An Exploratory Study of Jamaican Family and Consumer Sciences Educators' Attitudes Toward Research Engagement, Perceptions of Research Norms, and Perceived Control over Conducting Research and Research Engagement

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AN EXPLORATORY STUDY OF JAMAICAN FAMILY AND CONSUMER SCIENCES EDUCATORS’ ATTITUDES TOWARD RESEARCH ENGAGEMENT, PERCEPTIONS OF RESEARCH NORMS, AND PERCEIVED CONTROL OVER CONDUCTING RESEARCH AND RESEARCH ENGAGEMENT

By

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ABSTRACT

The aim of this study was to examine the relationship between attitudes toward research engagement, research norms, perceived control over the ability to conduct research and research engagement among family and consumer sciences (FCS) faculty in post-secondary institutions in Jamaica. The literature shows that in the family and consumer sciences discipline, faculty members are predominantly female. Females in higher education worldwide have not been as productive as males in terms of research output, at least according to current institutional definitions and quantitative measures. Women tend to have higher teaching loads, constitute a smaller proportion of tenured faculty, and are less likely to attain the professor rank. Additionally, women are more likely to be employed by non-research-intensive institutions. The Theory of Planned Behavior provided the framework for addressing the research question. The sample consisted of 39 female FCS educators, that is, 75% of all FCS educators in 11 post-secondary institutions in Jamaica. They were administered a 62 item, researcher-devised online questionnaire. More than two-thirds (69%) of the respondents had engaged in research. The average number of research products over the five year period was 3.54. There were no significant associations between the educators’ attitudes toward research engagement and their actual engagement in research; between their perceptions of norms regarding research engagement and engagement in research; nor between their perceived control over conducting research and research engagement. Recommendations to improve research engagement among the sample include: implement a FCS program such as that proposed by Nicholls et al. (2004) that allows faculty to mature as researchers; establish research accountability groups with FCS peers or with other university researchers; conduct research as faculty-student teams based on student projects; and encourage institutions to give credence to both quantitative and qualitative research so that FCS faculty are assured of credit for qualitative research they are likely to undertake.
CHAPTER 1

INTRODUCTION

Family and consumer sciences (FCS) continues to be an important field globally in addressing the concerns of individuals, families, and communities (IFHE, n.d.; Stage & Vincenti, 1997). The field, however, has several issues that affect its long-term viability (Griffore & Phenice, 2005). One major issue is research engagement in higher education where faculty in FCS are less productive in comparison to other disciplines (Asmar, 1999). In this study, selected factors associated with research engagement among family and consumer sciences (FCS) educators in post-secondary institutions in Jamaica were examined. Programs which prepare teachers for the secondary schools and for working in the hospitality industry are offered in three of the four 4-year colleges/universities, five of the 3-year colleges, and the four 2-year colleges on the island. The minimum qualification for many of the professions into which the graduates enter, and especially in teaching, is a baccalaureate degree. In fact, the government of Jamaica mandated a baccalaureate degree as the minimum requirement for teachers effective 2007 (University of the West Indies [UWI], 1997). To fulfill this mandate, post-secondary institutions in Jamaica have evolved from diploma-granting colleges to degree-granting colleges and universities. Concomitant with the change in the institutions’ status is the responsibility to engage in research; “the right to award research degrees requires that the institution demonstrates its strength in research” (Jenkins, 2004, p.7). In recognition of this responsibility, academic managers in some post-secondary institutions in Jamaica strongly encourage faculty to engage in research and some have tied research engagement to academic promotion and other rewards. Neumann (1993) noted that research has become such an integral part of higher education in post-secondary institutions that it provides the very framework for their productive existence. The aim in the Jamaican institutions is that the burgeoning institutions not be left behind in this crucial area of their development. According to Ramsden (1999):

research performance is possibly the most important factor for assessing the standing of the modern university. Reputation or prestige is an indispensible component of academic culture and high status institutions add social value to their students and enable graduates to access the absolutely scarce commodity of elite occupations. (p. 342)
Increasingly, post-secondary institutions identify research productivity as the “gold standard” for measuring their faculty’s career progress and promotion (Perry, Clifton, Menec, Struthers, & Menges, 2000), even while they recognize that faculty members in academia have a tripartite mission of research, teaching, and professional service (Brand, 2000).

**Research in Post-secondary Institutions in Jamaica**

Administrators of post-secondary institutions in Jamaica recognize the need for research and all the 4-year institutions espouse research in their mission (Northern Caribbean University [NCU], 2007; University of Technology, Jamaica [UTech], 2007; University of the West Indies [UWI], 2006).

At the Northern Caribbean University, the aim of research is “not only to add to the system of knowledge that exists within various disciplines, but to enhance the society at large and the surrounding community” (NCU Research Undertakings, n.d.). The institution has been recognized by the government of Jamaica for work on local food products and has had grants earmarked for future research on agricultural products in the country (Adventist News Network, 2009).

At the University of Technology, Jamaica, the focus of research is interdisciplinary and applied research is considered relevant to the country’s economic and social problems and needs. This emphasis on applied research is in line with that of other technical universities where the greater weight of the institution’s mission is generally on teaching followed by limited, usually applied research (Nicholls, Cargill, & Dhir, 2004; UTech, 2009). Research at this institution is also recognized as a vehicle for creating knowledge and adding to the intellectual climate of the institution. At this University, promotion to senior positions is also linked to research publication (UTech, 2001).

At the University of the West Indies, administrators recognize their role as a comprehensive university as being one that encompasses much more than teaching. “Equally important tasks of a comprehensive university include research, public service and community outreach” said Edwards (2009), Public Relations Officer of that university. At the UWI research publication is integral to promotion to professorship; additionally the conduct of research is recognized as an avenue to regional development (UWI, 2006).
Although research is undertaken in these institutions, the productivity level as assessed by numbers of publications seems moderate. At the University of the West Indies, professors failed to achieve targets in research between the years 2002 and 2007. The strategic target of 75% of academic staff publishing at least two papers per year in peer-reviewed journals between 2002 and 2007 had not been met up to 2006. The figure was closer to 12% then (UWI, 2006). Publications at NCU were showing fewer than 20 articles in journals, edited volumes, and textbooks (NCU, n. d.). Data on targets and achievement for UTech were unavailable.

**Context and Status of Research in FCS in Jamaica**

Between 1990 and 2009 family and consumer sciences educators in Jamaica were involved in the publication of approximately 10 textbooks for secondary level home economics students. These include “A Guide for Home Economics Teachers” (Davis-Williams, 1990); “Certificate Management of Homes and Families” (Stewart, 1994) “Caribbean Home Economics – Books 1, 2, & 3” (Gill, Hildyard, & Hodelin, 1995); “Nutrition made Simple” (Campbell & Sinha, 1997); “Crucial Years” (Davis-Williams, 2000); “Home Economics in Action, Books 1, 2, & 3” (Caribbean Authors, 2002); “Home Economics for Caribbean Schools, CXC Food and Nutrition: A Two-Year Course” (Campbell, Gayle, Glen, Marchand & Miles, 2002); “A Workbook for Food and Nutrition Students” (Davis-Williams, 2004); “A Workbook for Clothing and Textiles Students” (Davis-Williams, 2004); “Preparing for Exams and Beyond, Books 1 & 2” (Davis-Williams, 2004); and “Spice Up the Teaching” (Davis-Williams, 2009). FCS educators in Jamaica have also published research papers and book reviews in the Caribbean Journal of Home Economics (CJHE, 1999, 2001, 2003, 2005, 2007, & 2009).

These very important and beneficial publications represent the effort of approximately five (9%) of the FCS educators in the Jamaican post-secondary institutions and 15 or slightly less than 2% of the FCS professionals in the country overall. In Jamaica, there are approximately 800 FCS teachers at the secondary and post-secondary levels plus others who are engaged in professions other than teaching (Personal Communication, 2009) and so while these are significant, important, and laudable publications, it appears that there is scope for greater research productivity in the FCS field.

In Jamaica, FCS educators in post-secondary institutions and teachers in the secondary schools have voiced their concern about an over-reliance on educational materials generated
outside the Caribbean region. Many have noted that although factual information can be appropriately applied across cultures and countries, many regional issues that are culture-bound and geopolitically based are not addressed by the educational materials that are imported into the Caribbean. Many of the concepts are not easily transferable. Michael Manley (1990), past Prime Minister of Jamaica, cautioned that a country should be “constantly on guard against the uncritical importation” of material “which may be relevant in a highly sophisticated metropolitan economy but may be counter-productive in another based on that country’s peculiar social problems” (p. 144). FCS professionals, especially faculty in post-secondary institutions, could participate in generating publications to fill this gap. But the challenges that faculty members in post-secondary institutions face in conducting research and producing relevant and well-needed educational materials cannot be ignored. The American Association of University Professors (AAUP) (2008) noted that:

The work of faculty is, by its very nature, virtually unbounded. In addition to teaching classes, advising students, and serving on departmental committees, faculty members are expected to keep abreast of developments in their fields of specialization by engaging in original research and scholarship, participating in activities of one or more professional societies, and to read the latest research studies produced by their colleagues. There is always a new question to ask, further analysis to complete, or another issue to discuss. (p. 1)

The situation is especially challenging when the educators in focus are mainly females. Of note, 51 of the 52 or approximately 98% of FCS educators in post-secondary institutions in Jamaica are females. The AAUP (2008) observed that the intense demands of an academic career of female academics are often compounded by the multiplicity of roles they play.

An academic career demands an intense, some academics would say, total commitment. But faculty members, like anyone else, are not defined entirely by their professional pursuits. They are members of families with obligations to care for and time to devote to their loved ones. Finding the appropriate balance between an academic career and family responsibilities has been especially difficult for women, who in our society continue to perform the bulk of family work: childrearing, domestic chores, and care for family members with special needs. (p. 1)
In particular, the AAUP (2008) noted that the intensive work that is required to establish an academic career often coincides with female professors’ prime childbearing years. Women are more likely to carry the burden of childrearing duties, and are forced to make a choice between an all-consuming professional career and having children. This is a choice men are not generally forced to make. Academic work is also a significant source of inequities in faculty status, promotion, tenure, and salary, which are often based on research productivity.

Asmar (1999) found that female academics are often seen as less productive in research than males especially when it comes to publication rates. Female academics do not as often lead research nor do they apply for nor hold large research grants. Corley (2005) reported that the difference in men’s and women’s productivity level may be due to what they value in their job. Corley found that women in academia placed a higher value on student quality, teaching load, collegiality and interaction within their departments while men placed emphasis on salary, benefits, and research time.

Despite the historical and current challenges to female academics in general and by extension FCS educators in post-secondary institutions in Jamaica, research and publication are important for a number of reasons. First, one of the tenets of professionalism is that the professional displays characteristics that positively represent the standards of one’s profession and a commitment to advancing the program or activity of the profession (Newkirk, 1982). One relevant way of advancing the activities of the FCS profession in Jamaica is through research.

