socio-economic status and greater involvement of mothers in decisions regarding child care (Goodburn, 1990; Radebe 1996).

The frequency of complementary foods consumption of complementary food and snack was a major factor in wasting and underweight in children as revealed in the study. For the average healthy breastfed infant, complementary foods should be provided 2 - 3 times at 6 - 8 months of age and 3 - 4 times per day at 9 - 23 months of age (Arimond & Ruel, 2003). The economic status of the household a child lives in exerts a very strong influence on her or his nutritional status (Smith et al., 2003). Child nutritional status as discovered in this study could be as a result of some specific variables which when controlled properly a child has a chance to survive and remain healthy. Rivera and Habicht (2002) suggest that a preventive approach that targets children at the age when they are most vulnerable to growth is necessary.

### Conclusion

In conclusion, the cause protein energy malnutrition in children is multifactoral and malnutrition is observed in children between ages 0-24months. Malnutrition was also seen in children before six months of age and predictors for malnutrition include antenatal care, number of complementary foods and snack, hygiene and external exposure of mothers. This calls for a comprehensive nutrition education programme which should not only be based on introduction of nutrient dense complementary foods at 6months but should also include availability of information on the recommended nutrient intake of children.

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## Improving Complementary Feeding Practices of Modern Families Amid National Challenges.

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The improved feeding of children less than two years of age is particularly important because they experience rapid growth and development, are vulnerable to illness and there is evidence that feeding practices are poor in developing countries especially with the present national and global challenges facing families. This study therefore looked into the ways of improving the complementary feeding practices adopted by modern families amid national challenges in Isikwuato Local Government Area of Abia state, Nigeria. To achieve this objective, three research questions were formulated. Survey research design was employed to collect relevant data from a purposive sample of 310 nursing mothers using validated questionnaire. Data analysis was done using means. The findings of the study revealed among others, that the most preferred complementary foods used by the respondents were corn pap with powdered milk, mashed rice, and indomie noodles. At times these foods are not hygienically prepared. The findings revealed that the major factor that militate against adequate and improved complementary foods for infants in the area of study is the cultural belief that infants should not be given proteinous foods like eggs, meat and fish because this can lead them to steal when they grow up. It was also found out that one of the major ways of improving complementary feeding practices is through nutrition education. This will help to educate them on the need to utilize the available proteinous foods as complementary foods for proper development of children in the area.

**Keywords:** Feeding practices, Complementary feeding, Children, Nutrition

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### Introduction

**A**dequate nutrition during infancy and childhood is fundamental to the development of each child's full potential. Under nutrition has a profound effect on the growth and development of children, particularly those within the age of complementary feeding. Complementary feeding is appropriate when breast feeding alone is insufficient to meet infant's nutrient requirements and when other solid and liquid foods are needed along with breast milk. The American Academy of Pediatrics (AAP) recommends that parents should introduce the first complementary foods between four and six months of age when breast milk alone is no longer sufficient to meet all nutritional requirements (American Academy of Pediatrics, 2009). Growth faltering is more at this period, especially during the first phase (6- 12 months) when foods of low nutrient densities replace rather than complement breast milk (Dewey, 2006). Longitudinal studies have constantly shown that this is the peak age for growth faltering, deficiencies of certain micronutrients and common childhood illnesses

such as diarrhoea (Gringerg et al., 2009; International Food Information Council, 2006).

According to ACC/SCN (2002), it is during infancy and early childhood that irreversible faltering in linear growth and cognitive deficiencies associated with anemia occur. Complementary foods are expected to be affordable, have a good balance of amino acids, be stable microbiologically and rich in micro nutrients (Renner, 1989). The micronutrient content should meet the nutritional needs and recommended dietary allowance for 6-12 months old infants (Lutter & Dewey, 2003). Improper feeding during this period of an infant's life often results in immediate consequences, including morbidity and mortality as well as delayed mental and motor development. In the long term, early nutritional deficits are linked to impairments in intellectual performance; work capacity, reproductive outcomes and overall poor health (ACC/SCN, 2002; Krebs & Hambidge, 2007).

Nigeria ranked second amongst the six developing countries noted for high child mortality rate (Amina & Angle, 2004). As in most other developing countries, the high cost of fortified nutritious complementary foods is always, if not prohibitive and beyond the reach of most Nigerian families. Such families often depend on inadequately processed traditional foods containing mainly of non supplemented cereal porridges made from maize, sorghum or millet (Nwamarala & Amadi, 2009). The food situation in Nigeria is such that about 75% of the family's income is spent on foods especially with global and national challenges presently facing families. Food surveys done in Nigeria in the last decade reveals that about 43% of children under five are stunted, 36% are underweight and 9% are suffering from wasting (Ihensekhein, Obasegie, & Egbelue, 2009). Evidence abounds that feeding practices are poor in developing countries. This may be attributed mainly to poverty and to some extent harmful and superstitious practices sometimes adopted by some mothers. The thrust of this paper therefore is to look into ways of

improving the complementary feeding practices adopted by modern families amid national and global challenges. The major factors that militate against adequate and improved complementary foods for infants were also identified.

### Methods

The study was carried out in Abia state, Nigeria. Survey research design was employed for the study. The population for the study comprised of 310 nursing mothers purposively selected from the area of the study. Validated questionnaire was used for data collection. It was developed through extensive review of related literature based on the specific objectives of the study. Three hundred and ten copies of the instrument were administered by hand with the help of two research assistants. Mean was used in answering the research questions. A mean of 3.50 was used as a cut-off point for decision making for each item. Based on the values of the five point scale of 5,4,3,2 and 1, any item with a mean of 3.50 and above is considered as agreed, whereas any item with a mean below 3.50 is considered as disagreed.

### Findings

Table 1

*Mean Responses of Nursing Mothers on the Most Preferred Complementary Foods used by Modern Families*

S/N	Items	$\bar{X}$	Remark
1	Pap mixed with baby's milk only	2.56	D
2	Pap mixed with any milk	4.12	A
3	Pap mixed with soya bean milk	2.10	D
4	Pap mixed with ground crayfish and groundnuts	1.98	D
5	Mashed cooked yam mixed with oil	2.11	D
6	Mashed jollof rice	3.86	A
7	Moi moi	1.68	D
8	Soft drinks	2.43	D
9	Indomie noodles	3.98	A
10	Snacks	2.78	D
11	Any food shared by the family	1.99	D
12	Corn pap mixed with soya bean powder	2.42	D

Key: A=Agreed, D=Disagreed

Table 1 revealed that the respondents agreed with items 2, 6 and 9 as the most preferred complementary foods used by nursing mothers in the area of study. This is because these items have mean ratings above 3.50 being the cut-off

point. Items 1, 3, 4, 5, 7, 8, 10, 11 and 12 have mean ratings less than 3.50 indicating that the respondents disagreed with the items showing that modern nursing mothers do not often use those complementary foods at home.



Table 2

*Mean Ratings of Nursing Mothers on the Factors Militating Against Adequate and Improved Complementary Foods for Infants*

S/N	Items	$\bar{X}$	Remarks
1	Socio economic status	4.12	Agreed
2	Culture	4.78	Agreed
3	Family size	3.54	Agreed
4	Illiteracy	3.65	Agreed
5	Ignorance	3.76	Agreed

Table 2 revealed that the respondents agreed with all the identified items as the factors militating against adequate and improved complementary foods with culture being the major factor (mean 4.78). This is because they all met the cut-off point of 3.50.

Table 3

*Mean Responses of Nursing Mothers on the Strategies that can be Adopted to Improve Complementary Feeding Practices*

S/N	Items	$\bar{X}$	Remarks
1	Nutrition education on complementary feeding	4.69	A
2	Government insisting on fortification of all processed baby foods	3.86	A
3	Educating mothers on the harmful effect of some cultural believes on children	3.55	A
4	Educating people on the importance of family planning to reduce family size	3.78	A
5	Educating mothers during ante natal visits on good complementary feeding practices	3.54	A
6	Government should assist families by providing free baby formula	4.23	A
7	Day care attendants should be educated on the hygienic ways of feeding infants	4.05	A
8	Using the media to encourage the production and utilization of local food resources	3.99	A

Note: A= Agreed

Table 3 shows that the respondents are in support of all the identified items. This is because they all met the cut-off point of 3.50. Giving nutrition education on complementary feeding has the highest mean score (4.69) indicating that nutrition education can help to improve the complementary feeding practices adopted by nursing mothers in the area of study.

### Discussion

Table 1 revealed that pap mixed with any milk, mashed rice and Indomie (means 4.12, 3.86 and 3.98) were rated as the most preferred complementary foods for infants in the area of

study probably because they are easily affordable. Item 1 of the same table was rated poorly because not all families can afford baby milk because it is more expensive than others. Factory manufactured complementary foods in Nigeria that can meet the micronutrient and protein requirements of infants are expensive for the rural and urban poor. This is why they rely mostly on locally manufactured foods such as pap produced from cereals and other carbohydrate rich foods of plant origin as shown in Table 1. This normally results in malnutrition. Brown (1991) had shown that the absence of adequate amounts of micronutrients would not allow the child

to make good use of the macronutrients even if he/she consumed them in sufficient levels. An early consequence of inadequate intake of these specific nutrients and proteins is growth retardation (linear or weight), late development of cognitive abilities and high rates of infectious diseases in children in less developed countries.

Item 2 of table 2 (cultural factor) was rated highly as the major factor militating against improved and adequate complementary feeding practices. This is in consonance with the findings of Miri, (2001). This is because of the cultural belief in the area that infants should not be given foods like eggs, meat and fish because this can lead them to steal when they grow up. These foods are the main sources of protein and iron for the infants. Barton, (2001) and James (2002) also noted that when there are too many mouths to feed with little resources, it can lead to consumption of poor quality foods. Secondly, due to illiteracy and ignorance (items 4 and 5 of the same table), some mothers do not understand the better ways of feeding the infants to ensure healthy life, growth and development. To solve these problems, Item 1 of Table 3 revealed that nutrition education is a major strategy for improving the complementary feeding practices adopted by mothers in the area of study. This is in line with the findings of Mambolo, (2004) who noted that educational messages may be designed either to influence general feeding behavior such as the appropriate frequency of feeding and desirable food patterns, or to transfer more detailed information of specific recipes for improved complementary food. This will encourage care givers to improve existing child feeding practices. Communication of these messages may rely on traditional educational techniques. Nutrition education is also very necessary because one of the factors that militate against improved and adequate complementary feeding practices is illiteracy as shown in item 4 of Table 2.

Item 7 of Table 3 which is on educating day care attendants on the hygienic ways of feeding infants was also rated highly by the respondents as another important strategy that will help to improve the complementary feeding practices of

families. This is in agreement with the findings of Ekanem, (2001) who noted that care givers should have knowledge of food hygiene. This is necessary because modern families mostly employ the services of day care attendants to take care of their babies especially on working days when the mothers are at work. Most of the time, foods given to these babies are not hygienically prepared by the attendants. Educating the attendants on food hygiene will help them to adopt proper food handling practices.

Government insisting on fortification of all manufactured baby foods was also identified as a way of improving complementary feeding. This is in line with the findings of UNICEF, (2004) that the first approach to improving complementary feeding is to increase the nutritional adequacy of complementary foods and this can be achieved by blending together in appropriate proportion several ingredients to ensure adequate contents of energy, protein and micronutrients. This is also in line with the findings in items 6 and 8 of Table 3.

### **Conclusion and Recommendation**

The following conclusions were drawn based on the findings of this study. Pap mixed with any milk, mashed rice and Indomie are the most preferred complementary foods for infants in the area of study because they are easily affordable by the rural and urban poor. An early consequence of inadequate intake of specific nutrients and proteins is growth retardation (linear or weight), late development of cognitive abilities and high rates of infectious diseases. The major factor militating against improved and adequate complementary feeding practices in the area of the study is the cultural practice of not feeding the infants with some proteinous foods. Socio economic status is also a strong factor that militates against improved complementary feeding. Nutrition education was found out to be a major strategy for improving the complementary feeding practices adopted by mothers in the area of study. This will help to transfer more detailed information of specific recipes for improved complementary feeding.



Based on the above conclusions, the following are therefore recommended:

1. Government should provide nursing mothers with factory manufactured complementary foods that met the micronutrient and protein requirements of infants during post natal visits to help the rural and urban poor families.
2. Nursing mothers should be educated on the need to adequately feed their babies during ante natal and post natal visits.
3. Mothers should be educated on the harmful effect of some cultural believes on children through the mass media and during antenatal visits.
4. Day care attendants should also be trained on the hygienic ways of feeding infants.
5. Government should insist on fortification of all processed baby foods.

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## Food Hygiene Practices Adopted by Restaurants in Tertiary Institutions in Abia State, Nigeria: Effect on the Student and Family

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The practice of good nutrition and proper food habits constitute a major breakthrough in man's search for preventive measures against diseases and ill health caused by malnutrition. This study set out to identify the food hygiene practices adopted by restaurants in tertiary institutions in Abia State, Nigeria and the effect they have on the students and the family. Specifically, the study determined the personal and environmental hygiene practices adopted by restaurants. The effect of unhygienic practices adopted by restaurants on the students and families was also determined. Survey research design was employed to collect relevant data from a sample of 350 respondents using validated questionnaire. Data collected for the study was analyzed using descriptive statistics. The findings revealed among others, that the respondents lack proper waste disposal facilities; handle money and prepared food at the same time; lack personal hygiene facilities and also operate in dirty surroundings. These poor practices have negative effect on the academic performance of the students as well as their nutritional, social and health status and also impacted on the family economy and the quality of life negatively. It was therefore recommended that short courses should be organized for the operators of these restaurants by the management of these institutions to enlighten them more on the importance of food hygiene. Environmental sanitation committee should also be set up by the management to monitor the activities of these restaurants. Above all, creating awareness of the dangers of poor food handling through the mass media is very necessary.

**Keywords:** Hygiene, Food practices, Restaurants, Nutrition

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### Introduction

**F**ood hygiene is a broad term used to describe the preservation or preparation of food in a manner that ensures the food is safe for human consumption. It can also be seen as the practice of keeping food, food contact areas and working surfaces clean in order to prevent illnesses or diseases (Uko-Aviomoh & Nwabah, 2010). Food hygiene practices include all practices, precaution and procedure involved in protecting food from the risk of biological, physical or chemical contamination. This process of kitchen safety include proper storage of food item prior to use, maintaining a clean environment when preparing food and making sure that all serving equipment are clean and free of bacteria that could lead to

some type of contamination. It is generally expected that food should be nourishing and attractive and it must be clean as well as free from harmful materials. If restaurant workers will be able to observe and keep the rules and regulations of food hygiene, the risk of unhygienic food handling practice will be minimized.

Restaurant is supposed to be a retail establishment that serves prepared foods and drinks to customers in a hygienic surrounding (Nicholas, 2002; Rome, 1997). It is a business establishment where meals or refreshment are procured. Meals are generally served and eaten on the premises but many restaurants also offer take away and food delivery services. In other words, they are providing a product

(food) and a service (waiting on the customers). It should be realized that the basis for a good curative and preventive medicine is the provision of adequate hygienic foods. With the rate of population explosion in tertiary institutions in the country, providing adequate hygienic foods will help to achieve a healthy living condition amongst the students. Presently, students in higher institutions are faced with several outbreak of food borne infections and communicable diseases (Anozie, 2010; Iheagwam, 2010; Onwunedo, 2007; Umeh, 2009). There is need therefore to investigate the food hygiene practices adopted by restaurant managers in tertiary institutions and the effect these practices will have on students and families in the area of study with a view to evolving strategies that will help to improve on these practices.

**Purpose of the Study**

The major purpose of the study was to investigate the hygiene practices adopted by restaurants in tertiary institutions and the effect of these practices on the students and families. Specifically, the study determined the:

- Personal hygiene practices adopted by restaurants in tertiary institutions

- Environmental hygiene practices adopted by restaurants in tertiary institutions
- Effect of unhygienic practices adopted by restaurants on the students and families

**Methods**

The study was carried out in Abia state, in the south eastern geographical zone of Nigeria. Survey research design was employed for the study. The population for the study comprised of 350 restaurant managers in the four tertiary institutions in the state who also served as the sample for the study because of the small number. Questionnaire was used for data collection. It was developed through extensive review of related literature based on the specific objectives of the study. The instrument was face validated by three home economics lecturers and the reliability determined using Cronbach Alpha. A reliability coefficient of 0.91 was obtained. Three hundred and fifty copies of the instrument were administered by hand with the help of two research assistants. Three hundred and thirty five copies of the questionnaire were correctly filled and returned. Mean was used in answering the research questions.

**Findings of the Study**

Table 1  
*Mean Responses of Restaurant Managers on the Personal Hygiene Practices Adopted in the Restaurants*

S/N	Items	$\bar{x}$	Remarks
1	Thorough washing of hands before handling foods	2.89	NA
2	Using clean handkerchief	3.78	A
3	Avoiding sneezing or coughing over food	3.95	A
4	Avoiding wearing dirty clothing	4.32	A
5	Washing any utensil used for tasting food	1.97	NA
6	Covering hair when preparing food	2.66	NA
7	Washing hands after collecting money	1.92	NA
8	Covering any cut or wound on the hand before handling food	3.00	NA
9	Avoid discussion when dishing out food	2.77	NA
10	Use personal hygiene facilities like toilet and bathroom	1.89	NA

Note: A= Adopted, NA=Not Adopted

Table 1 revealed that only three out of ten personal hygiene practices identified were adopted by the restaurants. Only these three items met the cut-off point of 3.50 and above. These include using clean handkerchief,

avoiding sneezing and coughing over foods and avoiding wearing dirty clothing in meal preparation and service. Items 10, 7 and 5 were rated poorly by the respondents.

Table 2

*Mean Responses of Restaurant Managers on the Environmental Hygiene Practices Adopted in the Restaurants*

S/N	Items	$\bar{X}$	Remarks
1	Having proper waste disposal facilities	1.58	NA
2	Maintaining clean environment	2.46	NA
3	Covering the refuse bin with lid	2.26	NA
4	Cleaning working surfaces after the day's work	3.77	A
5	Buying ingredients from clean surroundings	2.14	NA
6	Sweeping the surroundings as soon as they are dirty	2.15	NA
7	Washing up used utensils immediately	2.30	NA
8	Covering the serving table with cellophane	3.97	A
9	Making sure foods are covered	3.16	NA
10	Keeping money away from cooked foods	1.61	NA
11	Separating solid and liquid wastes	2.22	NA

Note: A=Adopted, NA= Not Adopted

Table 2 showed that only two out of eleven environmental hygiene practices identified were adopted by the respondents. These include cleaning surfaces after the day's work and covering the serving table with cellophane. Having proper waste disposal facilities and keeping money away from cooked foods (item

1 and 10) were rated poorly by the respondents. All the ten negative effect of unhygienic practices identified were accepted by the respondents as revealed from the table. They all met the cut-off point of 3.50 and above.

Table 3

*Mean Responses of Respondents on the Effect of Poor Hygiene Practices on the Students and Families*

S/N	Items	$\bar{x}$	Remarks
	When students eat in unhygienic environment, it will lead to the following conditions in future:		
1	Reduced activity and energy as a result of food borne diseases	3.89	Accepted
2	Harmful effect on social development due to illness	3.94	Accepted
3	Harmful effect on physical development due to food borne illness	3.67	Accepted
4	Increase malnutrition and unhealthy living conditions	3.99	Accepted
5	Lowering educational attainment	4.56	Accepted
6	Economic hardship for students and families	4.22	Accepted
7	Predisposes students to chronic diseases in later life	3.68	Accepted
8	High mortality and morbidity rates	3.77	Accepted
9	Harmful effect on mental development	4.01	Accepted
10	Reduce work capacity	3.88	Accepted

### Discussion of Findings

Staff personal hygiene facilities like toilet and bathroom were not available in restaurants in higher institutions as shown in table 1. This finding was not surprising as most of these restaurants use makeshift structures. This finding was not in agreement with WHO (1996) that when proper facilities are made available, it makes it easier for staff to maintain a high standard of personal and communal cleanliness and minimize the possibility of food contamination. Table 1 also revealed that the respondents avoid sneezing and coughing over foods, they use clean handkerchief and personal clothing as shown in items 2, 3 and 4. This finding is in agreement with FAO (1995) and UN (2007) who noted that food handlers should observe elementary hygienic practices like not coughing or sneezing over foods, wearing clean clothing and using clean handkerchief. This is because these personal hygiene practices enable the consumers to be provided with foods prepared and served in proper hygienic conditions.

Tables 2 showed that respondents lacked proper waste disposal facilities. This is not in agreement with the requirements laid down by FAO (1995) who noted that solid and liquid wastes should be properly disposed to reduce the risk of contamination and pest proliferation in food handling. The respondents also handle money and prepared food at the same time as revealed from the same table. This is not in consonance with Nwana (1996) who advised that individuals who are in charge of collecting money in any food establishment should be different from those serving food to avoid contamination of any sort. The respondents adopted two out of eleven environmental hygiene practices identified. These include cleaning surfaces after the day's work and covering the serving table with cellophane. This finding is in agreement with the recommendations of FSA, (2011) and Onwunedo, (2007) that working surfaces

and other minor equipment for food service should be kept clean to avoid food contamination.

The practice of good nutrition and proper food handling constitute a major breakthrough in mans search for preventive measures against disease and ill health caused by malnutrition as noted by Olateregun, et al. (2009 ) and also revealed in Table 3 . Malnutrition has harmful effect on the education of the undergraduates. An array of afflictions ranging from stunted growth, reduced intelligence and various cognitive abilities, reduced sociability, reduced leadership and assertiveness, reduced activity and energy, reduced muscle growth and strength and poorer health over all are directly implicated to nutrient deficiencies. UN (2004) reported that malnutrition disempowers individuals by causing or aggravating illness thereby lowering educational attainment. Majority of our undergraduates miss their lectures and examinations due to illnesses resulting from poor hygienic practices adopted by restaurant operators. Other adverse effect revealed in table three and also in agreement with the findings of Scrinshaw (1997) and Ashworth (1998) include stunted physical growth, retarded mental achievement, low productivity, low resistance to diseases and infections, nutritional deficiency diseases, adverse effect during and after pregnancy, high morbidity and mortality rates.