The International Federation for Home Economics (IFHE) urges its members to provide opportunities through practice, research, and professional sharing that will lead to improving the quality of everyday life for individuals, families, and households worldwide (IFHE, 2008). Nickols, Ralston, Anderson, Browne, Schroeder, Thomas, and Wild (2009) note that because of charges leveled at the FCS profession regarding its failure to be at the forefront of important societal issues:

it behooves those in the profession to conduct internal examinations to ensure that as a field we are developing and using a body of knowledge that is relevant to contemporary society, is future-oriented to encompass the emerging conditions, and has the broadest possible applications, including research and practice. (p. 267)

This call has relevance for Jamaican family and consumer sciences professionals even as they themselves bemoan the lack of relevant materials that has national significance and application.
Publications of indigenous materials to improve the family are sparse and issues of concern to the family are not researched and published to a significant degree by these professionals. Neale (2002) opined that when faculty engage in research, they will also gain an appreciation of the generation of new knowledge and become better able to discern their own academic interest.

Second, research, scholarship, and creative work receive recognition beyond the campus and faculty members gain recognition among their peers through their publications. This becomes a source of personal and professional self-esteem, possibly with a higher salary and promotion (Brand, 2000). While all students in most secondary schools in Jamaica are required to take courses in FCS up to the grade nine level, FCS professionals are not generally recognized in society for the value of their work. This is due to the public’s lack of knowledge of the extent to which the work that FCS professionals do improve individuals’ everyday living. The professionals must engage in and publish scholarly work to receive recognition.

Third, by engaging in research, faculty will develop skills of critical appraisal of research literature, acquire habits of intellectual curiosity and lifelong learning, and become experienced at practicing evidence-based teaching (Neale, 2002). It is crucial that FCS faculty develop such skills especially as educators in post-secondary institutions in Jamaica are required to supervise students’ research at the baccalaureate level and at the graduate level as the institutions expand their programs to offer graduate degrees.

Many FCS educators work in degree-granting institutions where the expectation is that faculty members contribute to the institution’s tripartite mission of research, teaching, and professional service (Brand, 2000). Although it may be unrealistic, unfair, or even unnecessary to require all faculty members to conduct research, teach, and be involved in service, all to the same degree (Boyer, 1990; Brand, 2004; Moses, 1990), staying current with developments in their field could enable them to remain professionally alive and could establish some degree of research knowledge and skill. Faculty should demonstrate the capacity to do original research, study a serious intellectual problem, and present results to colleagues; they should keep informed of trends and patterns in their field (Boyer).
Problem Statement

The problem of low research production appears endemic in Jamaica. Although responsibilities in the 4-year post-secondary institutions in Jamaica involve research, teaching, and service, research activity as indicated by academic publications among the faculty is nominal. Unfortunately, literature detailing the reasons for this phenomenon in the Jamaican context is limited (Onyefulu & Johnson, 2009; Onyefulu & Ogunrinade, 2005). In this study, the researcher was particularly concerned with the low level of acknowledged research productivity among faculty in family and consumer sciences education programs in 2-year, 3-year and 4-year institutions in Jamaica.

FCS educators are engaged in meaningful activities that affect the students they teach. They write curricula for prescribed programs, employ a variety of strategies to encourage learning and present students with a wide range of learning experiences. They observe and evaluate students in training and make recommendations for improving practice, they devise innovative plans to create interest in the courses they teach, but many do not document and publish the work they accomplish (Personal Communication, 2009). Although many of these activities are a direct response to curricula upgrading to meet societal needs, or strategies for enriching and improving students’ learning, the lack of documentation of the processes, procedures, and results of their innovations and interventions makes it difficult to state unequivocally, that educators are employing the scientific process in conducting research and sharing their best practices in a systematic way. Given the gap in the existing literature on this topic, this study was designed to explore the influence of some selected factors on research engagement and productivity among FCS educators in higher institutions in Jamaica.

Purpose of the Study

Across disciplines, faculty in higher education in Jamaica are being encouraged to contribute to the knowledge base in their areas. The purpose of this study was to examine the relationship between attitudes toward research engagement, research norms, perceived control over the ability to conduct research and research engagement among family and consumer sciences (FCS) faculty in post-secondary institutions in Jamaica. More specifically, the study was aimed at determining: if faculty's attitudes toward research engagement was associated with their research engagement; if faculty's perceptions of norms regarding research engagement was
associated with research engagement; and if faculty’s perceived control over the ability to conduct research was associated with their research engagement.

Theoretical Perspective

The theory of planned behavior (Ajzen, 1975, 1991) was used in this study to explore the selected factors that were theorized to influence research engagement among FCS educators in Jamaica. Specifically, the theory was applied to investigate whether the following three factors had an impact on their engagement in research: (1) attitudes toward research engagement – behavioral beliefs, (2) perceptions of norms regarding research engagement – normative beliefs, and (3) perceived control over their ability to conduct research – control beliefs. This theory was used as it has emerged as one of the most influential and popular frameworks for studying human actions (Ho, Lee, & Hameed, 2008; Miller, Rainer, & Corley, 2003; Schifter & Ajzen, 1985; Terry & O’Leary, 1995).

According to Ajzen (1975, 1991, 2002), human behavior is guided by three considerations shown in Figure 1; behavioral beliefs, normative beliefs, and control beliefs.

![Figure 1. Model of The Theory of Planned Behavior (Ajzen, 2006). Source http://people.umass.edu/ajzen/tpb.diag.html](http://people.umass.edu/ajzen/tpb.diag.html)

The theory of planned behavior posits a link between attitude, subjective norms, perceived behavioral control and behavior. Human behavior is guided by beliefs about the likely outcomes of the behavior and the evaluation of the outcomes, beliefs about the normative
expectations of others and the individual’s motivation to comply with these expectations, and beliefs about the presence and power of factors that may facilitate or impede performance of the behavior (Ajzen, 2006). A central factor in the theory is the individual’s intention to perform a given task. Intention is a composite of the motivational factors that influence a behavior. These factors indicate how hard a person is willing to try, and how much effort one is planning to exert to perform a behavior. The stronger an individual’s intention to engage in a behavior, the more likely it will be performed. A behavioral intention will only be expressed if one decides to perform it on one’s own volition. Some non-motivational factors such as the availability of requisite opportunities and resources inclusive of time, money, skills, and cooperation of others also dictate the performance of a behavior. When these are available and one intends to perform the behavior, one should succeed in doing so (Ajzen, 1991).

There are three independent determinants of intention. These are attitudes towards the behavior, subjective norms, and perceived behavioral control. Attitude towards the behavior refers to a person’s favorable or unfavorable evaluation of the behavior to be performed and its consequences. It refers to the attribute, whether positive or negative, that the person links to the behavior such as the cost incurred by performing the behavior. Since the attributes linked to the behavior are already viewed as either positive or negative, one automatically and simultaneously acquires an attitude toward the behavior (Ajzen, 1991). In effect, individuals tend to form favorable attitudes toward behaviors they believe will have largely desirable consequences, while forming unfavorable attitudes towards behaviors they associate mostly with negative outcomes (Ho, Lee, & Hameed, 2008).

Another determinant, subjective norms, refers to the perceived social pressure to perform or not to perform the behavior. The role of “important others” in approving or disapproving performing a given behavior is crucial to the concept of subjective norms. “Subjective norms are a person’s own estimate of the social pressure to perform or not to perform a behavior. Subjective norms are assumed to have two components which interact: (1) beliefs about how other people, who may be important to the person, would like him or her to behave, and (2) the positive or negative judgments about each belief” (Francis et al., 2004, p. 9). Significantly, people are more motivated to perform a behavior when the referent group or individual is more important to them (Ho, Lee, & Hameed, 2008).
The third determinant, perceived behavioral control, more appropriately “perceived control over performance of a behavior,” refers to the perceived ease or difficulty of performing the behavior (Ajzen, 2002).

It is the extent to which a person feels able to enact the behavior. Perceived behavioral control has two aspects: (1) how much a person has control over the behavior, and (2) how confident a person feels about being able to perform or not perform the behavior. It is determined by control beliefs about the power of both situational and internal factors to inhibit or facilitate the performing of the behavior (Francis et al. 2004, p. 9).

According to Perry et al. (2000) some people may believe they possess a greater capacity to influence events than they have in reality, and others may believe they have less capacity than they actually have. Ajzen (1991) said that the person who is confident that he can master the activity is more likely to persevere than the person who doubts his ability.

The theory of planned behavior proposes that perceived behavioral control together with behavioral intention can be used directly to predict behavioral achievement, that is, one is able to perform a behavior when one has the intentions and perceived behavioral control. When the person has complete control over behavioral performance, intentions alone should be sufficient to predict behavior and increase effort and perseverance; however, perceived behavioral control is necessary when volitional control over behavior declines. While both intention and perceptions of control predict behavior, in a given situation, one may be more applicable than the other, and in fact, only one of the two predictors may be needed (Ajzen, 1991).

Other theories considered appropriate to study engagement in research were the social exchange theory and the social learning theory. Social exchange theory explains interpersonal behaviors in terms of exchange and rewards. The fundamental principle of this theory states that humans choose behaviors that are likely to satisfy their interests. They use a cost-benefit analysis and comparisons of alternatives when they intend to act. The theory is applicable when people make decisions about behaviors they will engage in and those they will avoid (Chibucos, Leite, & Weis, 2005; Serow, 2000).

Social learning theory suggests that individuals choose or increase behaviors that are likely to have positive consequences and avoid those that have negative consequences. Rewards increase behavior. Individuals differ on what is considered rewarding; some things that are rewarding for some persons may not be rewarding for others (Chibucos, Leite, & Weis,
For example, promotion may be rewarding for someone who is new in his/her career, but not for someone who has attained the highest level of promotion or one who is approaching retirement.

The study required a theory that could provide insight into the present situation, had potential to predict what could be expected, and could facilitate focused intervention that is feasible. The Theory of Planned Behavior allowed for the exploration of three factors that have been proven to be strong predictors of behavior in varying situations (Lodorfos & Dennis, 2008; Martin, Oliver, & McCaughtry, 2007). Although the Social Exchange Theory and the Social Learning Theory also explain behaviors, the Theory of Planned Behavior seemed to encompass more factors that were applicable in an exploratory research.

Therefore, the Theory of Planned Behavior was considered most appropriate as it allowed for an examination of fundamental factors that affect research engagement, as shown in the conceptual model of research engagement in Figure 2. The figure is an adaptation of Ajzen’s (2006) theoretical model. The theory was applied to conceptualize the participants’ engagement in research as being dependent on their attitudes toward research engagement, their perceptions of norms regarding research engagement, and their perceived control over the ability to conduct research.

![Conceptual model of factors associated with engagement in research. Adapted from The Theory of Planned Behavior (Ajzen, 2006). Source http://people.umass.edu/aizen/tpb.diag.html (No permission required for use).]
Based on Ajzen’s theory, it was theorized that if the participants had a favorable attitude toward conducting research, and if they perceived social pressure from important persons to conduct research, they would engage in conducting research. Likewise, if they felt able to conduct research, given their beliefs about their power to control both situational and internal factors to inhibit or facilitate their conducting research, they would engage in conducting research.

**Research Questions**

The research was guided by the overarching question: “Are attitudes toward engaging in research, perceptions of norms regarding research engagement, and perceived control over the ability to conduct research associated with research engagement?”

The specific research questions were:

1. Are attitudes toward engaging in research associated with research engagement?
2. Are perceptions of norms regarding research engagement associated with research engagement?
3. Is perceived control over the ability to conduct research associated with research engagement?

**Research Hypotheses**

The following hypotheses were tested:

H₁. More positive attitudes toward engaging in research will be associated with higher levels of research engagement.

H₂. More positive perceptions of norms regarding research engagement will be associated with higher levels of research engagement.

H₃. More positive perceived control over the ability to conduct research will be associated with higher levels of research engagement.

**Chapter Summary**

Research among faculty in higher education is relevant to the status and progress of the institutions. The movement toward becoming productive researchers in newly emergent universities, although recognized as important, is often hindered by the multiplicity of tasks
expected and undertaken. Female faculty members in higher education are generally less productive researchers than their male counterparts, at least in the way that research is currently defined and due to their involvement with a multiplicity of tasks. In the FCS profession, which is dominated by female educators, research productivity also is low for these reasons. Limited research has been conducted to ascertain factors associated with research productivity of FCS educators in Jamaica.

Specifically, the purpose of this study was to examine the relationship between attitudes toward research engagement, research norms, perceived control over the ability to conduct research and research engagement among family and consumer sciences (FCS) faculty in post-secondary institutions in Jamaica. The findings of this study are intended to contribute to the body of knowledge relating to research productivity of FCS faculty in Jamaica.
CHAPTER 2

REVIEW OF LITERATURE

This chapter examines literature pertaining to a definition of research, a distinction between research and scholarship, the importance of research in higher education, research productivity and the impact of attitude, subjective norm, and perceived control over the ability to conduct research. Contextual issues related to research and research productivity in relation to women and FCS, a female dominated profession, are also reviewed.

Definitions of Research

Neumann (1993) observed two types of views expressed in literature about a definition of research. The first is a broad view which takes into account disciplinary differences and highlights the wide and diverse range of research activities in different settings, and the second, a narrower view which includes only the discovery of new knowledge, often with an emphasis on quantitative techniques.

Smith (1981) supported a broad view of research by suggesting substituting ‘scientific research’ with the more liberating ‘disciplined inquiry.’ She defined disciplined inquiry as the dispassionate search for truth that is valued over ideology. It must be conducted and reported so that its logical argument can be fully examined. It does not depend on surface plausibility or eloquence, status, or authority of its author. Error is avoided and evidential test and verification are valued over ideology. (p. 585)

Gliner and Morgan (2000) expanded Smith’s definition by noting that research is systematic investigation that must be carried out and reported in a journal or at a conference so that it can be examined by others to determine, whether given the same situations, they would come to the same conclusion as the investigators.

Moses’ (1990) definition seems to support the narrow view of research. Research is defined as the systematic and rigorous investigation aimed at the discovery of previously unknown phenomena, the development of explanatory theory and its application to new situations or problems, and the construction of original works of significant intellectual merit.
Neumann’s (1993) review of several studies revealed that academics in different fields have different understanding of the term ‘research.’ In some disciplines research refers to what is done in projects; in others, it involves field work or laboratory experimentation, or even the study of documents in a library. A diversity of activities is carried out by different fields under the umbrella of research including: scholarship, theory construction, observing and chronicling, experiment, theory testing, design, development, criticizing and elucidating, artistic creation, and consulting and advising. Research activities may include either the discovery of new knowledge or the creation of original art, provided they are disseminated through publication; “it is only through publication that the work becomes a significant advancement of knowledge or the arts” (Neumann, p. 98).

To determine the views senior academic administrators had of research, Neumann (1993) interviewed 33 administrators from two universities with well-established research. The interviewees represented broad disciplinary groupings of the humanities, sciences, social sciences, and professional areas. They comprised vice chancellors, deputy and pro-vice-chancellors, chairs of the academic board or senate, deans, heads of school, and heads of department in universities; authority resides in senior academics, and different disciplines espouse different values and cultures.

Neumann (1993) found that the focus of research differed by discipline. Research in the humanities involved more of what is referred to as scholarship, although interviewees from the humanities spoke of new forms of research more closely aligned to characteristics of the sciences. Research activities in the sciences involved the discovery of new facts through experimentation and laboratory work, or ‘working at a bench’; in the professional areas research was practical, relating to applied questions raised by the practicing professionals or external interest groups, while in areas such as architecture, research included artistic design. Interviewees from the social sciences focused on the lack of theoretical research. The participants agreed that researchers tried to emulate the sciences and hence devoted much attention to experimentation.

Generally, all interviewees were dissatisfied with their inability to provide a clear definition for research. They felt that their definition was either too broad and trite, or too restrictive to adequately convey the diversity of forms research activity could take. Neumann (1993) found the two most frequent descriptors for research were ‘new,’ that is the discovery of
something new, and ‘inquiry,’ the asking and answering of questions which is fundamental to academic and research (p. 101). Neumann’s analysis of the interviews showed overall, that the participants agreed that research has three important elements: (1) creation of new knowledge, (2) the pursuit of a sustained line of inquiry, and (3) the dissemination of research results through publication for the scrutiny of peers.

Research involves sound ideas based on good information produced by trustworthy inquiry and then presented clearly and accurately. “Research goes on in laboratories and libraries, in jungles and ocean depths, in caves and in outer space, in offices, and in this age of information, even in our own homes” (Booth, Colomb, & Williams, 2008, p. 9). We benefit from the research of those who report it. We carry on their work by asking new questions and hopefully, answering them (Booth et al.).

In the institutions under study in this research, the broad view of research as promoted by Smith (1981) is supported. At the University of Technology published research means research or creative works which have been published in a refereed journal (UTech, 2001). The same applies at the Northern Caribbean University (Personal Communication, 2009).

**Research and Scholarship**

The dominant view of a scholar as a researcher, with publication as the yardstick by which productivity is measured, has been challenged by academicians desiring a definition that recognizes the educators’ interpretative and integrative work (Boyer, 1990). Boyer noted that scholarship encompasses four separate yet overlapping functions of the college professor: the scholarship of discovery, the scholarship of integration, the scholarship of application, and the scholarship of teaching.

The scholarship of discovery refers to research which contributes to human knowledge and to the intellectual climate of the college or university. The scholarship of integration involves making connections across disciplines, and interpreting what is discovered in ways to provide larger more comprehensive meanings. The scholarship of application implies the interaction of both theory and practice. It is a dynamic process which is not limited to the application of discovered knowledge, but to the new understandings that can arise from the very act of application. The scholarship of teaching is the avenue through which the work of the
professor is understood by others. Pedagogical procedures must be carefully planned, carefully examined, and relate directly to the subject taught (Boyer, 1990).

Another perspective of scholarship presented by Moses (1990) is “the analysis and interpretation of existing knowledge, aimed at improving, through teaching or by other means of communication, the depth of human understanding” (p. 354). In a study of 400 teaching-research staff at an Australian university, she illustrated the breadth of scholarship undertaken by professors in different disciplines such as Chemistry, Engineering, English, and Law; faculty in the Humanities were disadvantaged if the profile of the professor was narrowed to the number of publication and number of grants earned. This list of scholarly activities demonstrates that both teaching and research overlap.

1. Informal discussion with colleagues in the department about common research interests and teaching
2. Joint research projects with colleagues in the department
3. Reviewing of articles for a professional journal
4. Participating in staff and postgraduate seminars
5. Developing a new way of dealing with a problem
6. Engaging in systematic study to gain new knowledge, or to acquire a new research technique
7. Developing a new course in a subject area
8. Serving as a guest lecturer in a colleague’s class
9. Delivering a conference paper

Elton (1986) contended that the relationship of teaching and research is mediated through scholarship. He posited that teaching, scholarship, and research take place in universities but that scholarship is recognized as “research” only in the humanities and not in the sciences. He argued that much of the creative work that takes place in science is also scholarship, as scholarship is concerned with a new interpretation of what is already known, which is particularly true of theoretical research.

In distinguishing between research and scholarship, the 33 interviewees in Neumann’s (1993) study said firstly, scholarship provides the context of the research process, and is a broader notion than research, spanning the entire endeavor of academic work. Scholarship is the part of the inquiry that provides understanding of the field. Secondly, scholarship involves the
ability to glean information and respond critically to what has been done in the field, and it involves more of the reflective and contemplative activities that go along with research. Respondents further described scholarship as embracing teaching, mentoring, consulting, and writing. They agreed that if research provides the depth to academic enquiry, then scholarship provides the element of breadth.

Participants from the sciences contended that real research consists of theorizing, experimenting, and theory-testing, and applies only to the hard quantitative sciences, particularly to the expensive forms such as high-energy physics. They saw research as exploring the new frontiers of knowledge, and they described scholarship as keeping up to date with the research literature in one’s field, especially in fields which have few new frontiers of knowledge left. This dichotomous view is also used to link research with science and with social or economic value, while scholarship is applied to the humanities and implies private benefit to the individual rather than the community (Neumann, 1993).

Research and Teaching

Brown (2006) assessed two assumptions regarding the relation between research and teaching. The assumptions were: (a) there should be an overt and strong link between one’s own research and one’s teaching; and (b) one’s active involvement in the research process should, at the very least, underpin the quality of one’s teaching, and at best, improve it. Although Brown found that there is indeed a link between teaching and research, the strength of the link was questionable. One of the beliefs on which the academic’s obligation to do research is founded is that “your teaching is enhanced by your research” (p. 398). This is an entrenchment in the university system, influencing the work pattern of academic staff and the funding of departments. At the same time Brown believed that research supports teaching, she questioned the link on the basis that the need to do research was not only a matter of intellectual or disciplinary importance but was complicated by political and vested interests. She contended that while research and teaching can be bridged by scholarship or learning, or both together, it is unnecessary and counter-productive for academics to be simultaneously good researchers and good teachers, especially as this requirement is unlikely to be realized in practice. Brand (2000) also supported this view. Brown emphasized that there is no obligation for academics to overtly link their own personal research to their teaching in order to be considered good teachers.
Gray and Hoy (1989) proposed three models linking teaching and research. Model one suggests that all members of the staff should undertake research alongside teaching. In this model, research is usually done at the individual level with each staff following his or her personal interest. Status is an individual matter. This model tends to result in low output research which is spasmodic and unexciting with little sustained effort and little development. Research is thought to be subject-related and a buttress for teaching, but not as an end in its own right.

In model two, certain members of staff concentrate on teaching and others on research and publication. Research is usually done at an individual level although there may be associations with academics in other departments or other institutions. There tends to be a question as to where the balance of status falls, to the researchers or the teachers. Those who concentrate on research tend to overvalue their contribution to the department, and successful track records belong to individuals, and not to the department, despite the fact that individual reputations take a long time to build up (Gray & Hoy, 1989).

In model three, certain members of the departmental staff work together to establish some concentration on research, and gain expertise in obtaining funding for group projects while the other members concentrate either on teaching or individual research. The status of lecturers in the department depends on the interests of the head of department. A group reputation is built up, and success may be rewarded not only internally, but by other institutions so that the home university is seen as a base for exciting and remunerative research (Gray & Hoy, 1989).

**Research Productivity**

Research productivity in knowledge-based settings such as academic institutions, and industries such as information technology, biotechnology, and management consulting has implications for reputational capital, the institution’s competitiveness, and ultimately survival (Williamson & Cable, 2003). Williamson and Cable examined the research productivity of 152 new hires in accredited business schools in research–oriented universities in the United States of America who started their jobs between 1987 and 1992. The sample was drawn from several areas of the management discipline, and participants identified themselves as strategy researchers, human resource management researchers, professionals working in quantitative methods, and management science professionals, among others.
Two measures were used to determine research productivity among this group. They were the number of academic journal publications in journals with established quality ratings and the number of Academy of Management (AOM) conference presentations. This conference is described as the premier academic conference within the management discipline.