To avoid the adverse effect of unhygienic food handling, Food Safety Agency of Scotland (FSA), (2011) launched a national food hygiene rating scheme. This will help one choose where to eat out or shop for food by giving you information about the hygiene standards in restaurants, cafes, takeaways and other places you eat out and buy food to reduce food borne diseases and also as part of agency vision for safe food and healthy feeding. Adolescents require more food at this age than every other time in their life. Food borne infections have harmful effect on the physical, mental and social development of



undergraduates and this cannot be remedied in later life. It is therefore very necessary to provide this group of people with adequate and high quality foods to enable them attain the objectives of tertiary education.

### Conclusions and Recommendations

Restaurant operators in higher institutions adopted more of negative practices as revealed from the findings. These poor practices have negative effect on the academic performance of the students as well as their nutritional, social and health status and also impacted on the family economy and the quality of life negatively. Based on these findings, it is therefore recommended that:

1. Management of higher institutions should set up environmental sanitation committee to monitor the activities of these restaurants, control and issue guidance to clarify the steps that restaurants located in higher institutions need to take to control the risk of contamination from the industry. This body should occasionally publish a hygiene rating scheme that will help students choose where to eat.
2. Management of higher institutions should occasionally organize workshop training and short courses for the restaurant managers to enlighten them of what they should be doing to protect customers from serious consequences of unhygienic practices in food handling.
3. Providing standard and hygienic catering establishments in the institutions: If standard, hygienic and well organized food establishments are provided in the institutions, it will go a long way to reduce the problem of malnutrition as well as food borne infections among the undergraduate students. This will also have economic implications on the parents, institutions and the nation as well.
4. Giving nutrition education to food handlers: Nutrition education should be given to the restaurant operators to

enlighten them on the hygienic ways of handling foods. This can be achieved through seminars and workshop.

5. Awareness of the dangers of poor food handling should be created by the government through the mass media to educate other restaurant operators in the country.

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## Dietary Practices of Employees of a Construction Company: A Case Study of a Construction Company in Bulawayo Zimbabwe.

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This study was conducted to assess the dietary practices of twenty (20) employees of a construction company particularly during work hours. The design of the study applied mixed methods (both quantitative and qualitative), (Creswell, 2003) and the quantitative methods applied included a 24 hour recall, a three day diet record and anthropometric measurements. Qualitative methods included interviews and Focus Group Discussions (FGDs). The study revealed that there were two meal breaks for workers, a 15 minute break and a 30 minute break. The results showed that the most common foods consumed during working hours were tea combined with bread or thick maize meal porridge. Eighty percent (80%) of the participants skipped breakfast and lunch most of the time. Despite the work place having a fully equipped kitchen and a fulltime employed cook, employees were not having regular healthy meals. Body Mass Index (BMI) was associated with levels of activity. The food consumption patterns of workers failed to meet the recommended dietary requirements, particularly, the consumption of fruits and vegetables. Therefore the current study confirmed previous assertions and research that workers' diets were poor in many countries (Wanjek, 2005). Since this was an isolated case study suggested recommendations are that the study may be conducted on a larger scale so as to get a clear picture of scenarios taking place at different worksites focusing on the diet of employees during work hours.

**Keywords:** Worksite, Breaks, Nutrition, Body mass index

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### Introduction

With the current urbanisation setup very few people live close to their workplace. Much time is spent on travelling to and from workplaces, this has shortened the breakfast and dinner periods since most homes have a two-worker family. As a result many employees skip breakfast or have inadequate breakfast. Steyn, Parker, Lambert, and Mchiza (2008) reported that for these and other reasons food eaten in the workplace does increasingly make up an important part of the diet of many adults in formal employment. Many adults in Zimbabwe spend eight (8) hours or more at the workplace and this length of time is too long for productive human beings to go without eating. This makes breaks during the working day very necessary. For

efficient productivity employees need breaks in order to rest, eat and regain energy during work hours. Meals at the workplace are important because people cannot be productive and creative if they are hungry and thirsty. Skipping meals during the working period can be harmful as employees will have less strength and energy to continue working.

The wellbeing of employees has been the sphere of International Labour Organisation (ILO), World Health Organisation (WHO) and Food and Agricultural Organisation (FAO). According to Wanjek (2005) food has been observed to be an essential foundation for employment of a productive workforce, and indispensable element of social dialogue

between employers and employees. In 1971, the ILO, along with WHO and FAO re-examined the state of workers' nutrition and asked a number of questions such as; "Are employees getting enough calories and nutrients? To what extent is nutrition related to productivity, absenteeism, turnover and accidents? Who is responsible for planning and implementing meal programmes? And how can such programmes be financed?" (FAO, 1971, p. 6).

The report recommended that governments propagate laws and regulations requiring the establishment of employees' feeding programmes with a view to improving their health, welfare and productivity. (FAO, 1971, p. 17).

At present not much research has been conducted pertaining to breaks and meals of employees in Zimbabwe. This may imply that the health of the workers has been compromised by poor diets and poor eating arrangements at workplaces. It may also imply that the working environment such as organisational policies do not promote healthy eating. The diet of employees is a cause for concern because it impacts on their health; performance and productivity as a larger percentage of adults are found grouped together at the workplace. A workplace like a school setting offers an opportunity for health experts to intervene and teach employees about proper nutrition and provide them with nutritious foods through canteens and other pleasant places to eat.

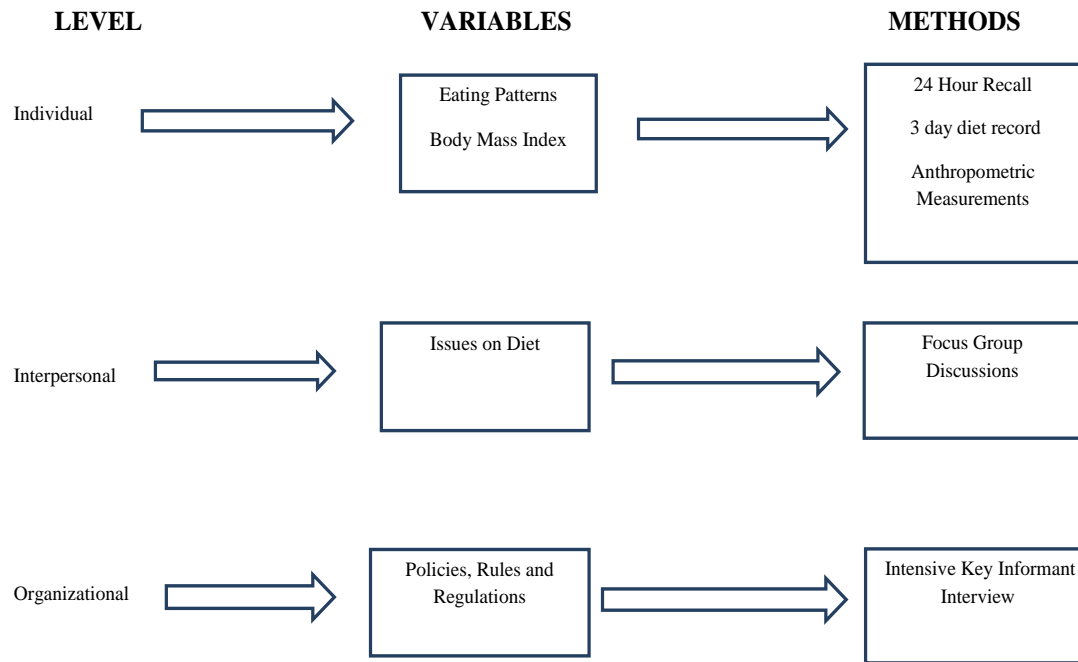
The main aim of the study was to establish dietary practices and body mass index of construction workers.

### **Methods**

The study was conducted among twenty employees of a construction company. Purposive sampling was used since the number of employees was less than thirty

making it difficult for the power of probability sampling. Permission to conduct the study was obtained from the company administration. Informed consent was obtained from the manager and each participant before the study was conducted. A mixed method design was used (Cresswell, 2003) as demonstrated in Figure 1. Specifically, a 24 hour recall, a three day diet record and anthropometric measurements (i.e. quantitative methods). In the 24 hour recall participants were asked to recall the foods they had eaten for the past 24 hours while for the 3 day diet record participants were asked to record the food they would take for the coming 3 days concurrently with food intake. For both instruments information required included time of day, name of food, ingredients used and portion sizes. Anthropometric measurements included height and weight and calculation of Body Mass Index (BMI). Weight was measured using a bathroom scale with participants barefooted and in light clothing. Height was measured using a metre rule with participants leaning on the wall and without shoes. Body Mass Index was calculated using the formula:  $\text{Body Mass Index} = \frac{\text{Weight in kilograms}}{\text{Height in metres squared}}$ . Qualitative methods included interviews and a Focus Group Discussion (FGD). The interview was conducted with the key persons to find out the presence of nutrition policies and meal breaks at the worksite. A questionnaire to guide the interview was developed and the key person was asked to record the information on the questionnaire. One thirty minute focus group discussion was conducted among the employees to find out data regarding their opinions and perceptions of dietary practices at the worksite and responses were transcribed with the help of the company secretary.

Figure 1  
Conceptual Framework



**Results**

The results of the anthropometric measurements showed that 17 of the respondents had a normal BMI (20-24.9 kg/m<sup>2</sup>), while 1 was underweight (BMI=18kg/m<sup>2</sup>), 1 was obese (BMI=35 kg/m<sup>2</sup>) and

1 was very obese (BMI=40kg/m<sup>2</sup>), (see Table 1). Using the Kendall correlation coefficient there was a decrease in number of respondents with increasing BMI ( $\tau = -0.17$ ).

Table 1  
Summary of Body Mass Index of participants (N=20)

Body Mass Index	Count	Percentage
Under 19.9	1	10
20-24.9	17	70
30-39.9	1	10
<40	1	10

White bread was commonly listed by most respondents during the four day period. It was consumed either during breakfast or the 10:00 meal break time at the worksite. It was listed four times by 17 respondents for the four day period, twice by 1

respondent and once by 1 respondent. Using the Kendall correlation coefficient there was an increase in the number of respondents with increasing frequency of white bread uptake ( $\tau = 0.5$ ), (See Table 2).

Table 2

*Summary of number of times white bread was recorded in the 4 day period (N=20)*

Number of times white bread recorded in the 4 days	Number of participants
Zero times	1
Once	1
Twice	1
Four times	17

Rape was the most common vegetable listed by most respondents. It was listed four times in the 4 day recorded period by 17 respondents, 3 times by 2 respondents and zero by 1 respondent. Beef was another common food recorded by the participants. It was recorded 4 times by 17 respondents, three times by 1 and once by

1 participant. Using the Kendall correlation coefficient there was an increase in the number of respondents with increasing frequency of beef uptake ( $\tau = 0.5$ ). Beer was a very common beverage listed in the 4 day period. It was recorded 4 times by 16 participants and zero times by 4 participants.

Table 3

*Summary of number of times rape was recorded in the 4 day period (N=20)*

Number of times vegetables recorded in the 4 day period	Number of participants
Zero times	1
Three times	2
Four times	17

Table 4

*Summary of number of times beef was recorded in the 4 day period (N=20)*

Number of times beef recorded in the 4 day period	Number of participants
Zero	1
Once	1
Three	1
Four times	17

Table 5

*Summary of number of times beer recorded in the 4 day period (N=20)*

Number of times beer recorded in the 4 day period	Number of participants
Zero	4
Four times	16

Tea accompanied by bread was the most common food eaten during breakfast and tea break at the worksite. Eighty percent of the workers skipped breakfast on most

days. None of the respondents listed fruits in the 4 day recorded period. Other protein foods listed by a few participants were fish

and eggs with one respondent listing fish 4 times during the 4 day period. Lunch consisted of maize meal thick porridge (Sadza) accompanied by rape or beef or beans. Lunch was either taken at the worksite or at home during days when workers dismissed early. Evening meals consisted of maize meal porridge served with rape alone or with beef and vegetables.

Interviews with the manager revealed that the company had two meal breaks per day but there was no nutrition policy. The company also had a fully furnished kitchen and a full time employed cook. The workers received food very irregularly when the company provided food for the workers but most often workers brought their own food which was prepared in the company kitchen by the cook. Focus group discussion revealed that workers were all interested in seeing the company kitchen operating fully to provide them with healthy meals since there were hungry most of the time during work hours. The main barrier to getting regular meals identified by employees was lack of dialogue among employees and between them and the management.

### Discussions

Workers who did construction work had a normal BMI with the exception of one who was underweight, while office workers were obese. These findings are consistent with WHO/FAO (2003) findings where it was established that regular physical activity was protective against weight gain while sedentary lifestyles such as sedentary occupations promoted it.

Skipping meals and unhealthy food options such as tea were likely to contribute to poor performance and diminished workout put. The dietary status of the workers as reflected in the dietary recall, and dietary records put the workers at increased risk of developing nutritional deficiencies. Most noticeably was their low consumption of fruits and vegetables. It has already being established that diets low in

fruits and vegetables are associated with the major chronic disease such as coronary heart diseases, diabetes mellitus and cancers of the digestive tract (WHO/FAO, 2003). Availability of healthy food during work hours was important to support the health of employees since they skipped breakfast most of the times. Skipping breakfast would make them less physically energetic resulting in inferior production. This also compromised their nutrient adequacy since other meals that were taken during the day did not provide sufficient nutrients to meet the recommended dietary allowances for vitamins and minerals. According to Preziosi, (2010) nutrients missed by skipping breakfast will not be compensated for in subsequent meals.

One major barrier to healthy eating during work hours was lack of a nutrition policy which is important because it was going to provide a structure for meal planning. Policy is a higher level process that may have strong influence and will demonstrate higher level acknowledgment for the importance of diet at work (Langilla & Rogers, 2010). Previous studies have demonstrated that employers with fewer workers are less likely and potentially less able than large employers to offer health promotion programmes like meals (Linnan *et al.*, 2008). As such it has been noted by similar authors that increasing the number, quality and types of health promotion programs at worksites especially smaller worksites, remains an important public health goal.

This study demonstrated the importance of interaction between all levels of an organisation. The kitchen facility would have been put into good use if the workers were involved in the decision making and planning process. Involving workers in the planning, implementation and management of the programme has been seen as one of the elements of success by Steyn (2008). In this case to promote change in eating behaviours it was important to strengthen communication and



cooperation on diet and diet policies. This is supported by Wanjek (2005) who pointed out that food is an essential element of social dialogue between employers and workers. Another barrier to healthy diet was the absence of a health and nutrition champion. A champion was necessary as they were going to prioritise health and stimulate local policy development (Langilla & Rogers, 2010). Studies conducted by (Linnan et al., 2008) demonstrated that one of the success factors to promoting healthy diets at the workplace was the presence of dieticians who provided nutrition education to participants. The studies revealed that sites with a dedicated staff person to health promotion were nearly thirty times as likely to offer a comprehensive program compared with sites without a staff person.

### Conclusion

This case study provides further evidence that worksites with smaller number of employees are less likely and potentially less able to offer health promotion programs such as onsite meals, (Linnan et al., 2008; Steyn et al., 2008). It also confirms the results by Sorensen et.al. (1992) and Wanjek, (2005) that diets of employees during working hours are not given serious thought by many organisations. Accordingly communication on diet, its related policies, program development and implementation should be strengthened.

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## Knowledge and Attitude of Household Heads Towards Insurance Policies in Ile – Ife area of Osun State

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The level of insecurity of life and property in Nigeria is on the increase. There is need for Nigerian household heads to protect their lives and properties against artificial and natural disasters. This is achievable through appropriate insurance policies. Therefore this study aimed to investigate the knowledge and attitude of household heads towards insurance policies in Ile – Ife area of Osun State, Nigeria. Specifically the study identified the type of insurance policies available to household heads; determined the knowledge of household heads about the policy; and investigated their attitude towards insurance policy. Semi-structured and validated questionnaire was used to collect information from 150 randomly selected respondents in the study area. Data were summarised and described while hypotheses were tested using regression analysis. The study showed that almost all of the respondents were aware of insurance policies. Respondents participated in insurances such as for automobile, property, health, and business. Some (44%) possessed a medium level of knowledge about insurance policies while 44.7% had neutral attitude towards insurance policy. A positive and significant relationship exists between attitude, knowledge and participation of respondents in insurance policy. With increase in knowledge level of respondents, positive attitude would be developed towards insurance policies hence, insurance services providers are advised to introduce proactive strategies that are primarily aimed at educating people and encouraging greater usage of insurance policies.

**Keywords:** Knowledge, Attitude, Insurance policy, Household head

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### Introduction

The world today, including Nigeria is full of risks. The rate of crime and natural disaster is on the increase from time to time. Individuals, families and organizations acquire properties on daily basis which require adequate protection from theft, fire and other natural disasters. Risk has been identified as a central part of life in the rural areas of less-developed countries because of marketing problems (Udry, 1994). These risks can be protected by insurance policies. Insurance is a form of risk management in which the insured transfers the cost of potential loss to another entity in exchange for monetary compensation known as the premium (Pareto, 2011). The insurance company pools clients' risks to make payments more affordable for the insured. Insurance coverage offers protection against financial losses caused by any

unforeseen event. Apart from getting the right insurance coverage for oneself and family members, personal and family valuable assets should be protected against any theft or damage. Olaleye and Adegoke (2009) stressed that insurance offers financial relief to victims of any potential misfortune and those who have suffered physical loss to their properties due to the consequences of uncertainty and unexpected mishaps. Literature has shown that insurance business has a high growth rate in Nigeria (Oluyemi, 1995; Omar & Owusu-Frimpong, 2006).

The relatively low penetration of the sector (CBN, 2004) indicates that there is still a considerable unexploited potential (Omar, 2007). This is as a result of attitude of most Nigerians towards insurance policy. An attitude

has been defined as a learned disposition to behave in a consistently favourable or unfavourable way with respect to a given object (Schiffman & Kanuk, 2000). It is known that people developed attitudes toward almost everything - religion, politics, clothes, music, food (Kotler, 2003). Attitude positions people into a frame of mind of liking or disliking things, of moving toward or away from them (Kolter & Armstrong, 2008). Omar (2007) indicated that lack of trust and confidence in the insurance companies are the foremost reasons for not buying a insurance policy in Nigeria. Yusuf (2009) posited that less influential reasons for not buying insurance is lack of knowledge about insurance products. Therefore the study aimed at providing answers to the following questions:

- a) are the people in the study area aware of insurance policy?
- b) what is their level of knowledge about insurance products?
- c) what is their attitude towards insurance policies?

Hence, the study identified types of insurance policies available to household heads, determined their knowledge about the policies and investigated their attitude towards insurance policies.

### **Methods**

The study was carried out in the (ancient) city of Ile – Ife. The city consists of two local government areas (LGA) namely: Ife Central and Ife East. The Obafemi Awolowo University, Ile – Ife and the University Teaching Hospitals Complex are situated in Ife Central LGA. Hence, the LGA was purposely selected because it consists of different categories of workers assumed to have good ideas about insurance policies and practise it.

Structured and validated questionnaire was used to collect information from 150 randomly selected respondents in the study area. Data were summarised using descriptive statistics while hypothesis was tested using regression analysis.

Knowledge was measured by scoring ten statements on a three point scale: agree, not sure and disagree which corresponds to 2, 1, and 0 respectively. Attitude was also measured

by scoring ten attitudinal statements on a five point scale: strongly agree, agree, undecided, disagree and strongly disagree corresponding to 5, 4, 3, 2 and 1, respectively and vice versa. In relation to participation in insurance policy, types of insurance policy respondents were involved in was scored one mark each and participation was calculated based on total number of policies engaged in.

### **Results and Discussion**

#### ***Awareness and participation in insurance policy***

The result in Table 1 showed that 97.3 percent of the respondents were aware about insurance policy. Out of this, 57.5 percent participated in insurance policy. This result indicated that majority of the respondents were aware and participated in insurance policy.

Data in Table 2 indicate that the respondents were aware of various types of insurance policies such as automobile (86.3%), property (84.9%), fire (76.7%), health (57.5%), and term life insurance (51.4%). Others include retirement income life insurance (39.7%), agricultural insurance (13.7%), disability (25.3%), business (19.6%), and credit life insurance (34.2%).

#### ***Types of insurance policy and years of participation***

Data in Table 3 show that respondents participated in business insurance (11.9%), credit life insurance (1.2%), automobile insurance (38.1%), and property insurance (17.9%). They were also involved in fire insurance (2.4%), retirement income life insurance (17.9%), agricultural insurance (6.0%), and health insurance policy (4.8%). None of the respondents participated in term life and disability insurance policy. The findings indicate a very low level of participation in insurance policy by the respondents. This finding agrees with Yusuf (2009) that almost 40 percent of the respondents do not have any protection against the financial loss that can result from death, disability or critical illness. Further, it corroborates Omar (2007) that lack of trust and confidence in insurance companies are the foremost reasons for not buying life insurance policy in Nigeria.

Table 1  
*Distribution of Respondents by Awareness and Participation in Insurance Policy*

	F	%
<b>Awareness</b>		
Aware of insurance policy	146	97.3
Not aware of insurance policy	4	2.7
Total	150	100
<b>Participation</b>		
Participate in insurance policy	84	57.5
Not participate in insurance policy	62	42.5
Total	146	100

Table 2  
*Distribution of Respondents by Awareness about Types of Insurance Policies*

*Insurance policies	F	%
Term life	75	51.4
Business	29	19.6
Credit life	50	34.2
Automobile	126	86.3
Property	124	84.9
Fire	112	76.7
Retirement income life	58	9.7
Agriculture	20	13.7
Health	84	57.5
Disability	37	25.3

\*Multiple responses

Table 3  
*Distribution of Respondents by the Types of Insurance Policies Practised*

Types of insurance	F	%
Term life insurance	0	0
Business insurance	10	11.9
Credit life insurance	1	1.2
Automobile insurance	32	38.1
Property insurance	15	17.9
Fire insurance	2	2.4
Retirement income life insurance	15	17.9
Agricultural insurance	5	6.0
Health insurance	4	4.8
Disability insurance	0	0
Total	84	100

Table 4  
*Distribution of Respondents by the Years of Participation in Insurance Policy*

Years of participation	F	%
Up to 2 years	28	33.4
3 - 4 years	18	21.4
5 - 6 years	9	10.7
7years and above	29	34.5
Total	84	100

Table 5  
*Distribution of Respondents by the Sources of Information about Insurance Policy*

*Sources of information	F	%
Radio/Television	74	50.7
Insurance agents	91	62.3
Friends/neighbours/families	80	54.8
Banks	36	24.7
Magazine and Newspaper	30	20.5
Seminars and symposia	15	10.33

\*Multiple responses

Result in Table 4 revealed that 33.4 percent of the respondents had involved in insurance policy for about 2 years, 21.4 percent participated between 3 and 4 years, 10.7% participated between 5 and 6 years while 34.5% had involved in insurance policy for 7 years and above.