The predictors of early career research productivity were advisor qualifications, pre-appointment productivity, academic placement, and academic origin. Williamson and Cable (2003) tested the relationships of the variables using structural equation modeling. The results suggest that the variables had either direct or indirect effect on research productivity. The effect of the predictors varied over the years of the faculty’s work. For example, they found that pre-appointment publications and presentations had the largest total effect on productivity between years one to three, while advisor research productivity had the largest total effect during years four to six. Overall, the 152 faculty members published 285 papers in the premier management journals during their first six years of appointment for an average of 0.31 articles per year.

Research productivity in higher education is a determinant of the funding received for research. Ramsden (1999) reported that in Australia, research productivity was determined by a composite index which is calculated based on a weighted sum of inputs from competitive grants, and outputs in the form of audited publications and number of higher research degrees completed. The composite index is the foundation for performance-based funding in higher education in Australia; this index represents a university’s share of the total universities’ research. Each university’s share is known as research quantum (RQ). The RQ is an indication of each university’s performance in relation to others and determines funding allocation. This is a proxy for research productivity (Ramsden, 1999).

The main predictor of research productivity in Ramsden’s (1999) study was institution type. The institutions were classified based on Marginson’s typology which classifies the traditional, older pre 1987 universities as “Sandstones,” those claiming leadership in research and professional training and emphasizing social prestige combined with academic value; the “Wannabee Sandstone Universities,” another 10 pre-1987 universities; the universities of technology which emphasize graduate employability and applied research; and the “New” universities comprising the smaller colleges of advanced education.

The indicators of institution type included percentage of staff with doctor of philosophy (Ph.D.) degree, student-staff ratio, student retention rate, student progress rate, good teaching,
generic skills graduates developed for employment, overall satisfaction of graduates with their courses, graduate employment, and proportion of graduate who proceed to further full-time study. The results showed that institutions which had a percentage of faculty with Ph. D qualification, a high proportion of students going on to further studies, and a favorable student to staff ratio had a higher level of research productivity.

Fairweather (2002) examined the percentage of faculty who were productive in either research or teaching and those who were simultaneously productive in both teaching and research in post-secondary institutions in the United States. Data for the research were gathered in the 1992-93 National Survey of Postsecondary Faculty (NSPF 1992-93). The sample comprised 29,764 part-time and full-time faculties in 962 two- and four-year colleges and universities. In all 25,780 full- and part-time faculties from 817 institutions responded. The institutional sample was stratified on the basis of source of control, public or independent, and type of institution, based on the Carnegie classification.

Based on a decision model Fairweather (2002) created, participants were classified into “high teaching productivity” and “high research productivity” groups. Productivity was defined as the ratio of outputs to input, that is, a measure of what is produced with time. Research productivity was determined on the basis of the number of refereed publications, inclusive of articles, creative workbooks, textbooks, monographs, chapters in edited books, and published reviews of books over the last two years.

Publishing productivity ranged from a high of about six refereed publications for faculty in research universities to less than two publications for faculty in liberal arts colleges. About 50% of faculty were highly productive teachers regardless of type of institution. There were about 39% highly productive researchers in liberal arts colleges compared to almost 50% in research-oriented institutions. The researchers found that about 22% of all faculty in four-year institutions simultaneously attained high productivity in teaching and research.

Research and Research Productivity in Family and Consumer Sciences

Although it is recognized that the field of FCS (formerly home economics) is comprised of predominantly female professionals, women in FCS have been active researchers over time. Ellen Swallow Richards, who has been identified as “the woman who founded ecology” (Langenheim, 1996), and who also led the home economics movement in the early 20th century
(Stage & Vincenti, 1997), was a productive researcher even before women were recognized as researchers (Langenheim). Scholars such as Nancy Tomes and Margaret Rossiter explored how race, class, and gender influenced women’s options in the marketplace and resulted in greater understanding of the obstacles women encountered and the strategies they employed to gain legitimacy as the field of home economics developed (Stage, 1997).

Home economists/family and consumer sciences professionals in the later 20th and early 21st century have continued to engage in research. Nickols et al. (2009) note that historically, home economics departments were pioneers in research playing key roles in identifying nutrients and establishing standards for dietary health. They have continued to periodically update recommended dietary allowances and identify standards for populations that are prone to nutrition-related diseases. Redick in 1996 critiqued research in home economics/family and consumer sciences that had been conducted from 1985 to 1995 in 29 different areas within the discipline (Johnson, 2007). Johnson reviewed 187 articles published by FCS professionals in three FCS-related journals, *Journal of Family and Consumer Sciences Education, Journal of Family and Consumer Sciences*, and the *Journal of Family and Consumer Sciences Research*. This number represented about half of all the FCS related articles that were published in these journals in that decade. She reviewed published works that addressed contemporary issues in education and FCS education related to curriculum, consumer education, careers, decision making, ethics, entrepreneurship, gerontology, nutrition, parenting education, diversity, and reform, among others. Johnson categorized 95 of the 187 articles as research, 18 as position papers and 76 as best practice. Fifty-eight of the research studies were empirical, 13 qualitative, three experimental, two action research, five mixed methods, four Delphi, two content analysis, and five were program evaluations.

Johnson (2007) noted, however, that although the quality of the research reviewed was extremely high, in some instances, there were only few articles published in certain critical areas such as effectiveness studies, occupational programs, and audiences in other countries. This indicated a cause for concern, and she recommended that work in these areas be continued. Smith and Prouse (2001), Canadian home economists, opined that the changes in world issues that impact families make it imperative for FCS professionals to engage in research. They emphasized the fact that home economics grew out of the changing nature of work and its relationship to changing family functions. They stressed that present changes in the economy
globally affect the quality of everyday life for families and continue to make research engagement important for FCS professionals.

Nickols et al., (2009) assert that research is a vital mechanism through which the body of knowledge of a particular profession is replenished and codified. This body of knowledge reveals the collective knowledge that may distinguish it from the body of knowledge of another and establishes boundaries and the place of professional discipline in epistemological schemata. Such boundaries are important because they provide the intellectual foundation for communication and successful practice, and help maintain the identity and cohesion of the profession. (p. 268)

In her recommendations for continued research in FCS and inherently adding to the body of knowledge in the discipline, Johnson (2007) suggested a focus on research in distance education, technology, alternative certification, supply and demand of teachers, adolescents, diversity, problem-based critical science practice, career clusters and pathways, professional organizations and their structure, nutrition and wellness, and collaboration. She also recommended continued professional development in research and scholarly writing with a focus on increasing skill and knowledge of conducting quality research using multiple modes of research. Johnson’s recommendation regarding developing skills in research is relevant for FCS educators in post-secondary institutions in Jamaica as they focus on needs in the work system, social structures, and family functioning particular to the country.

**Attitudes toward Engaging in Research and Research Engagement**

Sardo-Brown (1992) studied a group of 39 teachers to measure trends in teachers’ attitude change toward research. She used a 20-item Likert-type scale comprised of six general categories of teachers’ attitude; (a) the importance of educational research, (b) specific difficulties interpreting educational research, (c) preferred ways of learning educational research, (d) interest in conducting research, (e) general attitudes toward educational research, and (f) the ability to find systematic answers to classroom problems. The questionnaire was designed to assess the teachers’ attitude regarding the importance of educational research to teaching and to uncover specific difficulties teachers had with interpreting research findings.

The two items that showed change in the positive direction were teachers’ attitude towards statements that research in their field is informative and that keeping up with current
research in their field is important. Most teachers said they identified readily with the purpose of the study, appreciated the importance, and were impressed that the data were collected in a classroom setting.

Research on faculty’s attitudes toward research appears limited. While one researcher (Serow, 2000) examined faculty attitudes toward teaching in a research institution, not much literature appears to address their attitudes toward engaging in research in similar institutions or in teaching institutions.

**Perceptions of Research Norms and Research Engagement**

Colbeck (1998) explored how “governance structures, paradigm consensus, policies, resources, communication patterns and colleagues’ values influenced the ways and the extent to which faculty integrated teaching and research” (pp. 651-652). Faculty face expectations from two work contexts about how to accomplish teaching and research goals: the organizational contexts of their colleges and universities and the professional contexts of their disciplines.

Colbeck (1998) used direct observation of faculty activities and interviews with faculty and administrators in four departments, two (physics and English) in a Research university and two (similar departments) in a comprehensive university with unionized faculty. The sample included 12 white male, full professors who were nominated by their chair because they were thought to be excellent in both teaching and research. They were each observed for five non-consecutive days on different days of the week, at different times of the semester, and across semesters. Participants were interviewed on the days of observation to get information about confidential meetings and work accomplished at home, after regular hours, or off-campus the previous day or weekend. Data were collected for 587.2 hours, and a total of 4049 teaching and research activities were recorded. Teaching activities included classroom instruction, class preparation, informal instruction, advising, developing new courses, grading, and participating in meetings about teaching. Research activities included (a) conducting new inquiry (for example, investigating or developing new knowledge), (b) scholarship (for example, engaging in tasks that contributed to professional development or general expertise in one’s field), (c) working on logistics such as tasks that directly support inquiry, (d) presenting, (e) writing, and (f) doing grant work.
Colbeck (1998) analyzed the ways and extent to which faculty integrated teaching and research by calculating the proportion of time the faculty allocated to each goal and action of work. The extent to which teaching and research were integrated was analyzed, and similarities and differences in patterns were compared across institutions using within- and cross-case analyses. She found that classroom-oriented teaching actions were similar across physics and English departments across institutions. This obtained whether the faculty were teaching undergraduate, master’s, or doctoral students. She also found that faculty were more likely to integrate teaching with research when their teaching actions involved formal teaching and course development, and when their research actions involved inquiry, presentations, or scholarship. Examples of integration included a professor reading from a manuscript that he was reviewing for a publisher on a topic related to his current research, highlighting several arguments in the manuscript, and using the arguments to stimulate class discussion. Faculty in English found it easier to integrate their teaching with their research because the courses were less structured. A course such as *The Theory of Literature* could be conceived in various ways while a class in physics had a high degree of “accepted knowledge” and was not as flexible. Research roles in physics were therefore different from teaching roles.

Colbeck (1998) found that the universities’ policies made a difference in the ease with which faculty could integrate research and teaching. Faculty at the comprehensive university had a wide range (14) of activities that qualified as research. These included articles in refereed or trade journals, newsletter articles and creative works published in the popular media. In contrast, the evaluation of faculty research in the Research I university focused not only on what should be included in research evaluation but also included how the research should be evaluated, that is, “The evaluation will normally include outside evaluation of the candidate in comparison with the very best persons in his or her field at the same level of professional development” (Colbeck, p. 660).

Faculty in both types of universities and both disciplines felt they had more work demands than they could reasonably accomplish. They indicated overwhelming administrative expectations of both teaching and research. Some faculty responded to the expectation by integrating research and teaching while others concentrated on one at the expense of the other. One faculty member said the dean and chair made allowance for him to teach the same courses
repeatedly so he could get research done. Overall, the faculty in Colbeck’s (1998) study found that integrating teaching and research helped them manage the demands of both activities.

It appears, however, that in spite of the challenges the faculty members faced in being productive in research and teaching, the context of their discipline and the type of institution in which they worked influenced their level of research productivity. Although English faculty members exercised more latitude in designing their courses and thus found it easier to integrate research into their teaching, faculty in physics found it less easy to do so because of what constituted “accepted knowledge” and the level of inquiry they were expected to pursue in their discipline. In spite of the differences in requirements in the disciplines, both groups of faculty knew what was required of them. The institutional requirements also clarified what was research in the different types of institutions. Although the requirements were different, the faculty had an understanding of what counted as productive in their individual situations. The existence of the policies made faculty aware of the institutional expectations.

**Perceived Control over the Ability to Conduct Research and Research Engagement**

Perry et al. (2000) assessed research productivity by newly hired staff in different types of institutions on the basis of perceived control over the ability to conduct research or perceived control. Perceived control was seen as relevant to this study given the job demands and high degree of autonomy, the repeated challenges and threats to ego that accompany this type of work in academia. Perceived control referred to individuals’ subjective beliefs about their capacity to influence events throughout their development.

Two aspects of perceived control were assessed in this study: (a) perceived control-entity (PC-entity) measured the extent to which the participants believed they possess the personal qualities, such as the intelligence and publishing skills, necessary to conduct research and (b) perceived control-influence (PC-influence) which assessed the participants’ ability to effect broad-range research outcomes such as obtaining money for on-going research programs, funding for conference attendance, and receiving salary increases.

The researchers hypothesized that institution type, age, and gender could have both direct and indirect effect on productivity via PC-entity and PC-influence. They had three groupings of institutions: (a) the community college deemed to have little commitment to research, (b) the
liberal arts/comprehensive institutions, having a moderate commitment to research, and (c) the research I university, deemed to have a major commitment to research.

Data for this study are from a large three-year study of recently appointed, full-time, tenure-track faculty members. The variables included were drawn from the survey that was mailed at two time points, Fall 1991 and Fall 1992. The sample of 250 newly hired faculty was drawn from five U.S. institutions, two liberal arts college, one multi-campus community college, one comprehensive I university, and one research I university.

Their measure of productivity consisted of a frequency count of the articles, reports, creative works; book reviews; chapters in edited books; books and textbooks; exhibitions and performances; conference presentations; and grant submissions. Book publishing was given a higher weighting than other materials and activities.

Relationships between the variables were tested using correlations and a path analysis. The results indicated that gender was weakly correlated with PC-entity but not with PC-influence or research productivity. Age correlated with research I university showing that faculty in that institution tended to be younger. PC-entity correlated with research productivity, that is, faculty who had higher scores in PC-entity were generally more productive. PC-influence did not significantly correlate with research productivity. Path analysis showed that the institution variable was the most dominant variable for both perceived control measures. Gender and age did not have a large impact except that age was related to PC-entity. This showed that older faculty perceive themselves as having slightly more research ability.

Perry et al. (2000) found that faculty who perceived themselves as having the research skills and attributes were more productive than their counterparts with low perceived control. Perceived control had a greater impact on research productivity than age or type of institution.

**Chapter Summary**

The core task of the educator in higher learning is promotion of learning, especially the development of students’ learning abilities, advancing the sum of human knowledge, and preparing students to become good citizens. Educators fulfill their role in the education process through presenting content, encouraging students’ inquiry and providing general instruction to students to prepare them for public service. Each of these roles enables faculty members to generate and disseminate knowledge to peers, students, and external audiences. As faculty
members teach, they disseminate basic or applied knowledge to develop students’ learning abilities (Hamrick, 2009).

There are arguments for educators to research and for researchers to teach as a means of improving their work. However, despite the acceptance of the tripartite mission of faculty in higher education of teaching, research and professional service, there is concern as to whether this can realistically be done, or indeed, needs to be done to demonstrate quality. The literature is not conclusive that research improves faculty teaching, but it is clear that there are benefits associated with faculty in higher education engaging in research especially to the extent that they are current with the research in their discipline, seeking to interpret it and applying to their particular situation, and adding to the body of knowledge in their profession.

FCS educators must add to the body of knowledge in their profession by engaging in research. Early home economists made historical impact by studying the application of science to solve problems ranging from food safety to optimal child development. Likewise, future FCS researchers must continue to investigate solutions to problems associated with societal changes and that affect the family. They must pay attention to emerging critical areas such as effectiveness studies, studies involving occupational programs, and studies involving diverse families and audiences in other countries. Improving their research skills will allow them to conduct many forms of research of importance to families, the profession, and the global society.

Several factors influence faculty members’ engagement in research. Their attitude toward research, the requirements of the discipline in which they are trained, and the policies of the institutions in which they work are important. Faculty’s personal abilities and the level of control they perceive they have over the environment in which they work are also important.
CHAPTER 3

RESEARCH METHODOLOGY

This chapter presents information on the methodology employed in conducting this research. It details the design of the research, the method used to select the sample, and the procedures followed in developing the instrument, collecting and analyzing the data.

The purpose of this study was to explore three factors hypothesized to be associated with family and consumer sciences (FCS) educators’ engagement in research: attitudes toward research engagement, perceptions of norms regarding research engagement, and perceived control over ability to conduct research. The hypotheses suggest that more positive attitudes toward engaging in research, more positive perceptions of norms regarding research engagement, and more positive perceived control over the ability to conduct research will be associated with higher levels of research engagement.

Research Questions

The overarching research question was “Are attitudes toward engaging in research, perceptions of norms regarding research engagement, and perceived control over the ability to conduct research associated with research engagement?”

Specifically, answers were sought to the following questions:

1. Are attitudes toward engaging in research associated with research engagement?
2. Are perceptions of norms regarding research engagement associated with research engagement?
3. Is perceived control over ability to conduct research associated with research engagement?

Research Hypotheses

The following hypotheses were tested:

H$_1$. More positive attitudes toward engaging in research will be associated with higher levels of research engagement.

H$_2$. More positive perceptions of norms regarding research engagement will be associated with higher levels of research engagement.
H₃. More positive perceived control over the ability to conduct research will be associated with higher levels of research engagement.

**Study Variables**

The independent variables were attitudes toward engaging in research, perceptions of norms regarding research engagement, and perceived control over the ability to conduct research. The dependent variable in this study was faculty’s engagement in research.

**Definitions of Terms**

For clarity, the following terms used in the study are defined:

**Research engagement.**

This is defined as applying the scientific process in conducting research and disseminating the findings to the FCS community and the wider society through journal publications; writing, reviewing and revising books and book chapters; and making presentations at professional seminars, conferences and workshops, and writing newspaper articles for the consuming public at large. Research engagement was specifically measured through the educators’ level of research productivity. Patterning Fairweather (2002), the measure was achieved using a simple count of the number of publications the participants had produced and the number of conference presentations they had made, instead of using weighted scales which may have been impractical given the context of this research.

**Research productivity.**

This is a measure of scholarly output for each faculty member inclusive of the number of publications and conference presentations over the last five years. Publications deemed eligible in this study included research articles in peer reviewed journals, creative works, workbooks, textbooks, monographs, chapters in edited books, articles in newspapers, trade journals, magazines, and published reviews of books. Conference presentations included presentations faculty made about the research they conducted or innovations they developed at professional conferences.
Research Design and Procedure

The literature on Caribbean faculty members in general and FCS faculty members in particular, is limited. A correlational design was used to explore relationships between the independent variables and the dependent variable. While Fishbein’s and Ajzen’s (1975) and Ajzen’s (1991, 2002) models of planned behavior suggest a penultimate variable, intent or planned behavior, this research was able to examine the actual behavior of engaging in research.

The following steps were taken to collect and record the data for analyses: first, the researcher developed the questionnaire (see Instrumentation below and Appendix A) following the Theory of Planned Behavior (TPB) questionnaire design procedures (Ajzen, 2006; Francis et al., 2004). The survey was converted into an online version using Survey Monkey.

Second, the sample was identified and sent an invitation (Appendix B) to participate via email after approval was received from the Institutional Review Board Human Subjects Committee (IRB) (Appendix C). Informed consent was obtained and participants were informed of the voluntary nature of their participation and the protection of confidentiality (Appendix D). Third, data from the survey were entered and statistical analyses conducted using the Statistical Package for the Social Sciences (SPSS) version 15.

Sample.

The focus was on Jamaican FCS educators because while they may have similar low levels of research outputs as other educators in emerging universities (Onyefulu & Ogunrinade, 2005), FCS educators are strategically positioned to make a significant contribution in the area of family research in a country that is plagued by negative family situations. There are 52 FCS educators in 11 post-secondary institutions in Jamaica and all were sampled.

Family and consumer sciences educators are professionals who have obtained some level of qualification in family and consumer sciences/home economics education either at the certificate, diploma, baccalaureate, master’s, or doctoral level. They teach family and consumer sciences courses inclusive of food and nutrition, family studies, clothing and design, and housing. They may also teach courses in education, psychology, tourism and hospitality, dietetics, and pure sciences at a post-secondary institution.
Instrumentation.

The instrument used to collect data was a survey questionnaire. The questionnaire was developed by the researcher under the supervision of survey development experts and based on guidelines for developing a TPB questionnaire (Ajzen, 2006; Francis et al., 2004). Experts in survey development assessed the instrument for face validity and faculty in the Family and Child Sciences Department at the Florida State University and in the School of Computing and Information Technology at the University of Technology, Jamaica reviewed the questionnaire items. They were asked to comment on the items’ ambiguity, redundancy, length, depth; format of the questionnaire; and the time it took to complete the survey. They were also asked to assess revisions made based on their feedback. Internal consistency reliability of the items was determined after all changes were incorporated. The internal consistency of the survey was determined using Cronbach’s alpha. The coefficient alpha for the instrument was $\alpha = 0.884$. Frances et al. (2004) recommend an internal consistency reliability of $\alpha \geq 0.6$ (p. 30) for a TBP questionnaire.

The questionnaire consisted of 11 demographic items, 36 content questions that measured the independent variables (attitude, subjective norm, and perceived behavioral control), and one nine-part item which measured the independent variable (research productivity).

Demographics.

The demographic items included:

- Type of institution
- Education
- Completion of research project
- Publication of research project results
- Years of teaching experience
- Age
- Marital status
- Number of children under 18 years old and over 18 years old
- Number of students taught (Fall and Spring)
- Number of hours per week (Fall and Spring)
• Hours of service per month

**Independent variables.**

**Attitudes toward research engagement.**

To measure educators’ attitudes toward or their overall evaluation of engaging in research, two dimensions were measured each consisting of eight items: (a) ‘behavioral beliefs’ and (b) ‘outcome evaluations’ (see Appendix E, Table E1). The behavioral belief items were:

1. Engaging in research will make me feel that I am making a positive contribution to the institution in which I work;
2. Engaging in research will make me feel that I am doing something positive for my profession;
3. Engaging in research regularly will help me sharpen my skills in conducting research;
4. Engaging in research regularly will help me develop a better understanding of the courses I teach;
5. Engaging in research regularly will give me an opportunity to interact with my colleagues professionally;
6. Engaging in research regularly will ensure my publishing journal articles, creative works, and books;
7. Engaging in research regularly will help me stay current with the developments in my profession; and
8. Engaging in research regularly will improve my chance for promotion/advancement on my job.