#### **Sources of information about insurance policy**

Results in Table 5 show that the major sources of information about insurance policy include: radio and television (50.7%), insurance agents (62.3%), as well as friends, neighbours and families (54.8%). Respondents also heard information about it through banks (24.7%), magazines and newspapers (20.5%) and seminars and symposia (10.3%).

#### **Knowledge of insurance policy**

Table 6 revealed the knowledge of respondents about insurance policy. It shows that majority of respondents agreed that insurance: provides protection against risk of properties (84%); adds value to policy holder even after death (82%); property destroyed by

fire that is not negligently caused by the person under an insurance policy will be replaced (79.3%); in case of vehicle accident, an insurance replaces either partial or in full the loss to whomever under the policy (84.7%) and in case serious diseases/disabilities occurred naturally or by accident, insurance will care for the person under the policy (79.3%). Furthermore, respondents were of knowledge that insurance provides some standard of living for dependents of policy holders (64.7%). They are also aware that farmers can also enjoy some help or benefit in case of destruction to their farm by either natural or by human activities (69.3%), there is a certain financial obligation to be paid by the policy holder for the full benefits to be attained (58.0%), insurance policy provides benefits when a person is permanently disabled and can no longer work in his profession (59.3%), and that an insurance company can stand for the policy holder against the third party in the court of law (42.0%). The results indicated that majority of the respondents possessed good knowledge of what insurance policy entails and the benefits available to policy holders.

However, using mean plus/minus standard deviation, it was revealed that some (44%) of the respondents possessed average level of knowledge (Table 7), 32 percent had high level of knowledge while 24 percent possessed low

level of knowledge about insurance policy and its inherent benefits. This is in line with Yusuf (2009) that lack of knowledge about insurance products is a less influential reason for not buying insurance.

Table 6  
*Distribution of Respondents by their Knowledge about Insurance Policy*

Knowledge variables	Agree		Not sure		Disagree		Mean
	f	%	f	%	f	%	
Insurance provides protection against risk of property	126	84.0	20	13.3	4	2.7	1.81
Insurance policy adds value to one even after death	123	82.0	18	12.0	9	6.0	1.76
Property destroyed by fire that is not negligently caused by the person under an insurance policy will be replaced	119	79.3	25	16.7	6	4.0	1.75
In case of vehicle accident, an insurance replace either partial or in full the loss to whomever under the policy	120	84.7	20	13.0	3	2.0	1.73
In case serious diseases/disabilities occurred naturally or by accident insurance will care for the person under the policy	119	79.3	16	10.7	15	10.0	1.69
Insurance provides some standard of living for Dependents	97	64.7	30	20.0	23	15.3	1.49
Farmers can also enjoy some help/benefits in case of destruction to their farm by either natural or human activities	104	69.3	6	4.0	40	26.7	1.43
There is a certain financial obligation to be paid by person under insurance for the full benefits to be attained	87	58.0	40	26.7	23	15.3	1.42
Insurance policy provides benefits when a person is permanently disabled and can no longer work in their profession	89	59.3	28	18.7	33	22.0	1.37
An insurance can stand for the person under it against the third party in the court of law	63	42.0	71	47.3	11	10.7	1.31

Table 7  
*Distribution of Respondents into Level of Knowledge Category*

Level of Knowledge	F	%
High	48	32.0
Medium	66	44.0
Low	36	24.0
Total	150	100



**Attitude towards insurance policy**

Data in Table 8 show that respondents agreed that insurance policy is beneficial to both the insured and the insurance company (93.4%); life insurance policy provides value for the dead (73.3%), employee will receive benefit from insurance company (60%). They also agreed that people in the rural areas are likely to purchase the basic insurance policy (39.3%) and that the cost of insurance policy in Nigeria is affordable (34.7%). Furthermore, respondents disagreed to the statement that: I have enough savings so I do not need insurance (87.3%); insurance services are owned and maintained by government (76%), insurance companies refuse to pay benefit to beneficiaries (66.6%), insurance companies are not trustworthy (65.3%) and that people in the

rural areas cannot afford to buy insurance policy. This finding is an indication that majority of respondents in the study area had developed favourable dispositions towards insurance policy.

However, using mean and standard deviation, Table 9 indicates that a little less than half (44.7%) of the respondents had neutral attitude towards insurance policy while 26 percent had positive attitude 29.3 percent had negative attitude towards insurance policy. This implies that despite the fact that the respondents understood the benefits of different insurance policies, they still developed care-free attitude towards insurance policies. This finding supports Yusuf *et al.* (2009) that Nigerians have negative attitudes towards insurance services.

Table 8  
*Distribution of Respondents by their Attitude towards Insurance Policy*

Attitudinal statements	SA %	A %	U %	D %	SD %	Mean
Insurance policy is beneficial to both the insured and the insurance company	44.7	48.7	2.7	4.0	0	4.3
I have enough savings so I do not need insurance	0	2.0	10.7	58.0	29.3	4.1
Insurance services are owned and maintained by government	7.3	11.3	5.3	46.0	30.0	3.8
Insurance companies refuse to pay benefits to beneficiaries	2.7	8.0	22.7	53.3	13.3	3.7
Life insurance policy provides value for the dead	1.3	72.0	18.7	6.0	2.0	3.6
The advantages of guaranteed insurance for the employer and employee is that the employee will receive benefit from insurance company	2.7	57.3	34.7	5.3	0	3.6
Insurance companies are not trustworthy	5.3	6.0	23.3	53.3	12.0	3.6
People in the rural areas are likely to purchase only the basic insurance policy	5.3	34.0	46.0	10.7	4.0	3.2
The cost of insurance policy in Nigeria is affordable	4.0	30.7	25.3	35.3	4.7	2.8
People in the rural areas cannot afford to buy insurance policy	5.3	44.7	33.3	12.7	4.0	2.7

Table 9  
*Distribution of Respondents by Category of Attitude*

Attitudinal category	F	%
Positive	39	26.0
Neutral	67	44.7
Negative	44	29.3
Total	150	100

Table 10

Regression Analysis Showing Relationship between Knowledge, Attitude and Participation

Variables	Regression coefficient (b)	T - Value	Significance
Constant	-1.238	-3.411	0.001
Attitude	0.027	3.818	0.000
Knowledge	0.055	3.350	0.001

Note: Level of significance:  $p \leq 0.05$ ; R square: 0.19

### Test of hypothesis

The result in Table 10 show that knowledge (b = 0.055, T = 3.350) and attitude (b = 0.027, T = 3.818) of respondents contribute significantly to their participation in insurance policies. This implies that knowledge and attitude sustained by the respondents towards insurance policies influence their participation.

Thus, there was a significant relationship between knowledge, attitude of people in the study area and their participation in insurance policies. The study suggests that their participation will increase as their knowledge increases and develop more positive attitude towards insurance policies.

### Conclusion and Recommendation

Majority of the respondents were aware of different insurance policies and participated mainly in automobile policy. Some of the respondents possessed average level of knowledge and had neutral attitude towards insurance policy. Knowledge and attitude had significant relationship with participation. Hence, with increase in their level of knowledge, positive attitude may be developed towards insurance policies. Therefore, insurance service providers are encouraged to intensify efforts in educating people on the potential benefits of insurance with a view to changing the developed attitude. They should evolve strategies that are aimed at rebranding the insurance industries in Nigeria.

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## Personalization of Hostel Rooms at the University of Botswana: Academic or Social Benefit

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University provides a locus of place that brings together people for the common purpose of studying and socialization. This is a challenging period particularly for first year students who have to leave the familiar surroundings of their parental homes and settle in a totally new environment. The purpose of the study was to examine how students of University of Botswana adapt and personalize their residential rooms in pursuit of creating an environment that is conducive and meaningful to their learning and stay at the university. The study adopted a systematic random sampling method to select a total of 316 students, both male and female, who reside on campus accommodation. A questionnaire was used to obtain information on the method and nature of personalization the students adopt, as well as the impact personalized space has on academic performance and social benefits. The findings indicated that both male and female students personalized the hostel rooms to help them adapt to their new living environments, express their personalities and values. Most of the students indicated that "comfort" was their main influence in personalizing their spaces. Common items used to personalize the rooms were various electrical appliances gadgets, soft furnishings and personal accessories. The display of academic materials did not form a part of personalization of space in this study. The personalization of students' rooms was not connected to motivating their studies because they displayed less academic materials. It was associated more with social benefits such as helping them to relax and reduce academic stress.

**Keywords:** Personalization, Hostels, University, Identity

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### Introduction

**A**t the beginning of their first year, most students are moving out of their parents' homes for the first time. For these young adults, this is an important transitional phase. This is a challenging time mainly for them as they leave the familiar surroundings of their parental homes to settle in a totally new environment. They spend seventy percent of their time in the residence halls; therefore the campus housing becomes "home away from home" (Wilson & Banning, 1993). University life provides a place that unites people for the purpose of studying and socialization. This has an impact on their personality, attitudes and behavior. Students find themselves sharing a residential room and personal space with an unknown person who may be of a different age and social origin.

The university provides a stage for students to discover their own identity and their role in social life. Moving into a college hostel is a sign

of freedom for most students. According to Papalia, Olds and Feldman (2008), at this stage, the young adults develop personalities and make choices on their personal life style. It is important for them to have a place they call their own where they have authority over activities happening there other than studying. When students move into their rooms, they have their personal belongings that become part of their living space. Personalization of hostel rooms is important for the student survival at the university. It is therefore important to know how students design their spaces in order to create an environment that is conducive and meaningful to their learning and stay at the university, at the same time identifying who they are.

The main aim of the study was to find out how the University of Botswana students personalize their own space, specifically,

materials, equipment and furnishings used to personalize the room. The objective was to determine the academic and social benefits for personalization. The study may help planners at the University of Botswana in understanding how students give meaning and make themselves comfortable in their given environment. It may also help in future designs and refurbishment of the hostels to cater for students needs.

### ***Hostels at the University of Botswana***

The University of Botswana recognizes the importance of students' residence halls on their student life and experiences whilst there. The aim of the university is to help students create a "home away from home" (University of Botswana, 2002, p. 1). It also strives to create a safe environment that is also conducive to their educational, social, spiritual and physical needs. The students are generally responsible for the upkeep and cleanliness of the rooms. The design of furniture in each hostel block provided by the university is similar, for example, space planning and arrangement of the bed, table, chairs, and closet. According to the University of Botswana Halls of Residence Guidelines and Regulations (2002), students are allowed to bring the following electrical appliances to use during their stay on campus: Small radio music system (not more than 25 watts music power), small fans (table model), irons, kettles, and heaters (not more than 750 watts). Large electrical items such as a refrigerator are not allowed. Students are not allowed to cook in their rooms except for Graduate Village in Block 417. The Guidelines and Regulations also indicate that students are not allowed to host meetings, parties or any other gatherings in their hostel rooms.

### ***Conceptual framework***

The study is guided by the personalization concept. Well and Thelen (2002) define personalization as a process of expressing one's values, preferences, identity, or territory through the deliberate modification of the physical environment. According to Marcus and Sarkissian (1986), personalization involves any modification or addition done to a dwelling.

Personalization of space is commonly done in shared and similar spaces e.g. offices, halls of residence, and other spaces of similar design. People tend to personalize their space to give it their own meaning thus improving their stay. Personality is an important element of an individual's relationship with their environment. In personalization the user displays their conscious decoration of space as a representation of their personality. It improves their psychological well-being and provides others with information about them, that is, their identity (Well & Thelen, 2002).

### **Review of Literature**

Student housing allows students to establish a feeling of belonging to the place which is important to their learning. Students in flexible rooms tended to spend more time in them than those in non-flexible rooms (Galan, 2003). Furthermore, Galan indicated that most students see personalization of their hostel rooms as a way of creating self-representation and personal space that is both stylish and functional. According to the survey done by Doxtater (n.d.), having a room that makes good first impressions was important to males than females. The female students were more prone to personalizing their spaces than their male counterparts. The survey indicated that students found it important to impress their friends and relatives.

Personalization of hallways and door exterior was important to most students especially females. The rooms were used to celebrate special events as they were regarded as their "homes" (e.g. birthday parties). In such situations, hallways played an important role. The reasons for personalization were; for decorating space, for entertaining (socialization), for neatness, to create more "like home" environment, (in most cases to resemble their bedrooms, or an apartment), comfort, to make a good impression, and as a form of a positive cultural meaning / expression.

Common materials, furnishings and accessories used by students to personalize their rooms include bedding, rugs, stuffed animals, photos, posters, kitchen and electronic

appliances, full length mirrors, calendars, plants, greeting cards and others. Bulletin boards and doors are used for putting up things e.g. posters (Galan, 2003; Wilson & Banning, 1993).

### ***Use of Personalized Space and its Impact on Student Behavior***

Most universities recognize the importance of physical environment to enhance the territorial behavior of students in halls of residence. Smith (1982) assessed student behavior in relation to personalization of space. The results indicated that due to personalization of space, there was a decrease on damage of public spaces in 38% of institutions. Cohesiveness increased in 50% of the colleges among residents where personalization was allowed. The study concluded that the more freedom on personalization of space the higher the level of territorial behavior. Kaya and Weber (2003) conducted a study to investigate cultural difference in the degree of territoriality in residence hall on the American and Turkish culture. In both cultures, male freshmen exhibited more of non-sharing behavior and less personalization compared to female students. Student tended to share their belongings if they previously knew their room-mates. Amole's (2005) study examined coping strategies used by students living in student residential facilities in 20 south western universities in Nigeria. The results indicated that the living conditions were perceived as stressful and one of the major coping strategies was decorating personal spaces. Most of the students used their space to entertain friends and study. Sense of belonging increased the likelihood of remaining at an institution. Hansen and Altman (1976) found that students who personalized their rooms had a higher point averages and lower university dropout rates than student who did not personalize their space.

### **Methods**

The study included all the thirty five (35) male and thirty (30) female halls of residence in the main campus of University of Botswana

during the 2004/05 academic year. At the time, the University had a combination of 395 single-bed rooms, 372 partitioned rooms, 3160 double bedrooms (for undergraduate students) and eight blocks made of 240 single-bed rooms only reserved for post-graduate students. The total sample for the study was 316 bed spaces out of a total of 4264 bed spaces at the university of Botswana Main campus. However, 310 questionnaires were returned. The halls of residences (or blocks, as they are commonly known) for the study were divided into 4 clusters according to the types of rooms in each block as outlined above. The blocks included in the sample were chosen conveniently to cover the heavily populated blocks and the first room in each block was used as a starting point. A systematic sampling was used for the choice of the rooms in the following manner (to achieve 316 bed spaces). Starting with room 1 every 10<sup>th</sup> room in each block was selected.

Due to the busy schedule of university students, a brief survey questionnaire was used to obtain information on their perceptions and interpretations in relation to personalization of space. This allowed the students' time to respond at a convenient time. The questionnaire was pilot tested on a convenience sample of fifteen Home Economics third year students residing on campus. Data was collected in a period of one week from the selected rooms in the evenings during the week when most students were in the rooms. The data collected was analyzed using SPSS.

### **Data Analysis**

#### ***Characteristics of participants***

Most of the respondents (62.3%) resided in double rooms followed by partitions (18.4%). Only 3% of them lived in common rooms. There were more female participants (53.9%) than male ones (46.1%). Most of the participants' age ranged from 18-25 (89.1%) followed by those above 30 years (5.8%). There was an even number of participants for 1<sup>st</sup> and 2<sup>nd</sup> years (23%), and 24% of the participants were in 3<sup>rd</sup> year with 16% for 4<sup>th</sup> year and 13% for post graduates.



### **Personalization items**

The most popular appliance was the iron (N=269) followed by radios (N= 245). Other popular appliances were radios and mini-fridges. More female students had mini-fridges in their rooms (N=61). There were fewer heaters in the rooms. However, the heaters were mostly present in males' rooms (N=20) than female rooms (N=7). Most of the appliances were popular with female students than males. The least popular was heaters (N=27). Other electrical appliances included the computer (N=17) and DVD player (N=6). Overall the most popular type of furnishings and accessories was the personal bedding (N=250) followed by photos (N= 245). Personal bedding ranked high for female students (N=155) followed by photos (N=136). Majority of the female students also had rugs (N=100), stuffed animals (N=92) compared to their counter parts. Posters were more popular with male students (N=110). Calendars were equally popular for both sexes (N=61 for each sex). Mirrors and plants were not popular for both sexes. Bedding was most popular among the 18-25 age group followed by photos (N=217), photos (N=11) and posters (N=10). In relation to year of study, bedding was common for year 1 to year 3 students, with 3<sup>rd</sup> years leading (N=63). It was followed by photos (N=245) then posters (N=207).

### **Personalization influences**

Influences on personalization of space were found more on female than male participants. Decoration was the main influence for female students (N=88) followed by comfort (N=75). To fit in university society was the least influence for them (N=14). This was however high for male participants (N=31). Comfort as an influence for personalizing space was more important for male participants (N=76) as compared to females followed by identity (N=61). Overall the most popular influence was "for comfort" (N=151) followed by "for decoration" (N= 143). The least popular was "to fit in with university society" (N=45). Responses to what influenced students to personalize their space in relation to age and year of study were analyzed. For 18-25 age groups (N= 137)

"feeling closer to family" was the main reason for personalizing space for all age groups followed by "for comfort" (N= 132). The most common influence based on year of study was "to feel closer to family/home" (N=161). This was higher amongst 3<sup>rd</sup> years (N=40). For 1<sup>st</sup> years (N=36) "for decoration" was the main reason.

### **Academic Benefit of Personalization**

In relation to age, providing comfortable atmosphere was the main academic benefit for the 18-25 age group (N=147) followed by relaxation (N=146) and reducing academic stress (N=142). For the year of study, all levels agreed that relaxation (N=166), followed by "providing a comfortable atmosphere" (N=162) was important. The least popular was "to display academic materials" (N=62)

### **Social Benefit of Personalization**

Overall the most popular social benefit was "to lift me when feeling down" (N=173) closely followed by "reminder for important people" (N=172). For both genders, the social benefit for personalizing space was "to lift me when feeling down" (N=88 males and N=85females) and the least popular was "to identify with certain social classes" (N=12males & N=10females). However, the results indicate that personalization of space for entertainment was more important to males than females.

### **Discussion**

The findings indicated that students at the University of Botswana main campus do personalize their rooms. Personalization of hostel rooms was more popular with female than male students and among the 18-25 age groups. The 2<sup>nd</sup> and 3<sup>rd</sup> year students personalized their space compared to 1<sup>st</sup> year and other levels. For first years it might be due to the fact that they were new and had no idea of what to expect and bring. The rooms were merely static environment to inhabit between classes. Personalization helped them to take control and adapt to their living environments. Students brought with them their own bedding, various electrical appliances and accessories for their stay at the university. Computers,



televisions and DVD players were found in the student's rooms. However, it can be safely assumed that the number or ownership of electronic items (especially desktops and laptops) is on the increase based on the culture of technology among the age group.

Comfort was the main influence in personalizing their space. Personalization allowed the students to create a comfortable place away from home to improve their stay at the university. According to Pocerobba (2001), students demand more comfort in their spaces. This is in the form of decoration privacy, better lighting, increases power connections and closer proximity to various services on campus such as dining hall. Personalization had nothing to do with trying to fit in with university society. Interestingly, while personalization of space by the students had the ability to influence their academic performance, the display of academic materials did not form a part of personalization of space in this study. The personalized rooms had less academic purpose in terms of displaying academic materials and motivating their studies. For example, bulletin boards were used to put up personal items such as pictures, posters, and cards. The students viewed their rooms as a retreat away from their normal academic routine and classrooms. They described it as important for relaxing (in between and after classes), and used it to release academic stress than to do academic work. Amole (2005) indicated that students preferred to study away from their rooms and decorate their personal space as a coping strategy for living in residence halls. Personalization of space by the students had a social benefit. The most popular social benefit was lifting their spirits when feeling down. Personalization can be important in reducing academic stress and offer a place of solace and refuge. Personalization of space was also a reminder of important people. This was achieved through the used of photos and greeting cards. It also provided a space to entertain friends.

In conclusion, the hostel room played an important part in the social and academic success of the student's university life. Personalization also encouraged a sense of

place and a sense of self. Student satisfaction with campus accommodation is important to their stay, success in the university environment. To enhance the interior space, the design of halls of residence must emphasize the functional, aesthetic and personalization factors. It must allow a perception of control over space hence reducing acts of vandalism (Kaya & Weber, 2003). Functionality must include enhancing the function of certain events and activities such as reading, writing, and use of computer/laptop. Personalization factors must include a home-like environment, display of identity, status and family.

### Recommendations

The following recommendations are important in refurbishing and designing of future halls of residence at the University of Botswana:

- Allow easy to adjust and versatile furniture. This will allow the students to re-arrange their furnishings. For example, moveable beds, more shelves and wall cubicles will provide space for decoration without damaging the walls
- In pursuit for academic excellence, there is a need to provide for technological needs in the students rooms. There is need for telephone, computer and internet outlets to improve and support their academic needs.
- Creating more attractive housing such as co-educational housing, co-op housing, family housing etc.
- Room design and size should encourage personalization and cater for both the various academic and social activities to take place in it.