The outcome evaluation items were:

1. For me to do something positive for the institution in which I work is;
2. For me to do something positive for my profession is;
3. For me to sharpen my skills in conducting research is;
4. Developing a better understanding of the courses I teach through research engagement is;
5. Having an opportunity to interact regularly with my colleagues regarding professional issues is;
6. Being able to publish journal articles, creative works, and books regularly is;
7. Staying current with developments in my profession is; and
8. Improving my chance for promotion/advancement on my job through engaging in research is.

The eight behavioral belief items were scored on a seven-point scale (1 = disagree to 7 = agree). The eight outcome evaluations items were scored on a seven-point scale (1 = undesirable to 7 = desirable). The seven point scale was recoded as -3, -2, -1, 0, +1, +2, +3, following previous research done on Ajzen’s conceptual model (Francis et al., 2004). Total scores for this variable ranged from -48 to +48 (16 * -3 to 16 * +3). The higher the total score, the more positive are attitudes toward research engagement.
Perceptions of norms regarding research engagement.

To measure perceptions of norms regarding research engagement or educators’ estimate of the social pressure from important others to engage in research, the dimensions measured were (a) normative beliefs; and (b) motivation to comply. Four items were used to measure each dimension. The normative beliefs items were: (1) Educators in other post-secondary institutions think I should engage in research regularly; (2) Supervisors on the job think that I should engage in research regularly; (3) My colleagues at my job think that I should engage in research regularly; and (4) My colleagues who are not in my profession think that I should engage in research regularly. The motivation to comply items were: (1) Generally speaking, I care about what other educators in post-secondary institutions do; (2) Generally speaking, I care about what supervisors on the job think I should do; (3) Generally speaking, I care about what my colleagues at my job think I should do; and (4) Generally speaking, I care about what colleagues who are not in my profession think I should do.

The four normative beliefs items were scored on a seven-point scale (1 = agree to 7 = disagree). The four motivation to comply items were scored on a seven-point scale (1 = not at all to 7 = very much). The seven points were recoded as -3, -2, -1, 0, +1, +2, +3. Total scores for this variable ranged from -24 to +24 (8 * -3 to 8 * +3). The higher the total score, the more positive are perceptions of research norms.

Perceived control over ability to conduct research.

To measure educators’ perceived control over the ability to conduct research, two dimensions were measured each consisting of six items: (a) ‘control beliefs,’ that is the presence of factors that the participants thought could either facilitate or impede their engagement in research and (b) ‘power of control’ or the power of those factors to facilitate or impede their ability to perform the behavior (Ajzen, 2006).

The six control beliefs items were: (1) How often do other activities, e.g. faculty meetings, at your work or employment place heavy demands on your time?; (2) How often does lack of resources, e.g. funding, make it difficult for you to engage in research on your job?; (3) How often do family obligations place unanticipated demands on your time?; (4) How often do you feel ill, tired, or listless?; (5) How often do you encounter unanticipated events that place demands on your time?; and (6) How often does your work load place unanticipated demands on
your time? The six power to control items were: (1) If other activities at work, e.g. faculty meetings, placed heavy demands on my time, it would be difficult for me to engage in research on my job regularly; (2) If I encountered lack of resources for research, it would be difficult for me to engage in research on my job regularly; (3) If I encountered unanticipated events that placed demands on my time, it would be difficult for me to engage in research on my job regularly; (4) If my work load placed unanticipated demands on my time, it would be difficult for me to engage in research on my job regularly; (5) If I had family obligations that placed heavy demands on my time, it would be difficult for me to engage in research on my job regularly; and (6) If I felt ill, tired, or listless, it would make it more difficult for me to engage in research on my job regularly.

The six control beliefs items were scored on a seven-point scale (1 = rarely to 7 = frequently). The six power to control beliefs items were scored on a seven-point scale (1 = disagree to 7 = agree). The seven points were recoded as -3, -2, -1, 0, +1, +2, +3. Total scores for this variable ranged from -36 to +36 (12 * -3 to 12 * +3). The higher the total score, the more positive are perceptions of ability to conduct research.

Figure 3 shows an operationalized model of the study with survey items noted (see Appendix E Tables E1, E2, and E3 for items).
Figure 3. Adaptation of Ajzen’s model of The Theory of Planned Behavior (2006) to study the association between attitudes toward research, perceptions of research norms, and perceived control over the ability to conduct research and FCS educators’ engagement in research.

**Research engagement.**

This item asked if respondents had produced or published the following research products:

- Journal article
- Book review
- Book
- Newspaper article
- Textbook
- Monograph
- Book chapter(s)
- Conference research presentation
- Creative work
Respondents were asked to indicate “yes” or “no” if they produced each research product. “Yes” responses were coded “1” and “no” responses were coded “0”. The number of “yes” responses was totaled.

Data Analyses

Data from the survey were analyzed using SPSS version 15. Descriptive statistics were used for the univariate analysis. To test the bivariate relationships indicated in the hypotheses (as values increase for the independent variables, it is expected that the values will increase for the dependent variables) correlations were used.

For further examination of the relationship between the demographic variables and the dependent variable, the dependent variable was collapsed into a dichotomous categorical variable (0 = no research engagement; 1= research engagement: one or more research products) and chi-square analyses were conducted.

Chapter Summary

This chapter presented information on the methodology used in this study. The total population of FCS educators in post-secondary institutions in Jamaica (N = 52) comprised the sample. A survey was conducted to answer the three research questions regarding the association between FCS educators’ attitudes toward engaging in research, their perception of research norms, their perceived control over the ability to conduct research and their actual engagement in research. The chapter also provided an overview of how the measures were scored for analysis. All questions were analyzed using descriptive statistics to analyze the participants’ scores for attitudes toward research, perceptions of research norms, and perceived control over conducting research. Bivariate analyses that examined the relationships between the variables included correlations and chi-square tests. The next chapter reports the findings.
CHAPTER 4

RESULTS

The purpose of this study was to explore the factors associated with engaging in research among family and consumer sciences (FCS) educators in post-secondary institutions in Jamaica. In this chapter the description of the sample, the productivity level of the participants, and the results of hypothesis testing and crosstabulations are presented.

Description of Sample

Thirty-nine of 52 persons sampled responded to the survey for a 75% response rate. According to Babbie (2005), this rate is considered to be “very good.” All respondents were female (Table 1). Fourteen (36.8%) participants were between 25 – 45 years old while 24 (63.2%) were above 45 years old ($N = 38$). The majority of the participants (59%) were married and 41% were either unmarried, divorced, or widowed. Twenty-four (61.5%) participants had children who were 18 years old and under, while 15 (38.5%) participants had children who were older than 18 years.

Five participants (13.2%) had a baccalaureate degree, one had post-diploma qualification (2.6%), 28 (73.7%) had a master’s degree, and four (10.5%) had a doctoral degree. Of the 39 respondents, six (15.8%) were from 2-year community colleges, 15 (39.5%) from 3-year teachers’ and multidisciplinary colleges, and 17 (44.7%) were from 4-year universities. One participant did not indicate type of institution or number of years working for the institution. The participants had been working in post-secondary institutions for between 1 – 30 years. Eighteen (47.4%) participants had worked in post-secondary institutions for between 1-10 years, 19 (50.0%) for 11-21 years, and one (2.6%) for 30 years.
### Table 1

**Demographic Characteristics of the Sample**

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (N = 38)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 – 35 years</td>
<td>4</td>
<td>10.5</td>
</tr>
<tr>
<td>36 – 45 years</td>
<td>10</td>
<td>26.3</td>
</tr>
<tr>
<td>46 – 55 years</td>
<td>18</td>
<td>47.4</td>
</tr>
<tr>
<td>&gt; 55 years</td>
<td>6</td>
<td>15.8</td>
</tr>
<tr>
<td><strong>Marital Status (N = 37)</strong></td>
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<td></td>
</tr>
<tr>
<td>Married</td>
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<td>62.2</td>
</tr>
<tr>
<td>Unmarried</td>
<td>10</td>
<td>27.0</td>
</tr>
<tr>
<td>Divorced</td>
<td>3</td>
<td>8.1</td>
</tr>
<tr>
<td>Widowed</td>
<td>1</td>
<td>2.7</td>
</tr>
<tr>
<td><strong>Children (N = 39)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have children under age 19</td>
<td>24</td>
<td>61.5</td>
</tr>
<tr>
<td>Have children age 19+</td>
<td>15</td>
<td>38.5</td>
</tr>
<tr>
<td><strong>Qualification (N = 38)</strong></td>
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<td></td>
</tr>
<tr>
<td>Baccalaureate</td>
<td>5</td>
<td>13.2</td>
</tr>
<tr>
<td>Post-Diploma</td>
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<td>2.6</td>
</tr>
<tr>
<td>Master’s</td>
<td>28</td>
<td>73.7</td>
</tr>
<tr>
<td>Doctoral</td>
<td>4</td>
<td>10.5</td>
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</table>
Table 1 continued

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>Institution (N = 38)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2- year Colleges</td>
<td>6</td>
<td>15.8</td>
</tr>
<tr>
<td>3- year Teachers’ &amp; Multidisciplinary Colleges</td>
<td>15</td>
<td>39.5</td>
</tr>
<tr>
<td>4-year Universities</td>
<td>17</td>
<td>44.7</td>
</tr>
<tr>
<td>Years working in Post-secondary Institution (N = 38)</td>
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<td></td>
</tr>
<tr>
<td>1 – 10 years</td>
<td>18</td>
<td>47.4</td>
</tr>
<tr>
<td>11 – 21 years</td>
<td>19</td>
<td>50.0</td>
</tr>
<tr>
<td>22 – 30 years</td>
<td>1</td>
<td>2.6</td>
</tr>
</tbody>
</table>

Research Engagement

Research productivity was defined in this study as scholarly output, inclusive of journal articles, book reviews, books, newspaper articles, textbooks, monographs, book chapter, conference presentations, and creative works. Respondents were also asked about supervising students’ research projects but this item was not included as a research product. Results showed that of the 39 participants in the study, 27 (69.2%) had engaged in research (produced one or more research products) while 12 (30.8%) had not engaged in research.

For those that engaged in research, the range of research products was from 1 to 22 with a mean of 3.54 (s.d. = 5.43). Table 2 shows the breakdown by type of research product. The respondents were most likely to engage in creative work and present research papers at conferences. They were least likely to have written a book. Almost one-fourth (23.1%) had published an article in a journal.
Table 2

*Research Products*

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal article</td>
<td>9</td>
<td>23.1</td>
<td>.38</td>
<td>.88</td>
</tr>
<tr>
<td>Book review</td>
<td>8</td>
<td>20.5</td>
<td>.31</td>
<td>.69</td>
</tr>
<tr>
<td>Book</td>
<td>2</td>
<td>5.1</td>
<td>.05</td>
<td>.22</td>
</tr>
<tr>
<td>Newspaper article</td>
<td>3</td>
<td>7.7</td>
<td>.13</td>
<td>.52</td>
</tr>
<tr>
<td>Textbook</td>
<td>3</td>
<td>7.7</td>
<td>.08</td>
<td>.27</td>
</tr>
<tr>
<td>Monograph</td>
<td>3</td>
<td>7.7</td>
<td>.08</td>
<td>.27</td>
</tr>
<tr>
<td>Book chapter</td>
<td>3</td>
<td>7.7</td>
<td>.10</td>
<td>.38</td>
</tr>
<tr>
<td>Conference research presentation</td>
<td>11</td>
<td>28.2</td>
<td>.82</td>
<td>2.00</td>
</tr>
<tr>
<td>Creative work</td>
<td>16</td>
<td>41.0</td>
<td>1.59</td>
<td>2.64</td>
</tr>
</tbody>
</table>

**Hypothesis Testing**

The first hypothesis stated that more positive attitudes toward research engagement will be associated with higher levels of research engagement. The Theory of Planned Behavior purports that if individuals have a positive attitude toward the performance of a behavior they will perform that behavior (Ajzen, 1991, 2006). The range of scores for the eight behavioral beliefs items was -2 to 24 with a mean of 17.54 (s.d. = 6.90). The range of scores for the eight outcome evaluations items was -6 to 24 with a mean of 20.14 (s.d. = 5.19). The two dimensions were not significantly correlated (r = .253; p = .071) (Table 3).