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## Scaling up Clean Cooking Technologies

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In 2010 the United Nations and the World Health Organization, have founded the 'Global Alliance for Clean Cookstoves', a public private partnership of different stakeholders who work together in order to 'save lives, empower women, improve livelihoods and combat climate change by creating a thriving global market for clean and efficient household cooking solutions'. Very recently, The IFHE (International Federation of Home Economics) has joined the Alliance as a 'Champion' partner and the PC HT&S (Programme Committee on Household Technology and Sustainability) took on the support of the Alliance's vision and mission. Besides the development of energy efficient stoves a change in cooking habits is needed to optimize cooking processes in terms of saving resources and reducing smoke from combustion. Therefore the PC HT&S has developed 'Best Practices in Cooking' and is seeking constantly for their dissemination.

**Keywords:** Cook stoves, Biomass, Best practice in cooking, Household technology

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### Introduction

Worldwide, 2.5 billion people use biomass fuels e.g. firewood, charcoal or wood for cooking. Especially women and children suffer from eye irritation and coughs caused by the exposure to smoke from inefficient cook stoves. In 2010 the United Nations and the World Health Organization, have founded the 'Global Alliance for Clean Cookstoves', a public private partnership of different stakeholders who work together in order to 'save lives, empower women, improve livelihoods and combat climate change by creating a thriving global market for clean and efficient household cooking solutions' (GACC, 2011). The goal of the Alliance '100 by 20' calls for 100 million households to adopt clean and efficient stoves by 2020 with four major requests:

- Protect the family from the toxic fumes of daily cooking.
- Reduce the family's consumption of firewood by 1.5 tons per year.
- Reduce the environmental impact by 1 ton of CO<sub>2</sub> annually.
- Support the creation of jobs and income on local stove markets.

### Modern cooking technologies

Despite all efforts in electrification biomass will remain the most important source for cooking energy in the next decades (GIZ, 2010). Thus the production of biomass and the design of the stoves are of high relevance in terms of sustainable and energy efficient cooking methods. From the environmental point of view the stoves should reduce the use of resources and also emit little smoke in order to protect users from diseases caused by air pollution.

An energy efficient performance of modern biomass stoves can be achieved by:

- improved combustion due to sufficient ventilation.
- efficient use of biomass due to controlled flow of hot air.
- reduction of smoke emission due to improved combustion.
- use of a chimney to improve indoor air quality.

More energy efficient than cooking with biomass is the use of electric stoves, gas stoves and liquid fuel stoves. Although their use is highly recommended by the Alliance, biomass stoves are in the focus of the efforts

Table 1  
*Best Practice in Cooking*

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**Which appliances and cookware to use?**

**When cooking with wood or coal**

- use a closed stove.
- try to replace a wood stove with more energy efficient appliances.

**When cooking on gas stove tops**

- choose a small gas flame which heats the bottom of the cookware only.
- select a pan size that matches the size of the cooking element.
- keep metal grease plates under burners clean to improve heat reflection.
- make sure the flame touches the bottom of the pot.
- use pots with rounded bottom.
- be sure the flame is a bright blue color, not yellow, to assure a clean and efficient burn.

**When cooking on electric stove tops**

- use the smallest pan or pot and cooking plate possible for the quantity of food being prepared.
- use only flat-bottomed pots and pans, which make full contact with the plate or glass cooking surface.
- keep reflector pans under coil type heating elements clean to reflect heat back to the pan.

**When oven baking**

- don't cover racks with foil.
- keep door gaskets clean to promote a tight seal.
- do not use the oven as a room heater.
- open the door as little as possible during baking to prevent the loss of heat.
- don't preheat the oven, in general it is not necessary.

**When using the microwave**

- avoid defrosting food by microwave – defrost in the refrigerator instead.
- don't use the microwave for cooking large portions.

**How to cook resource-saving?**

- make sure the flavour of the dish is not compromised by the cooking process.
  - use the most efficient appliance in your kitchen to do the job.
  - cover pots with lids whenever it is possible.
  - turn the oven or stovetop off, a few minutes before the food is ready.
  - cook just in time for serving – keeping warm needs additional energy.
  - turn the oven or stove top down as soon as the water is boiling.
  - choose the minimum time and temperature for cooking.
  - use thermometers or timers to avoid overcooking of food.
  - cook larger portions and store for other meals, warming up uses less energy than cooking.
  - place the pan on the heating element before turning it on.
  - use a slow cooker or stove top method rather than the oven when possible.
  - use the self-clean oven mode immediately after baking, while the oven is already hot.
  - use a pressure cooker for foods that take a long time to cook such, as lentils and dried beans.
  - use as little water as possible to do the cooking.
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because many users don't have access to other fuels than biomass. Solar cookers can be considered to be the best cooking technology from the environmental point of view, as they don't use any fuels and don't emit any pollutants. But solar cookers are not widely accepted by the users, because cooking with solar energy is time intensive and the cookers are not suitable for all kinds of dishes.

**The contribution of the IFHE to the Alliance**

In order to scale up the use of clean cook stoves, capacity building for local stove production, sales strategies and supply chains are necessary. In addition, a change in cooking

habits is needed to optimize cooking processes in terms of saving resources and reducing smoke from combustion (GIZ, 2010). Very recently, the IFHE has joined the Alliance as a 'Champion' partner and the PC HT&S has taken on the support of the Alliance's vision and mission. The work of the PC HT&S focuses on the development and dissemination of Best Practices in doing all kinds of household tasks. Among others Best Practices in cooking have been certified by the members of the programme committee and are disseminated in order to convince consumers that modern cooking technologies can provide better results with less use of resources than the traditional

Table 2  
Frequently Asked Questions

**1. Which is the most efficient appliance in the kitchen to do a cooking job?**

It depends on the cooking job that has to be done:

- For boiling water use an electric kettle.
- For boiling eggs use an egg boiler.
- For brewing coffee use a coffee machine.
- For cooking dry legumes like dried beans use a pressure cooker.
- For cooking small amounts of food (less than 0.5 L) use a microwave oven.
- For baking small amounts of meat use a toaster oven.
- For cooking rice use a rice cooker.

**2. How can dry legumes and rice be cooked in an energy saving way without a pressure cooker?**

Soaking of dry legumes and rice before cooking decreases the cooking time and thus the energy consumption.

**3. Shall the energy be turned off a few minutes before the food is ready?**

Turning off the energy 5 to 10 minutes before the cooking process ends is energy saving. But experience is necessary to make sure that the water does not stop boiling before the food is ready. Turning off the energy too early and turning it on again might consume more energy than necessary. The interruption of the cooking process might compromise the quality of the dish.

*Solid heating plates* are heated by electrical resistance. They take longer to heat up and also longer to cool off. Also *radiant elements* placed under heat-resistant ceramic glass take longer to heat up and cool off. Turning off the energy a few minutes before the cooking process ends is applicable on both stove tops.

*Halogen elements* use a quartz-halogen lamp to radiate heat to the ceramic glass surface, they are more energy efficient than solid heating plates and radiant elements. *Magnetic induction elements* heat metal pans directly by exciting the metal molecules, they are also energy efficient. Both halogen and magnetic induction elements heat up and cool down fast. Find the right time to turn off the energy before the cooking process ends needs some experience.

**4. Why do some pots and pans don't work on induction hobs?**

Magnetic induction elements heat metal pans directly by inducing an electric current in the bottom of the pot. The pot or pan must be made from ferromagnetic material that is electrically conductive. Therefore special cookware is necessary for cooking on induction hobs. E.g. pots and pans made from copper or aluminium are not suitable for induction hobs; also pots made from steel containing nickel cannot be used.

**5. How does a microwave oven heat up food?**

Microwaves heat food directly by exciting mainly the water molecules in the food. The food stuff is heated by heat conduction from the fringe to the centre. Interruption of microwave radiation provides the time which is needed for the heat flow. Stirring of the food may also be needed to ensure a uniform temperature in the food. The more water molecules have to be excited, the more time and energy is necessary to heat up the food stuff. Microwave ovens are therefore very energy efficient for small amounts of food, up to 0.5 L. For cooking larger portions heating in a pan or pot on a stove top is less energy intensive.

**6. Why shouldn't the microwave be used for defrosting?**

Defrosting in a microwave is fast but consumes energy. Most efficient is defrosting in a refrigerator. It helps cooling the refrigerator and thus decreases the energy consumption of the refrigerator. Defrosting in ambient temperature is also energy saving but can cause sanitary problems.

**7. Why should oven racks not be covered with foil?**

Energy consumption for producing aluminium foil is high. The foil can reduce the air flow inside the oven and thus increase the cooking time.

**8. Why is cooking by solar cookers not mentioned in the best practices?**

Cooking with solar cookers is time intensive and not suitable for all kinds of dishes. Solar cookers that are available in the market need direct solar radiation and have to be handled with care in order to avoid burnings.

**9. Shall metal grease plates under burners be lined with aluminium foil?**

Lining metal grease plates under gas burners helps to reflect the heat to the bottom of the cookware, but energy consumption for the production of aluminium foil is high. Keep grease plates under gas burners clean to ensure proper reflection of heat.

**10. What is the appropriate size of the gas flame?**

The gas flame should touch the bottom of the pot only. If the flame is visible all around the bottom of the pot, it is too large.

method. Table 1 lists Best Practices in Cooking which have already been published by researchers or non profit organizations (Grupp, 2006; Höll-Stüber, 2005; Oberascher, et al., 2011; Rocky Mountain Institute, 2004; Service écologique ville d'Esch-sur-Alzette, 2004; Vattenfall, 2008; Verbraucherzentrale

Bundesverband, 2008) and have been certified by international and independent experts in household technology. In addition to the Best Practices, frequently asked questions about the best way to do a cooking job are answered in Table 2.

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## Going an Extra Mile: Linking Religion to Family Diet and Consumer Patterns in Zimbabwe

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Consumer patterns mirrored in family diets are determined by intertwined factors like the social, economic, political, technological, cultural and religious ones. In general, solutions on family diet and health issues have been following some conventional ways modeled on western patterns. This study engages a new paradigm anchored on religion. It seeks to link religion to consumer patterns, which shape the diet of many ordinary families in Zimbabwe. Specifically, the study posits that religion plays a pivotal role in determining the quality and quantity of food consumed in families. A religiously-determined diet helps to avert the impact of some killer diseases common in Sub Saharan Africa such as tuberculosis, kwashiorkor, diabetes and HIV and AIDS. In our view, adopting the religious paradigm to dietary issues is 'going an extra mile'. In this context, an 'extra mile' implies the espousal of some methods, techniques, advice and ethics on diet inspired by religion. The research utilised 12 unstructured in-depth interviews and data from 80 questionnaires administered equitably to adherents of Christianity, Islam, Rastafari and African Traditional Religions based in Masvingo province. The phenomenological method also informed the study. The study established that majority of adherents strictly observed some dietary rules and taboos for spiritual development, health and identity. The researchers concluded that religion significantly influenced family diet and consumer patterns in Zimbabwe for moral and practical reasons.

**Keywords:** Consumer Patterns, Diet, Nutrition, Religion, Zimbabwe

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### Introduction

Food is a fundamental ingredient in sustaining humanity. Notably, the texture, nature, quantity and quality of diet are not universally agreed upon. Whereas some people might have a wide range of food stuffs to choose from, some have limited alternatives (Baker, 1999). The choice of food stuffs is influenced by several factors. These include environmental, socio-economic, educational, age, sex, state of health, culture and religion. In addition, food choice is governed by food availability, cost, personal preference, cultural upbringing and religious precincts. The study seeks to show that a religious-dictated diet is useful for practical and moral reasons and constitutes an identity of people in their existential situatedness.

The study posits that religion, in the context of its culturedness, plays a crucial role in determining the nature of diet for some

families. The effect of religion and culture on diet is significant to different individuals. Furthermore, the study argues that a religiously determined diet averts the impact of killer diseases such as kwashiorkor, diabetes and HIV and AIDS. The vitality of religion in family diet is like 'going an extra mile'. This implies the espousal of some methods, techniques, advice and ethics on diet inspired by religion. Therefore, the study is timely as a new paradigm of tackling family diet and health through religion that seeks to corroborate existing modes which are steeped in western forms of food processing. The study focuses on religions in Masvingo province, namely, Islam, the Judeo-Christian tradition (particularly the Seventh Day Adventist Church [SDAC] and Johane Marange Apostolic Church [JMAC]), Rastafari faith and African Traditional Religions.

## Methods

The study used the sampling method in which twelve (12) unstructured in-depth interviews were conducted among the selected participants. Data was also collected through eighty (80) questionnaires that were administered equitably to some adherents of Islam, Christianity, Rastafarianism and African Traditional Religions based in Masvingo province. Furthermore, the phenomenological method was employed placing particular emphasis on elements such as descriptive accuracy, epoche, empathy and eidetic intuition that serves to establish the meaning and essence of family diet in various religious traditions under study.

## Findings

### *Judeo-Christian diet*

Although Judaism and Christianity are two different religious traditions, it is important to note that they share some common dietary rules. Arguably, whereas Judaism is conservative, Christianity follows a more liberal dietary pattern. In the Zimbabwean context African Jews follow a strict diet to express their cherished Jewish identity and religious faith (Chitando, 2010). The study finds it convenient to use the 'Judeo-Christian' tag in order to cover both Judaism per se as well as some Christian denominations such as Johane Marange Apostolic Church with practices that are anchored in the Old Testament.

In general, Orthodox Jews are strict observers of their laws, ceremonies and traditions. They adhere to dietary laws called the Laws of Kashrut as an act of self-discipline. The laws govern both the types of food eaten and its preparation (Baker, 1999).

### *The laws of Kashrut*

- Meat must be sourced from animals that chew the cud, are cloven hoofed and have been killed ritually.
- Milk or milk products must not be eaten together at the same meal as meat. They must be prepared and stored separately.
- Fish must have fins and scales. Eels and shellfish are forbidden.

- The pig is regarded as unclean by Jews.
- No cooking or preparation of food should be done on the Sabbath. However, food which was prepared before the Sabbath can be eaten.
- Food and meal times are vital elements of the Jewish family life and tradition.
- Jews buy their meat from a kosher butcher. The Jewish method of slaughtering animals for meat is very quick and ensures maximum blood loss. Through a process called koshering, the carcass is salted and soaked in water to remove remaining blood from meat. Where kosher meat is unavailable, Jews settle for Halaal meat from Muslim butcheries.
- Fasting is also important for self-discipline. Regrettably, Esau lost his birthright to his brother Jacob because he failed to fast (Gen 25:29-34).

These Orthodox Jewish demands have influenced some Christian Churches including JMAC. This Church has been greatly influenced by its reading of the Old Testament on a number of issues including that of diet. For instance, the Church members do not eat pork (nguruve), eel (muramba) and other food types enumerated in the Old Testament. The study established that all JMAC members agreed that this rule was adhered to by the Church. It was further noted that the importance of Sabatha (the Sabbath) was strictly observed by JMAC members in Masvingo. For instance, like the Jews, the members are not supposed to cook food during the Sabbath.

Another example of a Christian Church that is informative for the study is the Seventh Day Adventist Church (SDAC). The SDAC stresses the teachings found in the New Testament side by side with its own church tradition. For instance, SDAC members practice fasting that is vital for health and spiritual reasons. Their diet is essentially vegetarian. They follow a lactovegetarian diet that includes plant food and dairy products. The study established that SDAC members avoid the consumption of meat for health and moral reasons. For instance, the

majority of SDAC respondents claimed that their diet that excludes meat saves them from diseases of the elite such as gout. The SDAC members also strictly observe the Sabbath for similar reasons as other traditions like JMAC and Judaism. Such a vital contribution from religion on diet is also notable in Islam.

### **Islam and diet**

Islam is both a religion and a way of life (Brown, 1986). As such, Islam is not limited to prayer at a particular time or place. In fact, the Quran governs every aspect of life, including the manner of dress, education, business, politics and diet. Islamic diet is dictated by religion in a number of ways and for a number of reasons. The general rulebook with regards to food is as follows:

**Rulebook of Islamic diet.** Muslims must eat Halaal food, that is, food only permitted according to the law of Allah. The Quran says, 'Allah has forbidden dead meat, blood, the flesh of swine, animals on which any other name has been involved, other than the name of Allah'.

Ulama (2003) outlines three principal Islamic regulations on diet as follows:

- Muslims must eat food moderately, that is, not to over eat. Gluttons are discouraged in society.
- Muslims must wash hands always before touching or taking in food. In addition, food must not be wasted.

Islam prohibits every kind of intoxicating food or beverages. This includes drugs, alcohol and hashish which lead to loss of self-control and are destructive to human life. The Quran says, 'Intoxicants are an abomination...Shun such abomination so that you may prosper'.

**Islamic eating habit.** There are also some foods eating habits that are followed by Muslims. These include the following:

- Washing of hands before eating.
- The name of Allah must be mentioned before eating.
- People must use the right hand when eating.
- Every Moslem must eat from the nearest portion of the food, that is, not

eating from all sides of the plate.

- Food is not eaten from the centre of the plate, rather from the side. The belief is that barakak (blessings) descend from heaven in the centre.

Islamic diet can also be appreciated through Eids (festivals) which occur four to five times a year. A typical festival is Ramadan which last for the whole month. This occurs in the ninth month of the Islamic Lunar calendar (Baker, 1999). Muslims are expected to fast during day light hours of Ramadan. Every Muslim above 12 years of age is expected to fast except for those who are ill, travelling, pregnant or breast-feeding. Those exempted during Ramadan are expected to make up for the fast time at a later date. During the duration of fasting a large breakfast is taken another large meal is taken after sun set.

The research established that Muslims in Masvingo province also fast the Ramadan. This particular festival is cited to show the extent to which Islam shapes human diet. This aspect is part of spiritual discipline necessary to shape a full meaningful life. For instance, fasting enhances people to come closer to the Creator. The issue of diet can also be a litmus test for religious tolerance in a pluralistic context such as Zimbabwe. This can be illustrated by the 'Halaal controversy' towards the close of the 20<sup>th</sup> century when some Christians boycotted Halaal products in Zimbabwe (Chitando, 2003). For Christians, this seemed to give Muslims a theological mileage over Christians. Thus, the question of diet must not be taken for granted worldwide.

### **African Traditional Religion and diet**

African Traditional Religion has a pervasive influence to the nature of diet in most families in Zimbabwe. Previous studies, for instance, Gelfand (1971), Owen (1982), Kaeser-Hancock and Gomez (1985), Campbell (1987) and Gomez (2000), observed that a number of families, especially those in rural communities, still regarded traditional food items in high esteem. In general, indigenous foods are determined by factors such as traditional religion, availability of natural resources and Indigenous Knowledge Systems (Rusinga &

Maposa, 2010). Despite the super technology which has revolutionized food production and food processing today, edible wild fruits, insects, cereals, legumes, nuts, oilseeds, vegetables, mushrooms and caterpillars continue to be valuable in the menu cards of traditional African diet.

**Taxonomy of traditional food item.** Broadly speaking, there are seven principal categories of traditional food items which are identified below as:

- Cereals – magwere (maize), rukweza (finger millet), mapfunde (sorghum), mhunga (pearl millet), mupunga (rice).
- Legumes, Nuts and Oilseeds – nyemba (cowpeas), nzungu (peanuts), bhinzi (beans), nyimo (round beans).
- Vegetables and Mushrooms – ngaka (spider herb), mutikiti (pumpkin leaf), munyemba (bean leaf), guku or tsine (black jack), gusha or derere (bush okra), mbowa (spinach), chowa (mushroom), matapa (cassava leaves), khowa (sweet potato leaves).
- Indigenous Fruits – maganuorpura (marula), hakwa (monkey orange), chakata (mobola plum), mutudwe (batoka plum), maongororo (donkey berry), hubvu (chocolate berry), saswa (red milkwood), nhengeni (sour palm), nyii (bird's eye plum).
- Animal Foods – mandere (Christmas beetles), madora or maximbi (mopane worms), iswa (flying ants), makwiza (locusts), majuru (termites), chimukuyu (biltong), makurwe (sand crickets), mukaka (milk).
- Tubers – mujumbuya (cassava), madhumbe (yams), madima (sweet potatoes).
- Beverages – doro (beer: seven days' brew), mukumbi, (marula fruit juice).

These indigenous foods enhance a balanced diet for most families, particularly in rural communities in Zimbabwe. Yet, even in this day of 'information society' and advanced technology, the above particularistic varieties of

indigenous diet items are still not well known and documented as part and parcel of African heritage. Some of these food varieties are good in providing alternative forms of therapy for certain ailments like hypertension, diabetes and cancer. Whereas currently there is no drug to treat HIV and AIDS, there is a general trend to believe that certain traditional foods have the potential to boost the immune system in the fight against the deadly disease. African indigenous foods are largely natural in nature and not the GMOs. Thus, this study is timeous to share such valuable information based on indigenous food diet in a fast changing globalised world.

### **Rastafarian Faith**

The Rastafarian faith follows the Afro-Caribbean dietary patterns. The movement itself is like an 'anti-structure' as determined by its history that stresses black pride and liberation from white oppression (Campbell, 1987; Chitando & Chitando, 2004). Rastafari dietary rules are a combination of the need to eliminate all western influences from their life. Rastafarians tend to follow the Old Testament food laws. Strict Rastas are vegetarian and yet others are total vegetarians (vegan). The less strict Rastas eat meat. However, the standard rule is that Rastas never eat pork. The foods that are prohibited include all canned, preserved and convenience foods and alcohol. Traditional foods and cooking methods are used whenever possible. For instance, Rastas prefer roasted or baked food prepared using firewood or charcoal. Rastas do not add salt when cooking. Foods that are acceptable are called Ital. This means that they are natural and clean (Harrison, 1993). Paraiso (1988) lists several types of natural foods which include cassava, mango, bananas, pawpaw, plantains, sweet potatoes, yams, unrefined cereals and organically grown vegetables. The vegetables that are eaten are usually cooked for a long time and the water that contains folic acid is drained and thrown away. On this basis, some say that the Rasta diet may have insufficient supplies of iron, Vitamin B<sub>12</sub> and folic acid. The exclusion of animal products from the Rasta diet restricts the intake of Vitamin B<sub>12</sub> and iron.



Studies have shown that children fed with vegan products indicate a sort of the unbalanced nature of Rastafari diet. Few Rastas use pulses as substitute for meat. Babies are not fed with commercially produced foods. They are breastfed for a long time and weaned on a high carbohydrate diet based on cereals and starchy vegetables. In most cases these are not supplemented with the Welfare Food Scheme vitamin drops and do not contain any vitamin-fortified baby foods. Because Rastas, like some Christian members of the Seventh Day Adventists Church, follow a vegetarian diet, it is necessary to outline the types of vegetarian diet as shown below.

#### ***Types of vegetarian diet***

- Partial vegetarian – the diet includes fish, excludes red meat but may eat poultry.
- Lactoovovegetarian – diet includes plant foods and dairy produce.
- Lactovegetarian – diet includes plant foods and dairy produce.
- Total vegetarian (vegan) – diet includes plant foods only.

The study established that some of the Rastas in Masvingo province do not strictly follow the vegetarian diet. Although some Rastas eat a wide range of white meat such as chicken and fish as well as a lot of fruit, the researchers found out that some Rastas eat red meat and drink alcohol. Such Rastas could be seen at public drinking places such as Bottle Stores and Beer Halls taking liquor and braaing. Therefore, the study noted the fluidity and contested nature of Rasta identities through the diet of some of the Rastafarians.

The study also established that a common element on the 'menu card' of Rasta diet is marijuana also known as harshish or ganja. Whilst ganja is smoked, it is mixed to flavour the vegetables and as tea leaves for spiritual and medicinal purposes (Hood, 1990). This explains why most Rastas champion the view that ganja must be legalised. Although strict adherents always favour natural foods and hence 'Go Organic', recent revelations outside Zimbabwe have established that marijuana can

now be grown as part of the Genetically Modified Organisms (GMOs). This has long-term effects on health through food stuffs that may be 'tainted' by modern technologies. Evidently, this study is current in contributing to deliberations on opportunities and strengths that provide lessons to families on diet, regionally and internationally.

#### **Conclusion and Recommendations**

The study has established that religion is an important player in the choice of family diet as well as consumer patterns. Different religions have different customs and beliefs that guide their modus operandi in the area of diet. Religious traditions in Zimbabwe are no exception to this pivotal role that influences people overtly and covertly. On the basis of diet, religion can oppress and liberate people. Religion becomes oppressive when it does not consider the nutritive value of foods necessary for physical growth of a person. For instance, children who are on vegan diet may suffer deficiency in vital nutrients. It is this deficiency that eventually makes them vulnerable to some killer diseases.

On the other hand, the strict adherence to some dietary patterns that ensures a balanced diet that makes people to go for variety. A change towards more vegetables, fruit, bread, breakfast cereals, nyevhe, nyemba (cowpeas), beans, potatoes and mushroom can 'liberate' people from heart attack, obesity and gout, for instance. It is cogent to argue that people are what they eat. This means that diet is important for the wholistic and holistic nature of an individual. Religion can also 'liberate' people through fasting. For some people, fasting humbles (Ezra, 8:21) and frees oneself from spiritual bondage (Isa.58:6). In religious perspective, fasting itself is not only about foregoing eating food but is a medicine its own right. Therefore, a religiously determined diet can become alternative routes in providing sustainable solutions for dietary challenges faced by modern families. In the Zimbabwean context, people have started to see the value of going back to their cultural roots because African indigenous foods, in their natural state, a treasured heritage. Through this conference,

the study shares this information about family dietary patterns in a changing world. In the context of the study, the following recommendations can be useful:

- Although no single dietary pattern must be dictated to all people in a pluralist society, a spirit of religious tolerance is vital in diet within the broad framework of Family and Consumer Sciences. Some of the dietary patterns may appear simple to an outsider yet fundamental to the insiders. For instance, Halaal products are steeped in Islamic faith but have been adopted by all and sundry in the changing world.
- The challenge posed by the HIV and AIDS epidemic, particularly on people in Sub Saharan Africa, is devastating. This challenge can be mitigated through ramifications to dietary patterns where it is feasible. Given the nutritional relevance of African indigenous diet, comprising a complex mixture of foods, it is imperative to improve their documentation and use to complement western scientific food.

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## Cohabitation in Botswana: A Paradox of the Authority of Parents in the Changing Social Landscape

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Many perspectives on cohabitation in Botswana consider cohabitation from the conflict and legal issues, individual choices based on social economic status, marriage, and parental control. Such perspectives have enhanced the thinking about cohabitation in terms of new and/or old practice; good and/or bad practice. This study takes a perspective of cohabitation as an expression of negotiations between parents and cohabitants, with both categories of actors exercising their powers and agencies in such negotiations. This paper therefore explores how cohabitation is a function of negotiations between parents and the cohabitants. It further explores how, despite the apparent views that cohabitation is a modern phenomenon that expresses desire for freedom from the authority of parents by the young generation; the loss of authority by parents over their children, on the contrary, parents are still much in control of the lives of their children. The study was conducted in Botswana among cohabitants and other relevant stakeholders in the Kweneng District in Molepolole. Nine focus group discussions, indepth interviews and participant observations were carried out among 36 couples, 67 parents, two ward-headman and seven church leaders. Findings revealed that the commercialization of marriage has reduced traditionally accepted marriages into mere cohabitation; formation of cohabiting unions does not necessarily exclude parents. This study therefore recommends that *patlo* must supersede *bogadi* (lobola /bride price) in defining marriage.

**Keywords:** Cohabitation, Power, Agency, Negotiation

Note: *Patlo* – A Setswana practice at marriage whereby the parents/representatives of the prospective husband visit the parents of the prospective wife to officially ask for her hand in marriage and seek the consent of her parents.

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### Introduction

Most research and writing on non-marital relationships in Botswana have either focused on 'conflict' unions as in the study of court cases (Comaroff & Roberts, 1977; Schapera, 1939; Molokomme, 1991) and legal circles (Dow & Kidd, 1994; Molokomme, 1990, 1991); they have all been treated as homogenous (Griffiths, 1997; Mokomane, 2004). It is for this matter that Molokomme (in Mokomane 2004:20) calls for the examination of the meaning or role of cohabitation in Botswana.

As there is little written on cohabitation in Botswana, a lot of literature used has been written using Western 'eyes' (see for example, Manting, 1994). This literature however, suggests that cohabitation is a choice for the

socio-economic independent young people (Manting, 1994). Hence in the West, cohabitations reflect modernity (DeMaris & MacDonald, 1987): individuals who cohabit are unconventional or non traditional. They see cohabitation as an expression of "*individualism as opposed to familism...a rejection of familial control over individual behaviour in favour of greater individual autonomy* (DeMaris & MacDonald, 1987).

However, much as it has been pointed out that cohabitation in Botswana strongly suggest that people cohabit mainly for economic reasons, cohabitation is not an end in itself but a prelude to marriage (Mokomane, 2005) because none of the cohabitants have given up

on marriage. While in the West, affluence contributes to the decision to cohabit (Manting, 1994; DeMaris & MacDonald 1987), studies in Botswana point to the fact that people cohabit due to lack of resources (Mokomane, 2005). Thus, it is not a threat, but a prelude to marriage. One other thing I need to say is that, some scholars have related the rise of non-marital relationships in Botswana within the loss of the authority of parents over the lives and decision making of their adult children (Brown 1983, Schapera 1939). To the contrary: actually, parents are still very central in the practice and they play a big role in cohabitation.

With all this literature on the background of cohabitation in Botswana, however, there is something that lacks attention: the issues regarding the power dynamics between the key actors in cohabitation (parents of the cohabitants and the cohabitants themselves) and the agency dynamics. It is for this matter that this study analyses cohabitation in Botswana with particular attention to the power and agency dynamics of the key actors in cohabitation. Let me now turn to the issue of cohabitation in Botswana as the data showed.

### **Cohabitation in Molepolole**

Molepolole is one of the major villages in Botswana, has the largest population, and its proximity to the city makes it ideal for this research in that it has all the modernity influences and at the same times allows the opportunity to have all the participants (cohabitants, their parents and relatives) in the same locality, therefore making it convenient both in terms of distances to travel and financial costs. In this section, I present the three types of cohabitation in Botswana. I established these types after critically looking at the data I collected in Molepolole. I give the general details of each type, but concentrate on one type to show how the power and agency dynamics lead to negotiations and practices that determine any typology. I also present a case that demonstrates interplay between parents and the married in the marriage unions.

Once a couple realises that there is pregnancy, the woman's parents need to be informed, who then officially go the man's parents to let them know of the pregnancy (see Molokomme, 1991). If the man "knows" and "accepts" the pregnancy, he is asked *maikaelelo a gago ke eng*, i.e., his intentions about the woman with regard to marriage. If the intentions have to do with marriage, it is at this point that negotiations for marriage begin. Pregnancy is central in the determination of marriage because when a couple are together it is always a private affair, but the moment pregnancy comes in, the private turns to public affair. Let me now begin with the first typology.

### ***Go bulela ntlu (to open the door for)***

In this form of cohabitation, the man leaves his family and joins the family of the woman. This refers to the granting of visitation rights to the man who intends to marry, but not ready at that particular moment. Normally, a child has been born, and the father to the child agrees to take responsibility of the child; he intends to marry but not ready financially at that point in time. His parents then solicit cooperation of the female partner that their son be given visitation rights to the partner and child. This privilege to visit is in the expectation that he will marry the mother of his child, but at the same time financially supporting the baby and the mother. This was the least popular type of cohabitation.

### ***Go inyadisa (individual cohabitation)***

This kind of cohabitation is based on individual choice. Parents are not involved; sometimes the parents may be openly against the couple being together. Thus, the couple on their own, without the consent of the parents and without the payment of *bogadi* decide to stay together. This type of arrangement is shunned off. This is normally the type of non-marital union that the word "cohabitation" seems to refer to; it denotes negativity and lack of discipline, *boitaolo, ga se Setswana, i.e.*, lack of discipline or something not of Setswana culture.

**Go adima mosadi (Wife borrowing)**

As I mentioned at the beginning of this section, in order to see the power and agency dynamics in this issue of cohabitation, I shall concentrate on one type of cohabitation, *go adima mosadi*. This seems to be the most commonly practiced typology. This typology of co-habitation refers to a situation where the woman leaves her home to join the man. The premise of this kind of arrangement is that there must be verbal intention to marry. This intention must be verbalised by the representative of the man's family to the woman's family. If the man wants to marry, but he is not financially ready to do so, he makes the point clear to his parents who need to go on his behalf and ask the parents of the woman to allow her to join him while he still gets ready for

marriage. The two sets of parents meet and agree on the matter. This form of cohabitation is acceptable, respected and has better social status than the others.

The cases that eventually lead to wife borrowing are not similar, even though different patterns of wife borrowing can be established through the observation of the apparent rationales for a woman shifting to the man's home. I talk about apparent rationale because this is what the society is made to understand as reasons for a woman to shift to join the man. I shall contrast this "apparency" with actual rationales when I shall discuss the issue of agency. The apparent rationales, the cases in the rationale, and a total number of cases within a given rationale are presented in Table 1.

Table 1  
*Rationales and Cases for Cohabitation*

Apparent rationale (Why does the woman shift to the man's home?)	Case	No. of cases observed
To provide labour	A woman shifts to the home of the partner to help with hoeing and ploughing.	4
	Woman shifts to assist the man in clearing the plot he has been allocated.	7
	Woman shifting to take care of a home of the partner when the partner's mother is away.	1
Failure of parents to handle Negotiations	A woman shifts to the home of the partner because her father, who is a chief decision-maker, is away to negotiate for marriage and no one wishes to lead the marriage negotiations.	1
Grand-parenting	Parents of the man want to spend time with their grandchild.	3
Total number of observed cases		16

From Table 1, it is implied, therefore, that even the practice of woman borrowing is not homogeneous, but heterogeneous, depending on the underlying apparent rationales.

**Interplay between parents and the married**

In an in-depth interview trying to explore the

role of the parents in marriage, I came across an interesting interplay between a parent and the daughters-in-law. Names used here are pseudo names, to protect the identities of the participants.

I was with my sister-in-law Thato. I and Thato are married to brothers, her (Maemo) uncles. In 1980s our husbands were working in South Africa. After we got married, they left us in their parents' home under the custody of their father. When they sent money to us they did so through our father in law. When we would ask for money from him, he would then want to know how much we needed and the reasons. ... I once tried to make my husband understand that he needs to give me my own money, but he couldn't listen. So, we got fed up with the arrangement and wanted to fix both the father-in-law and his sons. One day, Thato, the youngest and coward went to the father-in-law and told him that she saw some good underwear of good quality at a shop in Molepolole at a reduced price; she wanted to buy them before they were up again. The old man was so embarrassed that the daughter-in-law was asking for money to buy underwear; he did not ask a lot of questions and gave her P50.00. The following day was my turn: I went, very bold and determined to sort him once and for all! I told him that *'ga ke tthaloganye gore ke dirafalelwa ke eng, ke bone setshwalo ga bedi mo kgwedding, ke kopa madi mo ke ye go reka di phete'* (I really do not understand what is happening to me, I got my periods twice in the same month; can I please have some money to buy pads). And the father-in-law responded. 'Your husbands must send you your monies so that you stop bothering me, you are insulting me; yesterday one wanted me to buy her a small trouser (*marokgwenyana*) and today you come and tell me stories' (o nthaya dipuo)

This is a typical negotiation pattern between parents and their children in marriage. What is interesting is the key actor, who is supposedly very powerful, loses it to the supposedly less powerful daughters-in-law. How this pattern can be explained will be a subject of the next section.

Table 1 showed the issue of heterogeneity due to rationales; I have now shown interplay between the parents and the married through a parent and his daughters-in-law whereby the powerful parent lost it out. These data lead to the following questions: how and why do these rationales happen? How and why do the different wife borrowing practices happen? How can the interplay between the parent and the daughters-in-law where the powerful parent loses it out be explained? In order to respond to these questions, I use the two analytical concepts of "power" and "agency". This is discussion for the next section.

### ***Power, agency and cohabitation***

The use of the analytical concepts of "power" and "agency" is critical in understanding the cohabitation phenomenon in terms of reasons and processes behind rationales and practices. I begin the section with the presentation of what power and agency are; I, then, situate power and agency within cohabitation in Molepolole.

### ***Understanding power and agency***

Power is one of the key issues in the regulation of relationships in any society. It has to do with ability to do something. Rowlands (1997; 1998) and VeneKlasen & Miller (2002) point out the different facets of power: "Power over", a negative and controlling power wielded in a win-lose relationship; "power with", a collective strength based on mutual support, solidarity and collaboration; "power to", a generative or productive power; "power within", the spiritual strength and uniqueness a person has for his/her self-worth, self-knowledge. In analyzing issues of access to resources in the livelihoods promotion processes, Kamanzi (2007) adds another type of power, the "power for", which is a hidden energy to respond diligently through sneaking personal interests into the projects dominated by the powerful. (For more details about such details, see Powercube (2010) on levels and spaces and see Lukes (2005), Gaventa (2006), VeneKlase and Miller (2002) on forms of power.)

In order to understand the concept of agency, let me sketch a little bit what is normally taken as its counterpart, the structure. and that form only has effects on people, in so far as structure is produced and reproduced in what people do". Thus, societal processes are a result of sets of institutional mechanisms (structures) that people draw upon as they produce and reproduce society in their activities. Agency, on the other hand, is about the capacity of individual humans to act independently and to make their own choices. Agency, therefore, implies that actors make use of their cultures and worldviews, interests, capacity to give meanings, values, beliefs, and purposes to "integrate experiences into their livelihood strategies and to look for outlets for aspirations, ambitions and solutions to problems" (de Haan, n.d:3). A temporal dimension is important in characterizing agency, as Emirbayer and Mische (1998) put it in defining human agency as a temporary embedded process of social engagement, informed by the past (in its habitual aspect), but also oriented toward the future (as capacity to imagine alternative possibilities) and toward the present (as a capacity to contextualise past habits and future projects within the contingencies of the moment). Thus, power is the ability to do or influence processes and agency is the capacity that realizes itself in activities or strategies.

### **Power and cohabitation in Molepolole**

In the general institution of marriage in Molepolole and its people, the parents hold the "power to" in the decision-making processes about the different processes that should lead to marriage and within marriage. In actual fact they are supposed to be the custodians of the traditional marriage procedures, and thus their role in ensuring cohabitation as a process aimed at marriage. In fact, in the different cases that show heterogeneous wife borrowing practices, parents are still key determinants. That is why when the man declares intention to marry the woman, then the parents of both partners negotiate and allow the wife borrowing practice. And still, even in the marriage life

In order to put across the idea about structure and its role in societies, Giddens and Pierson (1998) argue that "society only has form, itself, parents are still powerful in that they are given every responsibility to handle and distribute financial resources to the people in marriage, as was with the case of the parent and the daughters-in-law.

The cohabitants, however, are not powerless as such in front of the powerful parents. They are able to negotiate their way and have what they want: they want to be in partnership with person they like in order to have their own lives, but they have the institution of marriage that sets for them the rules of the game, among which is the *bogadi*, for example. With their "power for", they are able to negotiate their way and begin cohabiting. That is why they are able to take advantage of the power vacuums that happen with their parents, as was the case with "case 4" (see table above) when the father of the man was absent and the relatives never wanted to carry on negotiations and make decision about the fate of the couple. It is with this "power for" that the negotiations are done using the apparent rationales of borrowing a wife for labour and grand-parenting. Even the people in marriage are not that passive: they can strategically plan and execute their plans, as was with the case of the daughter-in-law.

The negotiations that are done by the parents of the cohabitants, with the cohabitants playing the "backbenchers' role", are an expression of the "power with". This enhances the chances of the decisions taken to be implementable. It is avoidance of the "power over" which would likely destroy the relationships of the parents of the cohabitants and the cohabitants themselves. With the "power with", another power is generated, the "power within". This is the power that is able to compromise with the dictates of the structure of marriage, which would have otherwise forced the cohabitants to get married according to the stipulated procedures or leave marriage. Similarly, when the daughters-in-law came asking for money, the father-in-law would have gone on insisting to know the reasons as to why they needed the money. However, with the



presentation of more personalised issues such as pants and pads, money is not only given goes directly to the daughters-in-law. A question is, then: how can negotiations and compromises be explained, if the structure of marriage is there and clear? This is a discussion for the next section with the concept of agency.

### **Agency and cohabitation in Molepolole**

In order to discuss this issue of agency and cohabitation in Molepolole, I begin with the main reason as to why wife-borrowing is allowed: the intention to marry, but economic circumstances not permitting. Already, this is an expression of exercise of agency: giving exceptions to the rules of marriage and doing what would otherwise be undoable. In principle, if the parents followed the rules of marriage, they would not allow cohabitation. The same goes with the apparent rationales for the different categories in the wife borrowing typology: apparent rationales, such as borrowing a wife for labour and grand-parenting reasons are simply and actually pretexts for partners to live together, going around the marriage institutionalised sanctions. So, the allowing of exceptions is an exercise of agency by both actors.

But could that be what the parents want for their children? They would like them to have a good life, establish their families, up bring their children, etc. So, anything that does not promote this kind of good life is rejected and what promotes it is encouraged. It is for this reason that parents are able to compromise with wife borrowing. Most likely, what is important for them would not be "marriage" as such, but a "good life" of their children in their partnering life!

For the cohabitants, as well, the main aim is that they live together. That is why when a woman goes for hoeing/weeding and she finishes, she does not go back to her parents (cases 1, 2, 3). That is also why when she goes to have the grandparents up bring the child, even when the child is grown up, she does not return to her parents (case 5); or when she goes to help her man when the mother is not

unquestioningly, but also with a condition that instead of passing through him, the money around, when the mother comes back, she still does not go back to her parents.

So, at the end of the day, what becomes important with cohabitation and agency is exactly what the actual rationales are for both parents and cohabitants: parents would like good life for their children and that is why they end up compromising and making exceptions for marriage procedures for their children; on the other hand, children want to stay together with their beloved partners and that is why with apparent rationales women shift to their men's residences and when the apparent rationales expire, they do not come back home to wait for "real marriages".

However, such negotiations and compromises are not done without fear for the backfiring of the structural settings. Women see it this way, for instance;

Yeah, I know we can just get a friend and go to register our marriage *re ya go pega be re folosa* but if you do that and tomorrow you experience problems, *batsadi ba le akgela matsogo*, parents will just watch and see and will not intervene. We are afraid that when we just get married when things go wrong and we have conflicts and start fighting and then need parents to reconcile us, if we did not involve them at the beginning we cannot involve them during problems. *Dilo tse dia golega KgaitSIDAKE*, these things are complicated my sister.

And another woman said:

Oh, that will not be marriage, that will just be marriage on paper because *bogadi*, *Ga o sa batliwa ebile o sa ntshetswa magadi o ngwana ga o kake wa tsenelela merero, lenyalo la gago le tla bo le leloliya* 'without patlo and the payment of *bogadi* one will always be considered a child and will never take part in adult meetings or consultations, your marriage will be without value', especially during marriage where the unmarried have



no room in the negotiations. So, it is better I wait while cohabiting until we have money for *bogadi*. But I am very grateful for having waited because finally I am being rewarded. I am finally getting married.

For men, the feelings about cohabitation are centred on not being recognised as men, as can be seen from this quote:

Really if you do not give *bogadi* you cannot say you are married. 'Mosadi ga se wa gago, bana gase ba gago ga o sa ba ntsetsa magadi ga se ba gago' 'the woman is not your wife and children are not yours'. That marriage will just be just nothing; so, it is better to cohabit until you can marry because if you wait (while cohabiting) then you know you are still owing but if you officiate the marriage without *bogadi* you will relax but people wont keep quiet, especially the wife and her family. They will always remind you that you are not married. *Go lo moo go go diga serite* (This thing questions your integrity).

There could be so many ways of looking at such tensions among the people who have negotiated as far as cohabitation and their fear for not accomplishing the 'ideal' step of marriage. One way is that they have been socialised in seeing marriage as the ideal life for partners.