Overall for attitudes toward research engagement, the range of scores was from 6 to 48 with a mean of 38.17 (s.d. = 9.47). Results of the correlations do not provide support for the hypothesis as the correlation was not significant at the .01 level (1-tailed) (r = .088; p = .308). Further, neither behavioral beliefs nor outcome evaluations were found to be significantly correlated with research engagement (r = .045; p = .395 and r = .066; p = .348, respectively).
The second hypothesis stated that more positive perceptions of research norms will be associated with higher levels of research engagement. The Theory of Planned Behavior purports that if individuals have positive perceptions of expectations regarding a behavior they will be more likely to perform that behavior (Ajzen, 1991, 2006). The range of scores for the four normative beliefs items was 4 to 28 with a mean of 17.69 (s.d. = 6.52). The range of scores for the four motivation to comply items was 16 to 28 with a mean of 21.89 (s.d. = 3.17). The two dimensions were significantly correlated ($r = .384; p = .011$); however, a correlation less than .40 is considered a small or low correlation (Guilford, 1950, p. 165) (Table 4).

Overall for perceptions of research norms, the range of scores was from 22 to 52 with a mean of 39.34 (s.d. = 8.34). Results of the correlations do not provide support for the hypothesis ($r = .185; p = .144$). Further, neither normative beliefs nor motivation to comply were found to be significantly correlated with research engagement ($r = .235; p = .084$ and $r = .094; p = .288$, respectively) (Table 4).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Outcome Evaluation</th>
<th>Research Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral Beliefs</td>
<td>.253</td>
<td>.045</td>
</tr>
<tr>
<td></td>
<td>.071</td>
<td>.395</td>
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<td>Outcome Evaluation</td>
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<td>.066</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.348</td>
</tr>
<tr>
<td>Attitudes toward Research</td>
<td>--</td>
<td>.088</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.308</td>
</tr>
</tbody>
</table>

Table 3

Correlations between Attitudes toward Research Engagement and Research Engagement
Table 4

*Correlations between Perceptions of Norms Regarding Research and Research Engagement*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Motivation to Comply</th>
<th>Norms Regarding Research</th>
<th>Research Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normative Beliefs</td>
<td>.384</td>
<td>.934*</td>
<td>.235</td>
</tr>
<tr>
<td></td>
<td>.011</td>
<td>.000</td>
<td>.084</td>
</tr>
<tr>
<td>Motivation to Comply</td>
<td>--</td>
<td>.688*</td>
<td>.094</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.000</td>
<td>.288</td>
</tr>
<tr>
<td>Norms Regarding Research</td>
<td>--</td>
<td>--</td>
<td>.185</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>.144</td>
</tr>
</tbody>
</table>

*p < .001.

The third hypothesis stated that more positive perceived control over the ability to conduct research will be associated with higher levels of research engagement. The Theory of Planned Behavior purports that if factors are perceived to be present that facilitate behavior and the factors that either facilitate or impede the ability to do the behavior can be controlled, then the behavior is more likely to be performed (Ajzen, 1991, 2006). The range of scores for the six control beliefs items was 8 to 42 with a mean of 30.39 (s.d. = 7.08). The range of scores for the six power of control items was 27 to 42 with a mean of 36.39 (s.d. = 4.75). The two dimensions were not significantly correlated (\( r = .140; p = .211 \)) (Table 5).

Overall, for perceived control over the ability to conduct research, the range of scores was from 50 to 84 with a mean of 67.40 (s.d. = 8.95). Results of the correlations do not provide support for the hypothesis (\( r = .082; p = .321 \)). Further, neither control beliefs nor power to control were found to be significantly correlated with research engagement (\( r = .099; p = .277 \) and \( r = .032; p = .426 \), respectively).
Table 5

*Correlations between Perceived Control over Ability to Conduct Research and Research Engagement*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Power to Control</th>
<th>Perceived Control</th>
<th>Research Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Control Beliefs</td>
<td>.140</td>
<td>.847*</td>
<td>.099</td>
</tr>
<tr>
<td></td>
<td>.211</td>
<td>.000</td>
<td>.277</td>
</tr>
<tr>
<td>2. Power to Control</td>
<td>--</td>
<td>.646*</td>
<td>.032</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.000</td>
<td>.426</td>
</tr>
<tr>
<td>3. Perceived Control over Ability to Conduct Research</td>
<td>--</td>
<td>--</td>
<td>.082</td>
</tr>
</tbody>
</table>

*p < .001.

In looking at the relationships between the independent variables, attitudes toward research engagement and perceptions of research norms were found to be significantly moderately correlated (*r* = .485; *p* = .002) (Table 6).

Table 6

*Correlations between the Independent Variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Research Norms</th>
<th>Perceived Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes toward Research</td>
<td>.485</td>
<td>.031</td>
</tr>
<tr>
<td></td>
<td>.002*</td>
<td>.433</td>
</tr>
<tr>
<td>Research Norms</td>
<td>--</td>
<td>.051</td>
</tr>
</tbody>
</table>

*p < .01.
Relationships between Demographic Variables and Research Engagement

The next analyses examined relationships between the demographic variables and the dependent variable. The demographic variables (see Table 1) were: age, marital status, number of children, qualification, institution type, and years of academic experience. Age, marital status, and number of children are individual demographics. Qualification, institution type, and years of academic experience all relate to academia and can be viewed as work demographics. All variables were treated as categorical variables and collapsed into two categories to avoid small cell size given the small sample. The dependent variable, research engagement, was also treated as a categorical variable with no research products coded as “0” or no, not engaged in research, and one or more research products coded as “1” or yes, engaged in research.

Individual demographics and research engagement.

With respect to age, whereas 64.3% of the respondents aged 45 and younger engaged in research, 70.8% of those aged 46 and older had at least one research product. This difference was not significant ($\chi^2 = .175; p = .675$). The relationship between marital status and research engagement was also not found to be significant with 71.4% of unmarried versus 69.6% of married respondents having engaged in research ($\chi^2 = .014; p = .904$). Although 71.4% of persons without minor age children had engaged in research versus 57.1% with minor age children, this difference was not significant ($\chi^2 = .622; p = .430$).

Work demographics and research engagement.

Similar percentages of respondents engaged in research whether they were bachelor’s level qualified or master’s or doctoral level qualified (66.7% vs. 68.8%; $\chi^2 = .010; p = .920$). A significant relationship was found, however, between type of institution and research engagement. Whereas 47.6% of those working in 2- or 3-year institutions engaged in research, 94.1% (16 of 17 respondents) working in 4-year institutions had at least one research product ($\chi^2 = 9.401; p = .002$). It should be noted though that this left just one case in the cell for no research engagement among 4-year institution respondents. Finally, with respect to years of work experience, no difference was found between those with up to 10 years and those with 11 or more years of experience (72.2% vs. 66.7%; $\chi^2 = .140; p = .708$).
CHAPTER 5

DISCUSSION

Internationally, research accomplishment is recognized as an important academic function. Research has social and economic value. It enhances faculty stature among peers and has implications for institutional funding (Fairweather, 2002). While legislation in some states in the United States is focusing on faculty commitment to the teaching mission (Fairweather), a comparable call in some post-secondary institutions in Jamaica is for faculty to increase research engagement and productivity.

Although the role of research is recognized in post-secondary institutions in Jamaica, the quality and quantity of research have been questioned. Post-secondary institutions in Jamaica have been both derided (Edwards, 2009) and praised (ATN, 2009) for research; the low productivity level is a concern. This concern may decrease as faculty engage in research and improve productivity. Therefore, in the present study, family and consumer sciences educators’ engagement in research was explored. The Theory of Planned Behavior was used to investigate whether the educators’ attitude, subjective norms, and perceived behavioral control were associated with their engagement in research.

This chapter presents a discussion of the findings, making reference to other studies that have been done in related areas and to the theory that guided the exploration. The strengths and weaknesses of the study are also outlined. Implications of the findings and recommendations for intervention and further research are presented.

The Study in Relation to Existing Research

There were similarities and differences between this study and others that had been conducted previously. Previous researchers outside of Jamaica had conducted studies related to faculty’s research productivity, faculty’s attitude toward research, and faculty members’ perceived behavioral control and research engagement. The following paragraphs relate this study to those in the literature. Note is also made of the productivity of educators in this study and FCS professionals in previous studies.
Research productivity/research engagement.

Research productivity was defined in this study as scholarly output, inclusive of academic publications in peer-reviewed journals, newsletters, and newspapers, or other avenue of publicizing information for both academics and the general public. These included seminar presentations, conference publications, and workshops. The measure of research engagement in this study closely resembled that used by Colbeck (1998) in her study of research productivity in comprehensive universities in the United States. The comprehensive universities counted, among others, publications in peer-reviewed or trade journals, newsletter articles and creative works published in the popular media as research productivity.

Fairweather (2002) used a measure that counted publications in peer-reviewed journals as research while Williamson and Cable (2003) counted the number of academic publications in journals with established quality ratings as research. Fairweather and Ramsden (1999) also included competitive grants in the measure of productivity in their studies. Grants were excluded from the measure used in the present study because grant writing is not yet prevalent in the participants’ research activities.

Productivity in the present study included presentations at professional conferences, seminars, and workshops. Although Williamson and Cable (2003) considered conference presentations in their assessment of research productivity, they specified the number of presentations at a premier academic conference, in their measure.

Research productivity was calculated as output over time. A five-year period was used in this study as opposed to the two-year period used by Fairweather (2002) and Hassan et al. (2008) in their assessment of research productivity among faculty in universities in the United States. The five year period was used to assess productivity in the present study in recognition of the emphasis placed on teaching in the institutions in which the participants work and the relatively recent thrust towards research engagement.

Although the measure of research productivity used in this study was considered a liberal measure that would capture all possible types of work that represented research and publication, the participants as a group achieved a level of productivity over the five year period that was interpreted as low. The overall group mean for productivity, measured over a five-year period, was 3.54. Fairweather (2002) found a mean of 1.741 for productivity level of faculty in Liberal Arts colleges for the two-year period. The mean for this study, adjusted for a two-year period
was slightly lower. A comparison of the two means may not be relevant, however, because of the difference in what counted as “research output” in the two studies. The measure in Fairweather’s study was more stringent, counting only specific types of activities as research.