### Conclusion

Cohabitation in Botswana was studied in terms of conflict and legal issues, individual choices based on socio-economic status, marriage and role of parents. Pointing out the lack of power and agency-based analytical perspectives in studying cohabitation, the paper showed how cohabitation was a function of negotiations between parents and cohabitants, both exercising their power and agencies. Such a study pushes us to think a little more about relationships. While it is

important to recognise that relationships take different forms, there is no way we can close our eyes to the realities of the economic challenges in the light of the expensive contemporary marriages. I think what is important here, as social transformations have always occurred, cohabitation signifies an evolution of partner relationships, a little distant from the normal way of considering marriage as after having paid bride wealth. If, therefore, there are other kinds of partner relationships which are in the make, what could their form be? What societal structural mechanisms are there to anchor them? These are questions which I think need more and more pondering than giving direct and spontaneous responses. And finally I hope such studies as this one will aid the formulation of policies that are more sensitive to cohabitants and their children.

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## University Students' Perceptions of Clothing Labels as Consumers of Textiles

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*Labels on merchandise assist consumers in making value judgments at the point of purchase. Labels also provide information about product identification and care procedures. The purpose of the study therefore, was to investigate the perceptions of student consumers regarding clothing labels. A descriptive type survey using a questionnaire for data collection was employed. Reliability of the questionnaire was established through pre-testing with a Cronbach's alpha score of .66. Data was collected from University of Swaziland (UNISWA) students. For data analysis SPSS (Version 17.0) was used. From results of the study respondents were aware of clothing labels, and agreed they understood clothing labels provided information about an item, but still did not read the provided information thus ignored labels when making purchases. The majority of respondents indicated they mostly considered other clothing characteristics than clothing labels during their purchases. However, results showed students had a positive attitude towards some information provided on clothing labels. Regarding brands, most respondents indicated they did not always search for brands, but sometimes did because they associated certain brands with quality; others considered brand names just for brand loyalty, while some argued that brands did not mean anything to them, and they were not interested in brands. Recommendations are that measures be taken to enforce that all clothing sold in Swaziland shops and by vendors should have labels.*

**Keywords:** Clothing labels, Consumer purchases, Textiles and clothing, University students

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### Introduction

Textiles are made from animal, vegetable or man-made fibres. The properties or characteristics of these fibres always influence the textile's reaction to treatment received (Finch & Putnam, 1985). Avoiding long exposure of textiles to harmful influences prolongs their life, and the care of clothes is not to avoid their use but rather to avoid their ill-use longer than is necessary; this can be achieved through careful reading and following information on clothing labels (Hall, 1975).

A label is a piece of paper or cloth etc. that is attached to a textile or clothing item (Hornby, 2005). It gives information about an item and is thus a means to learn about the garment and assist the consumer in making informed decisions about selecting and caring for the item. Labels should, therefore, be taken seriously by every textile consumer. Clothing labels provide important information such as

fibre content (generic name and percentage), care information, country-of-origin, and brand name, price, size, style, the manufacturer's name, specialty material information, claims regarding product performance, etc. (Chambers & Moulton, 1961). The manufacturer, retailer, and consumer may find this information useful.

The United States of America's (USA) Permanent Care Labeling Rule of 1972 revised in 1984 states that "all textile clothing sold in the USA must contain a permanently affixed care label giving complete information on regular care for the ordinary use of clothing items or fabric purchased to make clothing" (Brown & Rice, 2001, p.27). In the USA almost all garments, bedding and other textile products sold commercially are required by the labeling laws to carry a tag, or label, known as "apparel labels", "care labels" and "tags", indicating the

type of material the textile product is made from, where it was manufactured, the blend of materials the product is made from and its proper washing instructions (Saunders, 2010; Kadolph, 2007). Clothing labels include care labels which provide information on the recommended cleaning or washing instructions for the textile products; thus, care requirements play a key role in the purchasing decision process. Information on care labels must address cleaning methods, use of special cleaning aids such as bleach; pressing or ironing, drying, dry cleaning and any other necessary treatments' (Butler, 1975; Kadolph, 2007). It is also important that care label placement be where it can be easily seen so the consumer can read it before purchase.

### **Types of clothing labels**

Ready-to-wear apparel usually contains one or more different types of labels; and, most apparel contains several types of labels including brand, size, care, and fibre identification. The different label types contribute to the cost of the garment, thus makers of high-price apparel and those of high-volume casual clothing use different types of labels (Brown & Rice, 2001). The following is a list of commonly used labels:

*Printed labels* are available as pre-printed labels from label suppliers. The non-woven, printed labels (called paper labels in the industry) are used on casual and low-price merchandise but often fades fairly quickly, making the important information on the label illegible.

*Embroidered labels* give labels more texture and colour, but the threads backing embroidered labels are susceptible to snagging and unraveling.

*Woven labels* are made from different colours of thread which weave words, images and colour into the labels. These are generally more expensive than printed labels (Beaudoin & Robitaille, 2009).

*Hang tags* are temporary paper labels, printed on cardboard, stock paper, cloth and leather, and are part of the apparel at point-of-sale, making brand name, size and price easily

accessible to the consumer on a removable tag (Kadolph, 2007).

### **Requirements for care labels**

Care instructions on labels must apply to all parts of the garment i.e. the outer shell, lining, buttons, interfacing, any fusing material, sewing thread, and all trimmings (Brown and Rice, 2001). *Sewn-in labels* must be compatible with the other materials used in the product and the care as stated on the care label (Kadolph, 2007). Care labels must be permanently affixed/ attached to the garment and the wording remain legible throughout the useful life of the garment (Brown and Rice, 2001; Kadolph, 2007).

### **Purpose of study**

The study sought to investigate and document university students' perceptions of clothing labels so as to promote the selection of good quality clothing and textiles; and, also make readers aware of other factors to be considered whenever making clothing purchases.

### **Objectives of the study**

The objectives of the study were to:

1. determine students' level of knowledge on clothing labels ;
2. describe students' attitudes towards clothing labels;
3. determine the importance of clothing labels from students' perceptions;
4. identify factors influencing clothing selection by students as textile consumers; and,
5. determine students' preferences on clothing labels.

### **Limitations of the study**

Respondents were from the University of Swaziland (UNISWA), Faculty of Agriculture, who were within the researchers' reach, and the results are therefore confined and can not be generalised to other university campuses. Results of the study were mainly based on a majority sample of female respondents and can not be generalised to male students, or female students of the other campuses.

## Methods

The study used a descriptive survey research design and a questionnaire was used to collect data. The target population was students from the Faculty of Agriculture in UNISWA, and therefore provided an easily accessible population for the researchers. One hundred participants were randomly selected from all nine programmes, which were: Agricultural Education and Extension (5); Agricultural Economics and Management (5); Agricultural Education (13); Agronomy (4); Consumer Science Education (41); Consumer Science (4); Horticulture (4); Food Science, Nutrition and technology (17) and Textiles, Apparel Design and Management (7) through probability sampling.

## Instrument and Procedures

An open-ended and close-ended questionnaire was developed for gathering data using a 6-point Likert-scale, where responses were assigned values of 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=slightly agree, 5=agree and 6=strongly agree. [Section A – was on respondents' perceived knowledge of clothing labels; Section B – on respondents' attitudes on clothing labels; and, Section C – on respondents' perceptions on importance of clothing labels]. Section D – required respondents to tick the most appropriate answer from a given list of factors influencing clothing selection; and, Section E – was on respondents' preferences on clothing labels and requested participants to indicate how often they considered the listed items on a 4-point Likert scale, where responses were assigned values of 1=everytime, 2=sometimes, 3=rarely and 4=never. Section F consisted of demographic characteristics of respondents on gender, age, year and programme of study. For construct and face validity of the instrument the Department of Consumer Sciences four lecturers were engaged in validation of the questionnaire, the instrument was pre-tested at the Faculty of Health Sciences in Mbabane Campus of the UNISWA to establish its reliability.

## Data collection and analysis

A total of 100 questionnaires were distributed for data collection but only 91 were returned and used for subsequent data analysis using SPSS Version 17.0. Frequencies, percentage distributions, means and standard deviations were used to analyse data. The information that respondents wanted on textiles and clothing labels was ranked in order of preference.

## Findings

### Respondents' demographics

The target population consisted of 30 (33%) males and 61(67%) females, the latter being the majority respondents of the study, probably because most participants were from the Department of Consumer Sciences where males are very few. The majority of the participants 66 (72.5%) were between ages 16-25, and in their fourth and final year of training while 24 (26.4%) were 26-31 year old and also in their fourth and final year, and the least number of participants, 6 (6.6%) were in year one.

From the results it can be observed that most participants in the study were in Consumer Science Education (CoSE) [45.1%]), followed by Food Science Nutrition and Technology (FSNT), 18.7%), Agricultural Education (Agric Ed) (14.3%), Textile Apparel Design and Management (TADM) was 7 (7.7%) and the remaining 14.2% was spread across the other five programmes.

### Respondents' perceived knowledge level of clothing labels

Results showed that most respondents were aware of clothing labels. The statement: "I know about the existence of clothing labels" had the highest mean rating of 5.43, and a SD of 0.83 followed by "I understand that clothing labels provide information about a particular item" (M=5.24, SD=0.90). The respondents also "considered other clothing characteristics more than clothing labels e.g. price/style," (M=5.19, SD=1.12) when making purchases (Table 1).



Table 1  
*Perceived Knowledge Level of Student Consumers on Clothing Labels (n = 91)*

Statement	Mean	Std. D
I know about the existence of clothing labels	5.43	0.83
I understand that clothing labels provide information about a particular item	5.24	0.90
I consider other clothing characteristics more than clothing labels e.g. price or style	5.19	1.12
I understand the benefits of using clothing labels	4.85	1.24
I find it important to read and understand clothing labels	4.81	1.23
I know that clothes have to be labelled before being made available in shops	4.74	1.43
I am aware that some items are falsely labelled in some shops	4.44	1.69
I know that some clothing item in some shops are not labelled	4.43	1.56
I read the list of information provided on the clothing before I buy	3.59	1.55
I buy clothing items which are fully labelled	3.36	1.43
I know that unlabelled clothing item have not been regulated in Swaziland	2.66	1.49
Domain Average	4.43	1.30

#### **Respondents' attitudes on clothing labels**

The item "consumers should be made aware of the availability of unlabelled clothing" had the highest mean rating (M=4.98, SD= 1.15). Respondents agreed with the item "clothing employees should explain information on clothing labels" (M=4.75, SD=1.28). The lowest mean rating (M=2.40, SD=1.44) of the item "I will keep on buying clothing without inquiring about their labels" is an indication that only a few of the respondents did not care to consider clothing labels when making purchases.

#### **Respondents' perceptions on importance of clothing labels**

Findings showed that respondents perceived clothing labels to be important information as indicated by the high mean ratings in the

following items; "clothing labels are used to provide information about care procedures" (M=5.43, SD= 0.75), and "clothing labels provide information about product identification" (M=5.22, SD=0.81). Yet on the other hand, respondents indicated that "seeking label information is less important for inexpensive items than for expensive ones" with the lowest mean rating (M=2.65, SD=1.64).

For the preferred information on clothing labels Table 2 shows 'size' (M=1.02; SD=0.15) was considered the most important information followed by 'price' (M=1.25; SD=0.46), while 'care instructions' (M =1.97; SD =0.90) ranked fourth and the least considered was 'country of origin' (M=3.20; SD=0.89).



Table 2  
*Preferred Information on Clothing Labels*

Label information	Mean	SD
Size	1.02	0.15
Price	1.25	0.46
Brand name	1.89	0.90
Care instructions	1.97	0.90
Fibre content	1.97	0.90
Country of origin	3.20	0.89

The raw data on respondents' preferred ranking of information on clothing labels in Table 3 showed the following results 'price' was ranked first 38 (41.8%); 'size' came second 31

(34.8%); 'care instructions' was third 25 (29.1%); 'brand name' had 25 (27.5%); 'fibre content' 32 (35.2%); and, lastly 'country of origin' which ranked sixth with 76 (83.5%).

Table 3  
*Raw Data of Preferred Ranking of Information on Clothing Labels by Respondents*

Label information	Ranking Scale						Total
	1	2	3	4	5	6	
Price	38	25	16	5	0	3	87
Size	24	31	23	8	3	0	89
Care instructions	5	12	19	25	19	6	86
Brand name	13	11	16	25	27	3	95
Fibre content	0	9	17	24	32	2	94
Country of origin	1	0	0	4	10	76	91

From calculations of raw data made to obtain sum of ratios in order to get overall ranking, the results are shown on Table 3. The ratio of each rank in Table 2 divided by the total in the row gave each column an equal value (for example,

Price  $38/87 = 0.437$ ). Those values were then calculated to obtain the sum of ratio ranking and overall ranking values as shown on Table 4. For example: Price  $[0.437*1] + [0.287*2] + [0.184*3] + [0.057*4] + [0.000*5] + [0.034*6] = 1.995$

Table 4  
*Overall Ranking of Information on Labels by Respondents in Order of Importance*

Information	Sum of ratio ranking	Overall ranking
Price	1.995	1
Size	2.249	2
Brand name	3.537	3
Care Instructions	3.663	4
Fibre content	3.687	5
Country of origin	5.747	6

Note: *The larger the value the less important the information required on the label*

With regards to frequency and percentage distribution of whether or not respondents looked for information on care activities; results showed that 73 respondents (80.2%) looked for information on washing and 23 (25.3%) for ironing information as the most looked for information. Only 6 respondents (6.6%) considered all the care information before making their purchases.

### Discussion

The need for textile consumers' understanding and consideration of clothing purchases is imperative for success in making informed decisions about selecting and caring for clothing. Findings indicated that 'Price' was considered as the most important information that should appear on a clothing label. This is supported by Miller's study (1984) who stated that the governing factor in selection of either fabric or garment is 'price'. This is also in line with the participants' responses wherein they indicated that they considered 'price' before thinking of buying clothes. This is probably because the majority of respondents indicated that price determines quality; the higher the price, the better the quality of the clothing item. 'Size' was ranked second to price, while 'Care instructions' came fourth as respondents did not consider it during purchase decisions, but only when in possession of the merchandise and when they needed to have it cleaned. 'Fibre content' which was ranked fifth indicated that respondents did not understand its importance with regards to identifying fabric quality as well as care procedures. 'Country of origin' was ranked last as respondents did not care where the clothing was made as long as they liked it.

The majority of the respondents mostly considered other clothing characteristics such as "overall quality", "fashionable clothing", and the "different ways the clothing item can be used", than clothing labels when purchasing clothes. Although student consumers were aware and knowledgeable about clothing labels, they still need to consider them and extend their knowledge in order to understand the benefits of using clothing labels; and,

ultimately develop positive attitudes towards clothing labels; and, thus find it important to actually read, understand and apply what is on the label.

### Conclusion

Most respondents were not familiar with clothing labels, as only 7.7% were in TADM programme where they are taught about care instructions on clothing labels. Consumer education with regards to the importance of product information on merchandise/products is helpful in empowering individuals to look for labels whenever making purchases.

### Recommendations of the study

Based on the results of this study, it can be recommended that:

1. Measures are taken to enforce that all clothing sold in Swaziland shops and by vendors should have labels.
2. UNISWA should, in various courses where relevant, inform students about the importance of seeking labels whenever making purchases and reading information on labels of any merchandise/product purchased in order to be aware and knowledgeable of the use and care of the respective products.
3. Future studies that investigate the perspectives of older, non-university consumer's attitudes and behaviours towards use of clothing labels in purchasing clothes are suggested.

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## Determinants of Brand Loyalty for Consumer Products

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The degree of consumer loyalty to different brands of products varies considerably. Some are mere users or constant switchers, others are soft core loyal and some are hard core loyal. Hence, this study determined the influence of brand loyalty on the demand for a product. Specifically, it determined the level of brand loyalty for toilet soap among consumers and identified the various factors influencing brand loyalty. This study was carried out in Obafemi Awolowo University, Ile-Ife, Nigeria. A survey questionnaire was used to obtain information from randomly sampled three hundred and eighty eight respondents consisting of both staff and students. Data were described with appropriate tools and inferences were made using regression analysis. The findings revealed that, in case of price increase, 54.1% of the respondents would buy alternative soap and 54.6% would reduce the quantity purchased. Majority (74.2%) would change the product when there is scarcity while 64.4% would buy alternative brand when there is reduction in the quality of their favourite soap. The factors influencing brand loyalty of the consumers are satisfaction derived (86.1%), personal experience (80.4%), availability (80.9%), price (61.9%) and advertisement (56.8%). Good scent (69.1%) and antiseptic nature (40.2%) increased respondents' loyalty. There was a significant relationship between quantity of soap consumed monthly ( $b = 0.165$ ,  $T = 0.657$ ,  $p \leq 0.05$ ), amount spent ( $b = - 0.004$ ,  $T = -1.520$ ,  $p \leq 0.05$ ) and brand loyalty. Therefore, soap producers should maintain and improve quality of their products at reduced costs to sustain and increase customers' loyalty.

**Keywords:** Consumers, Soap, Demand, Brand loyalty, Consumer product

### Introduction

Consumers' needs and aspirations as well as their buying behaviour varied considerably. As individual consumers purchase and use different products and services, they are exposed/faced with a situation of whether to continually procure and use a particular product or service, or to try out new ones/alternatives. Consumers' decision is dependent upon their experience about the consumed product. If the product meets the immediate and latent needs of the consumers, this may bring about some levels of loyalty in the consumer towards the particular brand of the product. Pride and Ferrel (2002) stressed that brand loyalty is a customer's favorable attitude toward a specific brand and that consistent purchase of this brand when the need for a product in this product category arises depends on loyalty

strength. Consumer's preference to repurchase is the result of the desired perception and satisfactory purchase decision about the specific brand which offers right product features, image, quality, and price (Raghuvanshi, 2010). Jones, David and Sharon (2002) submitted that customers may repurchase a brand due to situational constraints such as lack of viable alternatives, or out of convenience. Dick and Kunal (1994) referred to such loyalty as "spurious loyalty". According to them, true brand loyalty exists when customers have a relatively high attitude toward the brand which is then exhibited through repurchase behaviour. Lau, Chang, Moon, and Liu (2006) reported that much of the previous research has focused on the distinction between spurious and true loyalty;

relationship among service quality, customer satisfaction and store loyalty; purchase patterns or characteristics of consumers based on buying behavior, self-image, and demographics, and multi-brand buying.

Specifically, studies have been conducted on brand loyalty of sportswear (Lau, Chang, Moon, & Liu, 2006; Yee & Sidek, 2008). Building on the previous researches, this study aimed at investigating determinants of brand loyalty for soap among consumers in Obafemi Awolowo University, Ile – Ife, Nigeria. Among others, this research would provide answers to the following research questions: what is the level of brand loyalty for toilet soap among consumers; and what are the factors influencing brand loyalty for toilet soap among consumers?

### **Objective of the study**

Specifically, the objectives of the study are to

- i. determine the level of brand loyalty for toilet soap among consumers;
- ii. identify and document the various factors that influence brand loyalty for toilet soap; and
- iii. establish relationship between quantity of soap consumed monthly, amount spent on soap and brand loyalty.

### **Methods**

This study was carried out in Obafemi Awolowo University, Ile – Ife, Nigeria. The institution is made of thirteen faculties which consists seven Science based and six Humanity related faculties. All were purposely selected for the study. Both the staff and students of the institution constituted the study population. In the humanity faculties, ten staff and twenty two students were randomly selected using simple random technique. Similarly, ten staff and eighteen students were randomly selected from science related faculties. In all 130 staff and 258 students were interviewed for the study using questionnaire. Data collected were analysed and summarized using descriptive tools while relationship was established with regression analysis.

### **Measurement of variable**

Brand loyalty: Using a 4-point Likert scale, always to never, loyalty index was calculated for each respondent. Maximum score was 36 while minimum was zero.

## **Results and Discussion**

### **Level of loyalty**

Results in Table 1 indicate that should the price of favourite soap of the respondents increased, at least 45.9 percent and 45.3 percent would rarely buy another soap and rarely reduce the quantity being purchased. In case of scarcity of the favourite soap, at least 78.8 percent of respondents would sometimes buy other products with better quality whereas; about 77 percent and 66 percent would rarely travel to buy their favourite soap where available or wait until it is available, respectively. If there is reduction in its quality, most (85.5%) were ready to buy another soap brand sometimes while almost 70 percent will sometimes reduce the quantity purchased. Furthermore, about 61 percent and 60 percent would stick to their favourite soap or use it interchangeably with another product if there is a new soap with lower price and high quality, respectively. Also, 63.4 percent would buy the other soap for the same reason. When there is a new soap with higher quality and higher price, respondents would sometimes buy their favourite soap (83%) and change to the new soap (55.2%).

To categorise respondents according to level of loyalty, the results above suggest that majority (54.1% and 54.6%) were brand switchers because they will buy other soap and reduce quantity purchased based on price increase of their favourite soap. Price is probably the most important consideration for the average consumers (Lau *et al.*, 2006) and serves as the strongest loyalty driver (Ryan, Rayner, & Morrison, 1999). It is evident that as a result of scarcity majority were classified as brand switchers: 78.8 percent would buy other product with better benefits; 76.8 percent and 66 percent would neither travel to buy it where available nor wait until it is available, respectively. As a matter of fact consumers

tend to be loyal to products that are always available almost everywhere at all time. If the quality of their favourite soap is reduced, respondents were brand switchers because majority would buy other soap (85.5%) and reduce the quantity purchased (69.3%). This is in line with the assertion of Evans, Moutinho, and Raaij (1996) that brand switchers use two or more brands when a single brand cannot satisfy all their needs. Furthermore, respondents indicated that they would stick to

favourite soap (mean % = 71.9%) if there is a new soap with higher benefits with lower/higher price. This shows that this category of consumers were hard core loyal. This supports Yim and Kannan (1999) that price variations may only affect consumers purchase quantity but not brand choice. Whereas, average of 57.8 percent were categorized as brand switchers for the same reason. It could be inferred that consumers of toilet soap in the study area were brand switchers.

Table 1  
*Distribution of Respondents According to their Level of Loyalty*

Variable	Always		Sometimes		Rarely		Never		Mean
	f	%	f	%	f	%	f	%	
In case price increases									
Buy another soap	68	17.5	142	36.6	80	20.6	98	25.3	1.54
Reduce the quantity being purchased	82	21.1	130	33.5	68	17.5	108	27.8	1.52
In case of scarcity									
Buy other product with better benefits	158	40.7	148	38.1	42	10.8	40	10.3	0.45
Travel to buy it where available	48	12.4	42	10.8	66	17.0	232	59.8	0.59
Wait until it is available	48	12.4	84	21.6	68	17.5	188	48.5	0.98
In case of reduction in quality									
Buy another soap	250	64.4	82	21.1	10	2.6	46	11.9	0.31
Reduce the quantity being purchased	160	41.2	110	28.4	40	10.3	78	20.1	1.91
When there is a new soap with lower price and higher benefits									
Stick to your favourite	152	39.2	84	21.6	48	12.4	104	26.8	1.73
Use interchangeably with favourite	86	22.2	148	38.1	44	11.3	110	28.4	1.46
Buy the new soap	124	32.0	122	31.4	48	12.4	94	24.2	0.64
When there is a new soap with higher benefit and higher price									
Buy the favourite soap	194	50	128	33.0	22	5.7	44	11.3	2.22
Change to the new soap	102	26.3	112	28.9	70	18.0	104	26.8	0.73

**Factors influencing soap brand loyalty**

Data in Table 2 show that satisfaction derived (mean = 2.46) from the use of favourite soap, personal experience (mean = 2.25) and availability (mean = 2.23) of the soap highly influence loyalty of the consumers. This was indicated by 69.1, 57.2 and 56.2 percents, respectively. Price (mean = 1.71) and

advertisement (mean = 1.61) mildly influence respondents loyalty. Whereas the influence of friends and relatives (mean = 1.27), social status (mean = 1.10) and family size (mean = 0.78) on brand loyalty was low. Hence the major factors influencing toilet soap brand loyalty among consumers were satisfaction derived, personal experience and availability.



Table 2  
*Distribution of Respondents by the Degree to Which Various Factors Influence their Loyalty*

Variable	High		Medium		Low		Not at all		Mean
	f	%	f	%	f	%	f	%	
Factors influencing loyalty									
Satisfaction derived	268	69.1	66	17.0	20	5.2	34	8.8	2.46
Personal experience	222	57.2	90	23.2	26	6.7	50	12.9	2.25
Availability	218	56.2	96	24.7	18	4.6	56	14.4	2.23
Price	130	33.5	110	28.4	52	13.4	96	24.7	1.71
Advertisement	110	28.4	110	28.4	76	19.6	92	23.7	1.61
Influence of friends and relatives	62	16.0	120	30.9	68	17.5	138	35.6	1.27
Social status	56	14.4	84	21.6	90	23.2	158	40.7	1.10
Family size	62	16.0	46	11.9	24	6.2	256	66.0	0.78
Other factors	22	5.7	2	0.5	0	0	364	93.8	0.18

***Other benefits that promote soap brand loyalty***

Data in Table 3 reveal that 34 percent of the respondents maintained loyalty to their brand of soap because of the scent while about 20 percent and 13 percent remained loyal to their soap brand because it is antiseptic and makes

the skin smooth, respectively. However, almost 15 percent would continue to be loyal to their favourite soap because of some other unidentified features. This study suggests that besides some specific characteristics, there are other features of the soap explainable by only the users that could strengthen their loyalty.

Table 3  
*Distribution of Respondents by Other Benefits that Promote their Loyalty*

Benefits that promote usage	Frequency	Percentage
It is antiseptic	78	20.1
It is long lasting	22	5.7
It is soft on the skin	6	1.5
It has good scent	132	34.0
It makes the skin smooth	54	13.9
It is cheap	10	2.6
It cleanses very well	12	3.1
It has a peculiar characteristics	12	3.1
It is multipurpose	2	0.5
Other benefits	60	15.5
Total	388	100.0

**Demand for soap**

Data in Table 4 indicate that almost 56 percent of the respondents bought up to 4 bars of soap at a time while about 30 percent purchased between 5 and 9 bars of soap at a time. As a result, the quantity of soap consumed monthly by majority (74.7%) was up to 4 bars and less than 50 percent spent up to

400 Naira (\$3) on toilet soap per month. Price of soap, income as well as family size of consumers are factors of both the quantity consumed and amount spent. The higher the price the higher the amount spent and the larger the family the more the quantity of soap likely to be consumed.

Table 4  
*Distribution of Respondents by Quantity Consumed and Amount Spent Monthly*

Variable	f	%
<b>Quantity bought at a time</b>		
Up to 4	216	55.7
5 – 9	116	29.9
10 – 14	50	12.9
15 – 19	2	0.5
20 – 24	4	1.0
<b>Total</b>	<b>388</b>	<b>100</b>
<b>Quantity consumed per month</b>		
0 – 4	290	74.7
5 – 9	72	18.6
10 – 14	26	6.7
<b>Total</b>	<b>388</b>	<b>100</b>
<b>Amount spent on soap per month (N)</b>		
Up to 400	190	49.0
401 - 800	112	28.9
801 – 1,200	62	16.0
1,201 – 1,600	14	3.6
1,601 and above	10	2.5
<b>Total</b>	<b>388</b>	<b>100</b>

Note: \$1 = N135

**Relationship between loyalty and independent variables**

Regression analysis in Table 5 revealed that the quantity of the favourite toilet soap consumed per month ( $b = 0.165$ ,  $T = 0.675$ ) had positive and significant relationship with loyalty. This implies that a unit increase in the quantity of the favourite toilet soap consumed by consumers per month will increase brand loyalty by their corresponding value. However, the amount spent monthly on the favourite toilet

soap ( $b = 4.309 \times 10^{-3}$ ,  $T = -1.520$ ) had negative but significant relationship with brand loyalty. This implies that a unit increase in the amount spent monthly on the favourite toilet would decrease brand loyalty by their corresponding value. This means that the quantity consumed per month and the amount spent on the favourite soap are significantly related to brand loyalty. Therefore, there is significant relationship between level of demand for toilet soap and brand loyalty.

Table 5:  
Regression Analysis Showing Relationship between Independent Variables and Loyalty

Variable	Regression coefficient (b)	T-value	Decision
Income	$-6.866 \times 10^{-6}$	-0.630	S
Quantity consumed	0.165	0.675	S
Amount spent monthly	$-4.309 \times 10^{-3}$	-1.520	S

R-square = 0.108

Significant level =  $P \leq 0.05$

Dependent variable = loyalty

### Summary and Conclusion

Increase in price, scarcity as well as reduction in quality of favourite soap of consumers, would make consumers to shift their loyalty to other brands. Other benefits that strengthen soap brand loyalty were satisfaction derived, personal experience, availability, good scent and advertisement. Quantity and amount of soap consumed are significantly related to brand loyalty. The study, therefore suggested that soap producers should maintain and improve quality of their products at reduced costs to sustain and increase customers' loyalty.

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## Love and Guilt: HIV-Positive Mothers Parenting Their Toddler Children Living with HIV and AIDS

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Studies have shown that caregivers of HIV persons have to deal with challenges associated with caring for the sick person as well as personal issues. Given that parenting a child implies relationship involving interchanges between mother and child over an extended period of time, this article sought to explore how mothers related to their children who were also living with HIV and AIDS. The aim was to increase understanding of mothers' perception of HIV and AIDS and how that influenced parental relationship. A qualitative, explorative design was adopted. Using a purposeful convenient sample (n=12), data was collected on the demographic characteristic of mothers; their understanding of the HIV and AIDS; relationship with their children; and how care was provided. The attachment theory was used as the theoretical framework to analyze the data. Four (4) important themes emerged. Mothers reported that children experienced anxiety when mothers were sick; mothers felt guilty; mothers loved the children intensely; mothers had great motivation to live because they were proud having children regardless of the challenges. Some dimensions of attachment theory were significantly related to parenting children when mothers were ill on-and-off. Children felt insecure in an illness situation because mothers were inconsistent with parental support. The results imply the need for further research to understand further child development issues in relation to chronic diseases such as HIV and AIDS.

**Keywords** Attachment theory, HIV/AIDS, Parenting, Toddler children

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### Introduction

The role of the family in the provision of care for persons living with HIV and AIDS is considered challenging because of its long-term and incapacitating nature. Generally, HIV and AIDS related care refers to care of people living with the disease who fall ill and require support including physical, clinical, psycho-social, emotional, spiritual, financial and practical care. Women are known to do the bulk of care work at home (Akintola, 2008; Ogden, Esien, & Crown, 2006). Women tend to suffer more when they are HIV-positive and have to care for others. The challenges women encounter are compounded further when they have to care for a child also living with the disease. Studies show that when an individual is living with HIV and AIDS, the

person experiences shock on discovering the HIV status after diagnosis (Fernandez & Ruiz, 1989). HIV diagnosis tends to illicit many emotions which manifest in different ways. The person may experience emotions including fear and anxiety regarding the uncertainty about the future with the disease, anger, feeling of frustration, and loss of control because the person feels he/she put her life at risk for the disease; the person may also experience fatigue which can be physical or psychological (Fernandez & Ruiz, 1989; Ruiz, 2000). The fear may also relate to stigma and discrimination from friends and relatives (Mwinituo & Mill, 2006; Rakodi & Nkurunziza, 2007). Emotional issues related to anger whereby the sick person may not understand

why he or she was infected with the disease may lead to changes in moods. The person may begin to feel guilty about the situation. The anger may also result from the financial burden that accompanies the disease such as hospital expenses, buying medication and purchasing recommended food.

Studies indicate that counselling helps to address some of the emotional issues related to the AIDS disease. This is because counseling provides psycho-social support and helps those living with the disease deal with the anxieties and guilt; to understand and accept the implications of the disease. In addition, counselling provides information that helps people with AIDS to make necessary adjustments to their lifestyles and continue with a normal productive life. (Fonchingong, Mbuagbo, & Abong, 2004; Pugh, O'Donnell, & Catalan, 1993). It is pertinent that the infected persons receive counseling and emotional support. In situations that the sick person lacks emotional support, there is the tendency for that person to be in distress. Mothers who are caring for their sick children living with HIV and AIDS are likely to experience distress which may influence the quality of relationship between the two of them. Unfortunately limited research exists in this area. Given that HIV-positive mothers may experience different emotions coupled with the demands of parenting of toddlers which require meeting their emotional needs, this study focuses on the relationship between mothers and their toddlers.

### **Theoretical Framework**

It is against the above scenario that this article places the study in the context of attachment theory. The theory demonstrates how early experiences in childhood could influence development and behavior in later life. Generally, individual attachment styles are established through the relationship between

the child and the caregiver during the early years of development. Attachment is a special emotional relationship that involves an exchange of comfort, care, and pleasure (Bowlby, 1988, 1969; Crittenden, 2008). Bowlby (1988) describes attachment as a lasting connectedness between two persons, usually a caregiver and a child. He further explained that attachment has an evolutionary component in the sense that it helps in the survival of individuals. Bowlby (1988) provides four characteristics of attachment:

1. Proximity Maintenance - The desire to be near the people we are attached to.
2. Safe Haven - Returning to the attachment figure for comfort and safety in the face of a fear or threat.
3. Secure Base - The attachment figure acts as a base of security from which the child can explore the surrounding environment.
4. Separation Distress - Anxiety that occurs in the absence of the attachment figure.

These four characteristics show the various components of the attachment theory. Children who receive sensitive care that corresponds to their needs tend to construct models of their caregivers as people who are readily available and see themselves as worthy to receive care. Such experiences lead to a sense of security because children conceive the expectation that is there for them. Conversely, children who experience rejection, and insensitive care that does not match their needs tend to feel unworthy which may lead to a sense of insecurity and lack of confidence to relate to people around them. It is assumed that primary care givers, for example a mother who is in a state of distress or depressed and has difficulty providing supportive care is likely to communicate her emotions to a child. Bowlby's (1969, p. 120) theory indicates that the mother-child communication occurs within a context of "facial expression, posture and tone of voice". It means that a child may be able to read into a mother's facial expression and other non-verbal communications. Thus, a harsh gesture, for example may create a negative expectation from the child that relationships are not reliable,

consistent and unfulfilling (Bowlby, 1988). According to Shemmings and Shemmings (2011), when children find themselves in an anxiety-provoking situation resulting from changes in moods, or gestures on the part of a caregiver or mother, children are likely to display momentary behaviors such as cry or fear because they may have a feeling of disconnection or disorganized attachment. Thus the child consistently seeks positive signal as a base of security. Emphasizing the importance of the need for a child to have a secure base to explore in time of danger of fear, Ainsworth, Blehar, Waters, and Wall (1978) explained that attachment security is a developmental milestone in the sense that the child, from birth continues to see proximity to, and comfort from a potentially protective caregiver in time of stress, particularly during illness.

Thus, maternal sensitive responsiveness to a child who is ill may be considered to be an important determinant of attachment security. Conversely, an extreme insensitivity may be associated with neglect on the part of the caregiver that could elevate the risk for insecure attachment (Out et al., 2009; Brazelton & Cramer, 1990). In demonstrating the association between mother-child interaction and illness, Nager et al. (1995) maintained that there can be interference with parent-child attachment which may have a potentially long-term psychological consequence when a caregiver is infected with HIV and caring with a child born and growing with the HIV and AIDS. This may be linked to the effect of the caregiver's physical and mental health. Li Li et al. (2008) demonstrated that the child often has to deal with reduced parenting capacity when their mother's are living with HIV and AIDS, a situation that can lead to emotional and behaviour changes in children such as uncertainty and fear. The situation can, however be restored when parenting capacity improves.

## **Methods**

### ***Procedures and Participants***

Participants for the study were mothers with toddler children (between 12-24 months) who attended the Fevers Unit out-patients clinic at the Korle- Bu Teaching Hospital in Accra. Participants were recruited between January 2010 and June 2010. The hospital staff assisted the researcher to identify HIV-positive mothers who attended the clinic with their children who were also positive. The mothers were approached and invited to a private room. The researcher explained the objectives and methods to the participants. Mothers who agreed to participate in the study were asked to sign a consent form to indicate their willingness to participate. An early contact was made with participants during a preliminary visit to the hospital and the researcher arranged with participants to do the interview on their next clinic appointment date. Thus the consent forms were signed prior to the interviews. Originally, 15 participants agreed to participate but on the day of the interview 12 of them were available for the interview.

### ***Interview Process***

The researcher employed in-depth interviews to collect data from twelve (12) HIV-mothers in a private room at the hospital. An interview guide was used to ensure that key topics were addressed. The interview commenced with a friendly conversation to establish rapport with each participant. Participants were asked to share their experiences about their diagnosis, the history of the disease, the story about their children's HIV status, the relationship between them and the routine of care at home.

### ***Data Analysis***

Data was analyzed using constant comparative methods with identification of codes and refinement of themes. The analysis began by reading through the data repeatedly



for clarification. Meaning was assigned to various units identified and topics were assigned to each unit to capture the content (Lincoln & Guba, 1985). The data was further examined for similarities and differences to highlight various dimensions of stories from participants. Patterns that emerged were noted, for example, patterns pertaining to relationships between themes were compared and contrasted to get a clear picture of the dimension of emerging themes. To ensure rigor, participants were contacted to confirm some of their responses. Also, colleagues read through the write up to make suggestions which helped in revising the write-up.

### **Ethical Approval**

Ethical clearance certificate was obtained from the Noguchi Memorial Research Institute of Medical Research (NMIMR) of the University of Ghana. (Clearance certificate number IRB0001276). Participants were informed that participation in the study was voluntary and that they were at liberty to withdraw at anytime. They were informed that confidentiality of information provided would be maintained during coding of interview responses to ensure anonymity. Another ethical issue addressed was that interviews were conducted in a secluded place of participants' choice in their respective households. Since AIDS is a sensitive issue, the researcher developed rapport to build trust with participants during a preliminary meeting at the clinic.

### **Results**

Four (4) important themes emerged. Mothers reported that children experienced anxiety when mothers were sick; mothers felt guilty; mothers loved the children intensely; mothers had great motivation to live because they were proud having children regardless of the challenges.

The mothers' ages ranged from 23 to 42 years. Their children's ages ranged from 12 to 24 months. 2 participants had preschool-aged children in addition to their toddler children. Out of the 12 women interviewed, 3 were married

and living together with their husbands. Three reported they had broken up with their husbands. The others said their partners had migrated to work in other towns in order to raise money to support medical expenses. With regard to their educational background, one participant had secondary education whilst had attained basic education. None of them was engaged in formal employment. Majority (11), were self-employed; they said they were selling items including packed water called 'ice-water', chilled soda drinks and fruits in their respective communities. They all indicated that the economic activity they engaged in was not regular. This meant that when they [mothers] or a child was very sick, they had to suspend the business. One participant living with her husband was not working at the time of the interview.

### ***Children experienced anxiety and fear***

All mothers reported that their children experienced fear and anxiety when they were ill and had to stay in bed. They associated the way children cried consistently during such times and the fact that their children did not accept to be comforted by other members of the family such as the fathers or other household members. Some women (6) reported that anytime they were critically ill, their children also had temperature and refused to eat. The mothers shared that they were unable to comfort their children because they were weak and had no energy to carry the children but the children would not understand and sought the attention of their mothers. This is consistent with the notion of self-haven described by Bowlby (1982) and Ainsworth, Blehar, Waters, and Wall (1978).

Anytime I have fever and I'm resting, she cries a lot. She will not allow anyone to carry her.

My daughter gets temperature and refuses to eat whenever I am sick.

If I'm not able to carry him for about a week, he behaves as if he is afraid of the other people in the house. He cries loud when they try to help him. Even the father cannot make him happy.

The responses are suggestive that the children were frustrated and desired specific care from their mothers. They expected comfort from their mothers. This conforms to the aspect of the attachment theory (Li Li et al., 2008) that indicates that children naturally return to their attached figures for comfort in the face of fear.

### ***Mothers felt guilty***

Guilt was expressed by 10 mothers as a worrying feeling. They reported that whenever they realized that their children were crying or were restless, they knew that the child was ill and that triggered the feeling of guilt. They reported that the feeling of guilt caused emotional and physical pain that worsened their conditions in the sense that they became confused. They reported loss of control over the situation anytime they were confused.

I am living with guilt because I know that I gave the disease to my daughter. I may die and leave her behind or she can die. I am worried that something will happen in the future.

Nobody knows that I have the disease, my husband left me before I got to know. I feel sad all the time because I have put my daughter into trouble. She is a child so she should not suffer like that.

I'm trying to accept the situation so that I can make my son happy but every day I feel like I've given him pain to deal with especially when he complains of headache.

I hold her and play with her all the time, but in my mind I feel hurt that I am carrying the disease. My husband died when I was pregnant so I have a lot of issues to deal with.

### ***Mothers loved the children intensely***

All mothers spoke of loving their children intensely because that was a source of happiness and also helped them pay less attention about their condition. They described strong feelings of responsibility to show affection even when they were ill and felt physically or emotions inadequate to do so.

I love my child very much because I am happy I have a child. I play with her and she gives me joy.

Every human being has one illness or the other. People die from all kinds of diseases. If I don't disclose my HIV status, no one will know about it. I just have to love my child dearly and be happy.

It is my responsibility to love my child, whether I am sick or not. I know that the more I love her, the better it is for her to recover. If I die, I doubt if any other person can love her the way I do.

I love my child very intensely because of our condition. I have no one to share my life with except her. When I see her around and I hold her, I feel healthy and I usually forget about my problem. I only worry if I am down with the sickness and cannot play with her or help her with food.

I know how to make her happy and also forget about the sickness. We sing songs together and praise God all the time.

In these scenarios, the mother's perception about love is consistent with attachment theory, in terms of the way the mother identified the love needs of their children and responded positively. In order for children to develop a secure bonding with their primary caregivers or mothers, the mother needs to have the capacity to spontaneously identify the signals from the child and interpret them appropriately in an attempt to meet the child's love need. The results further support previous research findings on parental love and activities among HIV- positive mothers (Tompkins, Henker, Whalen, Axelrod, & Comer, 1999). It was insightful to note that half (6) of the participants decreased (or reduced) activities at home in order to interact more with their toddler children. They reported sitting with the children and singing religious songs and clapping their hands. It was suggestive that mothers desired to create opportunities to show affection to their children.

### ***Great motivation to live regardless of the challenges***

Most of the mothers reported that their children are great sources of motivation for them to live. They explained that the mere idea that they have children give them energy to engage in care for the child and other family members. The care activities they engaged in covered a wide range of tasks including

fetching water, meal preparation, cleaning and attending the clinic for reviews.

I occupy myself with care activities. If I didn't have a child, I will be lonely and will die early. My child keeps me busy.

Having a sick child is better than not having one. I know that we will not die. I eat all the recommended diets and take my medication. I pray for God to give me money to continue to provide for the family.

I feel good that I have a child. My happiness depends on my child so I am working hard to make her happy and to make myself happy.

I don't want my child to leave me for even one minute. When I am sick I still like her to be close so I ask my sister to be with her in the same room so I can see her.

The results are consistent with earlier findings by Sroufe, Egeland, and Kreutzer (1990), demonstrating that when the caregiver exhibits ability to manage stress by way of engaging in self motivating activities that enables him or her to cope with the stressful situations, the consequences influence the overall relationships and psychological adjustment between the caregiver and care recipient.

### **Discussions**

This study examined the relationship between mothers living with HIV and their children, also living with the disease in the context of the attachment theory. The study revealed a complex situation for the mothers in their effort to support their children with love and to deal with their personal condition at the same time. What seemed to be important to the

mothers was to show affection to their children even when they were sick. This situation could be challenging for mothers. According to the mothers, children continued to seek for attention even when the mother were sick, a situation which is natural for children (Bowlby, 1988) because always find security and safety in their caregivers, particularly when they are ill (Ainsworth, 1978).

Nearly all mothers interviewed reported that they experienced a feeling of guilt whenever their children need their attention but they could not support them 'fully' because of their personal health conditional. Some mothers described some common challenges that related to fear and anxiety their children experienced when the children felt disconnected or that the mother were insensitive to their emotional needs. The information given by the mothers is critical in the sense that in situations when both the mother and the child are HIV-positive and they fall very ill at the same time, it can be really worrying since the attachment relationship maybe disrupted (Shemmings & Shemmings, 2011). Although HIV positive women have the right to make informed decision about whether to have children or not, in most cases in developing countries, they do not have access to healthy motherhood guidance and information to care for the child after birth.

In fact, caring for an HIV-infected child is challenging and affects the relationship between the caregiver and the child (Hansell et al., 1998). The authors study on coping, stress and caregivers of HIV-positive children confirmed that social support can mitigate caregiver stress and enhance coping; however, it was evident from the current study that some seropositive mothers did not disclose their HIV status to other members of the family. As such they did not benefit from the social support. HIV-positive mothers were uncomfortable disclosing their HIV status because they feared stigmatization and discrimination in the family. Only one participant reported disclosing her status to her sister. Her reason for disclosure was associated with anticipated social support. This result supports what Kalichman, DiMarco,

Austin, Luke and DiFonzo (2003) found in their study on disclosure to friends and relatives. Issues regarding disclosure are critical because where children are concerned they need emotional support so it is important that some close family members understand the illness of the mother so that a substitute caregiver is arranged to support the child. Steele, Nelson and Cole (2007) demonstrated in their study that appropriate disclosure may confer some benefits on the child in terms of psychological and physical health.

Interestingly, some mothers constantly engaged in household tasks such as cleaning and meal preparation and also devoted time to express affection to their children even when they were sick. The overwhelming expression of love is consistent with the findings from the study Hackl, Somlai, Kelly and Kalichman (1997) conducted on HIV positive women living as patients and caregivers that mothers living with HIV often face the dual challenge of showing affection to their children and having to deal with their own emotions.

Participants indicated their children gave them reason to live so they struggled to maintain positive relationship between them and their children. Thus, according to them, motherhood was fulfilling even with the HIV-positive child. It was suggestive although they said they maintained positive relationship with their children, they compromised the emotional needs of their children because they indicated that on certain days they were sick in bed and could not support their children.

Considering the fact that the HIV-positive toddlers in the study were struggling with health issues just like their mothers, they still required responsive parental care. Being children, particularly at the toddler age they may not understand when a mother rejects him or her because of weakness or fatigue. This condition as evident in the findings of the study created a situation of stress for children. When children are under stress, particularly when they are sick, they lose their capacity to seek the proximity of their caregiver (Bowlby, 1988). Consequently, they fall in a state of dilemma in the sense that their mother, who is supposed to

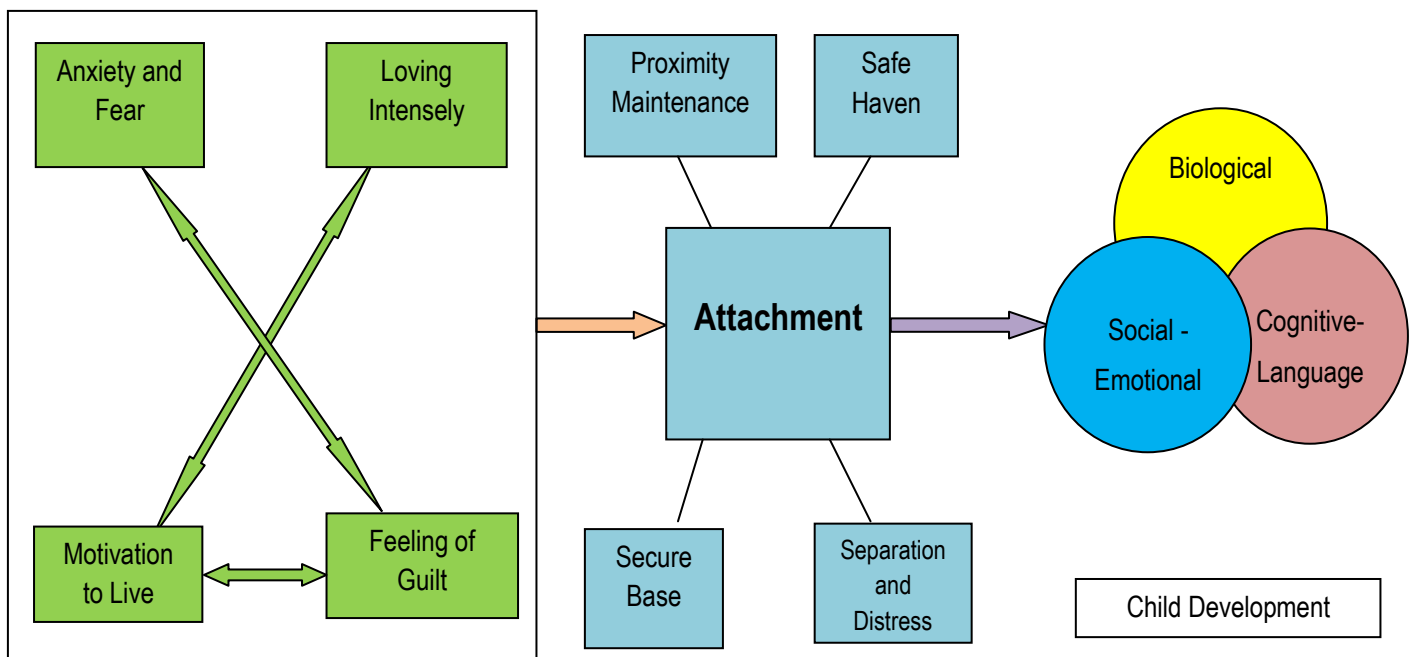
be their source of security, comfort and love in time of distress, now becomes a source of fear and anxiety.

**Conclusion**

Drawing from the results, the study concludes that most mothers naturally desire to bond with their children by having physical contact with them. When children are sick, they tend to be frustrated and cry a lot when they feel rejected. HIV-positive mothers reported feeling anxious and guilty that they infected their children with the virus. However, having a child was a decision they were proud of. Since having a child was a source of motivation and

happiness for them, they reported showing affection to their children even when they were sick in bed. Being close to and making a child feel important increased his or her chances of experiencing positive emotions, confidence and feeling secured and building relationships. The implication of this study relates to the fact that children appreciate quality time and caregivers who are sensitive and responsive to their needs. Therefore when the primary caregiver is not feeling too well and tries to maintain a bond, the chances are that the child may not feel completely accepted. This has implication for child development.

Figure 1  
*Relationship Between Emergent Themes, Theory and Child Development*



**Recommendations**

It was recommended that:

- Seropositive mothers must be encouraged to disclose their status to close relatives who can support the child emotionally.
- The National AIDS Commission and NGOs should target HIV+ positive mothers with young children and provide education to minimize feeling of guilty in order for mothers to be more confident to continue with life.
- HIV and AIDS intervention programs should involve public health officials to assist with counselling on the importance of quality mother-child interactions at the health centre where mothers visit with their toddler children.



- There is need to further research using a larger sample for better understanding of mother-child interaction in the context of HIV and AIDS.

It is critical that the emotional state of the primary caregiver of a child with HIV and AIDS be channeled to appropriate attachment relationships to enhance the overall development of the child. The relationship between emergent themes of the study, attachment theory and child development is shown in Figure 1.

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## University of Botswana Family and Consumer Sciences Students' Perceptions on Parenthood Type, Involvement and the Development of Primary School Pupils in Botswana.

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One of the important factors that are creating a changing world is the changing nature of family parenthood. The current changing trend in parenthood, including its limitation on the level of parental involvement in the education of their wards, has adverse influence on children's affective and cognitive dispositions in life. This calls for empirical studies that may suggest solution to this mammoth problem. Towards this end, the purpose of this exploratory study is to find out the extent to which there is some consensus among the perception of University of Botswana (UB) Family and Consumer Sciences students (FCS) as to the validity of this speculation. It also determined the level to which type of parenthood and level of parental involvement influence some pupil's cognitive and affective characteristics. These provided the basis for in-depth study that would further suggest possible ways of tackling this problem. Through an inferential design a questionnaire-based survey data from 150 UB Family and Consumer Sciences students were analyzed to test three related hypotheses. Following from the findings, appropriate discussions were advanced and relevant recommendations made in an attempt to contribute solution to the problem and for some further relevant studies.

**Keywords:** Parenthood, Parental involvement; Academic attainment, Primary school children

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### Introduction

The family is the nucleus of the changing world of human behaviour. The rate of changes in the world is now geometrical and no more arithmetical, and the one important factor underlying these changes is a changing structure of the family. For example, according to Barber (2006) "regression analyses found that current single parenthood ratios were strongly and consistently predictive of violent crimes" (p.1), and an "Analysis of INTERPOL crime data (murders, rapes, assaults) has shown that violent crime is a predictable feature of countries with a weak marriage market from women's perspective (i.e., a scarcity of marriageable men)" (Barber, 2006, p.1). Family structure has a significant influence on the level of parental participation in their wards' education especially in primary schools. Single parents often do not have the physical and psychological resources or adequate knowledge to give maximum

desirable help to the growing child hence indirectly assigning some of their roles to the street. For example, "many mothers do not have equipment or skill to plan science fair experiments or construct woodworking projects, and fathers may not be able to help design and sew costumes for the school play" (Wanat, 1992, p. 46). An executive summary of the report of a detailed review of studies related to this problem has it that:

family structure — whether a child's parents are married, divorced, single, remarried, or cohabiting — is a significant influence on children's educational performance. Family structure affects preschool readiness. It affects educational achievement at the elementary, secondary, and college levels. Family structure influences these outcomes in part because family structure affects a range of child behaviors that can bear directly

on educational success, such as school misbehavior, drug and alcohol consumption, sexual activity and teen pregnancy, and psychological distress. There is a solid research basis for the proposition that strengthening U.S. family structure — increasing the proportion of children growing up with their own, two married parents — would significantly improve the educational achievements of U.S. children (Center for Marriage and Families, 2005, p.1).

A large level of gap exist between what the parents would like to do in terms of getting involved with their wards' education and what they are really able to do. Based on their own expectations on what they think they should be doing as parents as compared to what they find themselves actually doing, the level of gap in parental involvement could be determined:

Gap in parental involvement in ward's education = What parents expect they should be doing minus what they perceive they are actually doing.

If they are doing exactly what they think they should be doing the gap of involvement should be zero, but if they are doing less than what they think they should be doing then the gap should be positive; on the other hand if they are doing more than what they expect themselves to be doing then the gap will be negative. Such gaps in other aspects of education have been shown to influence the level to which desirable results are achieved in education (Nenty & Odili, 2011; Wang & Ngai, 2011).

### **Problem and Purpose of the Study**

Level of parental involvement with their wards' education has been shown to play a vital role in the cognitive and affective development of pupil in primary schools. According to Desforges and Abouchaar (2003), ". . . parental involvement . . . has a significant positive effect on children's achievement and adjustment even after all other factors shaping attainment have been taken out of the equation" (p.4). As determined by Isaiah and

Nenty (2011), parental involvement is the most important variable that predicts the job satisfaction of teachers. The problem is that in recent years, changes in family type have come to inhibit parental effort at playing their role even to the extent they would love to. This has contributed, to a large extent, to the much complained about deterioration in pupil's academic and behavioural developments.

The purpose of this study was to determine the extent to which parental involvement by students of the department of Family and Consumer Sciences at UB in their wards' education, given the changing nature of family structure, influences children's cognitive and affective development.

### **Research Questions**

Among UB Family and Consumer Sciences students:

1. to what extent does their involvement in their children's education match their own expectation?
2. what is the relationship between type of family on level of gap of parental involvement in children education?
3. to what extent does type of parenting influence some behavior of children?
4. what is the relationship between marital status on level of gap of parental involvement in children education?
5. to what extent does the gap in their involvement in the education of their primary school children influence on the academic performance of their wards at school?
6. what is the influence of level of gap in parental involvement on children's level of discipline?

### **Review of Literature**

In a two-dimensional comparative study Wang and Ngai (2011) examined the gap in the educational aspirations of children from single-parent and two-parent families in the United Kingdom (UK) and Hong Kong, and found that "children from single-parent families in the UK and Hong Kong are found to have statistically significant lower levels of educational aspiration than those from two-parent families" (p.1).

Through an insightful quantitative analysis of data from INTERPOL and with adequate control of several extraneous variables, Barber (2006) found that violent crimes are caused by reduced parental investment. One of the important causes of this is seen to be the changing structure of the family.

Howard (2007), through an empirical study with a well articulated historical design, came to the conclusion that "single motherhood reduced school attendance among young black children (six to eight years old) by about 7 to 9 percent, relative to children in two-parent households . . . and teens residing in mother-only households were probably expected to enter the labor force to provide income for the household" (p. 54).

In a cross-sectional descriptive survey study which used a structured questionnaire and measurements of weight and height to determine the nutritional status of children in four districts of Botswana, Mahgoub, Nnyepi and Bandeke (2006) among several findings, "confirm the observations of other studies that show higher levels of under-nutrition in children under three years from single parent households . . . ." The deprived growth experiences children from single-parenthood are made to pass through rid's them of a rich foundation for a sound cognitive, affective and psychomotor growth. Based on a meta-analysis of several research findings by studies on the influence of parental involvement on the academic success of children, Baker and Soden (1998) came to the conclusion that parental involvement has a significant influence on children's academic achievement. Kumari (2009) found that parental involvement provides a significant source of educational motivation to children and this has a significant impact on their academic achievement.

### Method

A 100 out of a total of 150 students of the Department of Family and Consumer Sciences (DFCS) students of University of Botswana (UB) who were willing to take part

in the exploratory and descriptive study were used as subjects in the study. Being a feminized department, the sample consisted of 10 males and 90 females. Data were collected using a validated Likert-type 6-option instrument. Parental involvement was operationalized by a list of 29 expected parental behaviour to which the parent were requested to indicate the extent to which each of these is what they should do as parents, and the extent to which they were actually doing them. The differences between the two responses for each item operationalized the gap of parental involvement for each parent. Parental perceived wards' level of discipline, parental level of ward's attitude towards learning, and their perceived level of ward's attitude towards school were measured with 6, 12, and 12 items respectively. Cronbach alpha estimate of the reliability of each of these measure were .781, .887 and .901 respectively. On administration of these instruments, these items were scored coded and added up to provide an operationalized definition of the respective variables.

The gap size were added up for the 29 items and based on the mean level of gap, they were classified under 'high', 'some' and 'low' level of gap. Those with gap of half a standard deviation above and below the mean were classified as having 'some' gap, those with a mean higher and lower than this, were classified as 'high' and 'low' level of gap respectively.

### Data Analysis and Interpretation of Results

Research Question 1 was answered through performing a population t-test analysis of the size of the gap observed between parental expected and their perceived level of parental involvement (see Table 1). The result of the analysis showed that, in the view of UB Family and Consumer Sciences students, parents were significantly under-involved in their wards' education.

Table 1  
*Population t-Test Analysis of Gap in the Level of Parental Involvement in Wards' Education*

Gap in parental involvement in Wards' Education	N	$\mu$	Observed Mean	Std. Deviation	Std. Error Mean	Mean Difference	t	p<
	79	0.00	12.5570	20.03954	2.25462	12.55696	5.569	.000

As for the influence of type of parenting on level of gap of parental involvement in children education, the chi-square analysis (see Table 2) was done to answer the related research question showed that, in the view of UB Family and Consumer Sciences students, there is no significant type-of-parenting influence on the level of gap in parental involvement in the education of their wards.

As regards the extent to which type of parenting influence some behaviour of

children, independent t-tests (see Table 3) were done to compare perceived level of ward's discipline, school grade as reported by parents, perceived level of ward's attitude towards learning, and perceived level of ward's attitude towards school between pupil raised by both parents and those raised by mothers' alone. In none of these did the comparison result in a significant difference.

Table 2  
*Chi-square ( $\chi^2$ ) Analysis of Type of Parenting on Level of Gap of Parental Involvement in Children's Education*

Level of Gap in Parental Involvement in Wards' Education	With whom is your child living?		
	Both parents	Mother only	Total
Low Level of Gap in Involvement	15(12.00) <sup>a</sup>	7(10.00)	22
Some Level of Gap in Involvement	11(13.64)	14(11.36)	25
High Level of Gap in Involvement	10(10.36)	9(8.64)	19
Total	36	30	66

<sup>a</sup>Expected frequencies in the parentheses  
 $\chi^2 = 2.802$ ,  $df = 2$ ;  $p > .05$ .

Table 3  
Independent t-Test Analysis of influence of Type of Family on Pupil's Behaviour

Pupil's Behaviour	With who is your child living	n	Mean	Std. Dev.	Std. Error Mean	df	t-value	p<
Perceived level of Ward's discipline	Both parents	37	14.2162	2.89765	0.47637	70	0.580	.564
	Mother only	35	13.8286	2.77049	0.46830			
School grade as reported by parents	Both parents	31	79.3871	7.80887	1.40251	58	0.785	.436
	Mother only	29	77.7586	8.26635	1.53502			
Perceived Level of Ward's Attitude Towards Learning	Both parents	35	29.5714	4.42776	0.74843	66	-0.728	.469
	Mother only	33	30.3939	4.89221	0.85162			
Perceived Level of Ward's Attitude Towards School	Both parents	32	33.4375	3.61839	0.63965	61	-1.157	.252
	Mother only	31	34.6452	4.62276	0.83027			

Table 4  
Chi-square ( $\chi^2$ ) Analysis of Marital Status on Level of Gap of Parental Involvement in Children Education

Level of Gap in Parental Involvement in Wards' Education	Are you married?		
	Yes	No	Total
Low Level of Gap in Involvement	6 (8.4) <sup>a</sup>	18 (15.6)	24
Some Level of Gap in Involvement	8 (6.0)	9 (11.1)	17
High Level of Gap in Involvement	7 (6.7)	12 (12.4)	19
Total	21.0	39.0	60.0

<sup>a</sup>Expected frequencies in the parentheses  
 $\chi^2 = 2.170$ ,  $df = 2$ ;  $p > .05$ .



As for the question on the significance of the relationship between marital status and level of gap of parental involvement in children education, the chi-square analysis carried out (see Table 4) to answer this question showed that in the view of UB Family and Consumer Sciences students, no significant relationship exists between the two variables.

Finally, to answer the last two research questions on the influence of level of gap in parental involvement on pupil's academic performance as well as on their level of

discipline as perceived by parents, the one-way analysis of variance carried out (see Table 5 & 6) showed that in fact according to the view of UB Family and Consumer Sciences students, such influence exists to a significant level. A closer look at the group means for the two variables revealed that wards of parents with 'low' and 'some' level of gap in involvement performed significantly higher and were significantly more discipline than those with parents showing 'high' level of gap in involvement with their wards' education.

Table 5  
*Analysis of the Influence of Level of Gap in Parental Involvement on Pupil's Academic Performance*

Level of Gap in Parental Involvement	Academic Performance as Reported by Parents			
	N	Mean	Std. Deviation	Std. Error
Low Level of Gap in Involvement	18	79.8333	4.91397	1.15823
Some Level of Gap in Involvement	21	81.4286	9.06406	1.97794
High Level of Gap in Involvement	16	75.1250	7.78781	1.94695
Total	55	79.0727	7.86425	1.06042

Source of Variance	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	376.316	2	188.158	3.302	.045
Within Groups	2963.393	52	56.988		
Total	3339.709	54			

Table 6  
*Analysis of the Influence of Level of Gap in Parental Involvement on Pupil's Level of Discipline*

Level of Gap in Parental Involvement	Parental Perception of Ward's Level of Discipline			
	N	Mean	Std. Dev	Std. Error
Low Level of Gap in Involvement	24	4.88	.900	.184
Some Level of Gap in Involvement	17	4.47	.943	.229
High Level of Gap in Involvement	19	3.89	1.329	.305
Total	60	4.45	1.126	.145

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10.200	2	5.100	4.497	.015
Within Groups	64.650	57	1.134		
Total	74.850	59			

### Summary of Findings

- Parents were significantly under-involved in the education of their wards.
- Type of parenting has no significant influence on the level of gap in parental involvement in children's education.
- Type of parenting has no significant influence on some cognitive and affective behaviour of children's in primary school.
- Marital status has no significant influence on the level of gap of parental involvement in children's education
- The gap in the level of parental involvement in the education of their primary school children has a significant influence on the academic performance of their wards at school
- The gap in the level of parental involvement in the education of their primary school children has a significant influence on the children's level of discipline

### Discussion and Conclusion

The changing nature of the family is an important factor that influences changes in the world of human behaviour, especially as regards the cognitive and affective behaviour of children. Conclusion based on the findings of this study must be guarded and no generalization should be attempted not only because of its exploratory nature but also because it involved a very narrow and largely only small female population with a sample of volunteers. And the data were based largely on what parents perceived of their wards. Surely, there is a significant gap between what the parent would like to do as regards the education of their children, and what they are able to do. Though in this exploratory study such gap has been found not to depend significantly on the marital status of parents or on the nature of the family, it has been found to influence, to a significant level, the discipline and academic attainment of primary school children.

The large and significant gap found in this study is indicative of the fact that there is a significant reduction in parental material and psychological investment in the education of

their wards. This is likely to maximize and embolden peer and street influences on the children and hence lead to reduced performance and discipline among them. If as indicated by Barker and Soden (1998), research findings "strongly suggest that parents' involvement in their children's formal schooling is vital for their academic success" (p.1), then if such involvement is not forthcoming it follows logically that children's academic success will be impaired.

An important achievement of this study is that it has put forward a very unique method of studying the influence parental involvement on the behaviour of children in primary schools, through looking at the gap that exist between what the parents would like to see themselves doing and what they are actually able to do under the constraint of a changing family structure. Hence it is felt that the study will whet researchers' appetite to want to replicate the study with more scientific vigour. Meanwhile, given the problems associated with lack of single-parents' involvement in the education of their wards, and its adverse influence on the academic and psychological growth of children, and given the huge future consequences of such problem.

### Recommendations

Following from its findings this study recommends that:

1. A counseling center for single-parents should be established by the ministry in charge of social services.
2. Regular workshops should be mounted for all single parents by MoESD.
3. Relevant family/school programmes for example, 'parents as teachers' programme; should be developed and mounted for parents and teachers in primary schools by MoESD.
4. At the earliest opportunity, government should develop and implement a family-school partnership policy; It is envisaged that the study will whet researchers' appetite to want to replicate the research with more scientific vigour.

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