The participants in the 4-year colleges, the majority (54.2%) of whom were over 46 years old, had a higher mean score for productivity than participants in the combined group of 2-year and 3-year colleges. The finding of higher productivity among faculty in 4-year colleges was not surprising because this finding corresponds with the institutional requirement for faculty to engage in research. Research is pertinent to the goals and mission of 4-year institutions worldwide (Brand, 2000; Jenkins, 2004; Neumann, 1993; Ramsden, 1999) and in some 4-year colleges in Jamaica. At the University of Technology, Jamaica it has become a prominent criterion for faculty promotion (UTech, 2001).

Participants in this study with Ph.D. degrees had a higher mean score in research productivity, although their mean score did not differ significantly from participants with Master’s or baccalaureate degrees. Ramsden (1999) found a significant difference in research productivity among faculty with Ph.D. qualification in his study. He classified faculty with doctoral degrees as the “most important source of research productivity,” (p. 365) in higher education in Australia. The number of staff with a Ph.D. degree in the present study was small (10.3%) as compared with Ramden’s study where Ph.D. qualified faculty ranged from 29.1% of faculty in teachers’ colleges (New universities) to up to 63.9% in traditional universities (Sandstone universities).

An interesting finding by Hassan (2008) was that faculty who were married were more productive in research than faculty who were either single or widowed. In the present study, the finding was similar. It was found that more of the participants who engaged in research were married although the difference between the participants who were married and those who were not married was not significant.

Colbeck (1998) found that some faculty found ways to improve their research productivity by “merging [teaching and research] into a seamless blend” (pp. 647 - 648). She said that some faculty members engaged in teaching and research at the same time by using the same source material to prepare for a lecture and a conference presentation. Although this demonstrates efficient use of time to both conduct research and prepare for teaching, Brown (2006) noted that such integration might not always be effective as one’s teaching and research
are not always neatly aligned. In the Jamaican context however, where faculty members teach an average of five courses per semester, they may be able to achieve such a “blend” in even one course. Conversely, faculty may perceive a great challenge integrating research into what may appear an already burdensome workload.

Colbeck (1998) and Fairweather (2002) discovered that faculty found it easier to integrate research in their teaching in certain situations. Colbeck found that faculty were more likely to integrate research if it could be related to formal teaching, class preparation, out-of-class teaching about course-related materials with one or more students, and advising, or meeting with colleagues. Fairweather, on the other hand, found that faculty research was much more likely to overlap with independent study instruction or dissertation committee work. The absence of these two likely avenues for research and teaching integration in many of the institutions from which the participants were drawn in this study may further limit research engagement by FCS educators in Jamaica who generally work individually on research supervision activities.

Attitudes toward research engagement.

It is reasonable to conclude from the participants’ mean score that they had a favorable attitude toward research. Their mean score was interpreted as positive. While a favorable attitude was observed an attendant relation between the participants’ attitude toward research and a high level of research productivity was not evident. Fairweather (2002) also found that attitude was not a strong correlate of research productivity in his study. He found instead that rewards were the strongest correlates of faculty behavior.

Ho et al. (2008) noted that individuals tend to form favorable attitudes toward behaviors they believe will have largely desirable consequences, while forming unfavorable attitudes towards behaviors they associated mostly with negative outcomes. It is heartening however, that although these participants did not engage in research, they perceived desirable consequences of research. Ajzen (2006) stated that a favorable attitude toward a behavior predicts its performance given resources. It is possible that given other favorable factors the productivity level for the participants in this study could improve.
Perceptions of norms regarding research engagement

Subjective norms speak to the expectations important others have of the persons on whom they have an influence. In Colbeck’s (1998) study, faculty faced expectations from two contexts about how to accomplish teaching and research goals: (1) the organizational contexts of their colleges and universities and (2) the professional contexts of their disciplines. From the organizational perspective, administrators’ expectations were evident in that they clearly stated what counted as research and also how the research would be evaluated. From the professional context, the participants knew what counted as research in their particular discipline. This was helpful for the participants as these expectations provided them with the framework within which to act and enhanced their opportunities to integrate their teaching and research activities.

In the present study, no significant relation was found between subjective norms and research productivity. Unlike the participants in Colbeck’s (1998) study, many faculty members in this study did not perceive that they were required to conduct research neither by the organizations in which they work, the professional bodies in which they hold membership, nor by their fellow professionals. In general, the participants did not perceive positive pressure from important others to engage in research. Consequently their research engagement was interpreted as low. Although a clear relation seemed to exist between lack of expectations and direction from superiors and low productivity, the association between the variables was not statistically significant. This perhaps indicates that enhanced administrative clarity about research products and expectations could also increase FCS faculty members’ engagement in research.

Perceptions of ability to engage in research.

In general, participants in this study perceived that they had a strong positive control of their ability to engage in research regardless of the type of institution in which they worked or their age group. In contrast, Perry et al. (2000) found a difference in participants’ perception of their ability to do research on the basis of age and type of institution. They found that the effect of institution type was stronger than the effect of age. In effect, they found that the older participants from research-oriented institutions perceived that they had more research ability than the participants from liberal arts and community colleges perceived they had.
Faculty in Research 1 institutions have well-established research requirements for tenure and promotion (Perry et al. 2000). While research productivity is now a prominent consideration for promotion in some post-secondary institutions in Jamaica, tenure has not been based on research. This might account for the fact that type of institution did not have a strong association with research productivity in the present study as compared to the study by Perry et al.

Perry et al. (2000) focused on the personal qualities of faculty members that are essential to mastering the research aspects of academic work. Contrary to the present study, they found that faculty who had high personal attributes to do research were generally more productive in research. While the present study found that participants perceived themselves having the personal attributes to do research, their productivity level was not equally high.

Perry et al. (2000) found no significant correlation between persons' perception about their ability to determine what happens on their jobs and their research productivity. In this respect, the present study was similar. Specifically, although the participants in this study felt they could not control the environmental factors of their work, there was no statistically significant relation between their perceived behavioral control and their research productivity.

**Research and Research Productivity in Family and Consumer Sciences.**

Like the notable home economists, Swallow Richards, Tomes, Rossiter, and others, who pioneered and promoted home economics/FCS in the early years, FCS professionals in the USA and Canada have continued in the 21st century to make a meaningful contribution to research in FCS (Johnson, 2007). Although the FCS educators in the Caribbean have made important contributions to the educational landscape with their production of textbooks, the work has not been prolific. New titles have only been published by Dyer & Maynard (2005) and Davis-Williams (2004), while others authors have revised editions published prior to 2000.

The present research shows that FCS educators have the requisite attitude and perceived ability to conduct research although they do not sense the pressure from important others to engage in research. This may translate into the necessary drive to engage in research if they are nudged to engage in conducting research and if the environment is adjusted to facilitate their engagement.
Summary.

What emerges from the analysis is that the participants had a good attitude toward research and they felt they had the personal attributes and some level of control over their environment to propel them to engage in research. However, they did not feel positive social pressure from important others, such as their supervisors and colleagues to engage in research. The relation of attitude and perceived behavioral control to research productivity was generally strong and positive for the variables. It was not positive for subjective norms. However, there were no significant associations between any of the independent variables and the participants’ engagement in research.

The Study in Relation to the Theory of Planned Behavior

The scores the participants in this study received for two of the factors that promote performance of a behavior, attitude and perceived behavioral control, suggested that they possessed the attributes necessary for them to engage in research. They had a favorable attitude toward research, and they perceived themselves as having the requisite ability to conduct research although they appeared to perceive they had only limited control over their environment to do research. With reference to subjective norms, the participants did not perceive positive social pressure to engage in research.

Ajzen (2006) said that if individuals have positive results for the factors above, that is attitude toward the behavior, perceived behavioral control, and perceived positive pressure from important others to perform the behavior, they will perform the behavior in question. However, he stressed the importance of individuals having a “sufficient degree of actual control” and opportunities to carry out an “intention.” The participants’ low level of productivity in the present study seems to indicate either a lack of the actual control they perceived they had over their external environment, such as their work load; or perceived lack of opportunities, such as reduced course load and fewer meetings to attend during the course of the work day that would facilitate their engagement in research; or both. Their perceived limited control over their circumstances might have prompted them to take the easier course of action in their situation (Fukukawa, 2002), that of not engaging in research. Fukukawa refers to this as “avoidance of trouble” (p. 104).
This theory was very useful for understanding the phenomenon that was investigated. It facilitated the exploration of the topic by allowing an examination of relevant factors that influence engagement in research. Unlike other studies in which the theory of planned behavior has been used to predict, or explain behavior under varying circumstances (Inness, Barling, Rogers, & Turner, 2008; Lodorfos & Dennis, 2008; Martin, Oliver, & McCaughtry, 2007), its application in this exploratory study gives this study the potential to be the antecedent to larger scale explanatory and predictive studies that can be conducted among the academic population in Jamaica.

Strengths and Limitations of the Study

As with all studies, there were limitations and strengths of this research with regards to issues of external validity, construct validity, and the interpretation of results.

External validity.

Will the conclusions of this study apply to all family and consumer sciences educators in the Jamaica who did not actually participate in the study? It is likely that it will, given that the total population was included. There are approximately 52 active full-time family and consumer sciences educators in post-secondary institutions in Jamaica. Every effort was made to include all of the educators in the present study. Only one known educator from one post-secondary vocational institution was inadvertently omitted from this study. The response rate for the sample was 75%. According to Babbie (2005), this was a very good rate. The data should be generalizable to those participants who did not participate especially as the institutions have similar requirements for faculty work, work loads are equivalent, and working environments are similar in terms of economic constraints as they are all funded by the government.

While it is not possible to generalize the findings to faculty in other programs in the institutions in which the FCS educators work, this study can form the base from which to conduct research among non-FCS faculty in the institutions. The questionnaire items were general in that they did not specifically target FCS educators. The term “family and consumer sciences” was not mentioned in the items.
Construct validity.

The constructs for the theory of planned behavior, attitude, subjective norms, and behavioral control were operationalized following the instructions for developing a questionnaire for the theory of planned behavior (Francis et al., 2004). While other instruments have been developed for research involving the use for this theory (Ho et al., 2008; Perry et al., 2000), none was found that operationalized all the constructs to investigate research engagement. A pre-made questionnaire with reliabilities was therefore not available. However, the instrument was checked by experts in survey development, pilot tested and reliabilities were run to meet the specification of at least an alpha value greater than 0.6 for the constructs. The reliability for the instrument was $\alpha = 0.884$.

The items used to measure productivity were open to individual interpretation of the question which may have influenced the response to some of the items. Asking participants to provide bibliographical information on publications and conference presentations would probably have made for a more reliable and valid measure.

Sample size was a limiting factor in this research. It restricted the types of statistical analyses that could be carried out as well as the number of variables that could be included; for example, it was not possible to do regression analyses. However, the population was small so the number of respondents was a relatively large percentage (75%) of the population.

Perry et al. (2000) recommended using longitudinal designs and structural equation modeling rather than retrospective design and self reports which are suspect due to the quality control problems involving memory lapses, distortion, wishful thinking, and so on. They suggest that these are better suited to explore developmental aspects of faculty career than is a cross-sectional design that uses simple correlational or analysis of variance techniques. Although the recommended research designs and statistical analyses were not used in this study, the statistical analyses used provided useful results that can form the foundation for further research among other educators in Jamaica.
Implications

Intervention.

The results show that the present research engagement level is relatively low among the participants. One major reason for the low level of research among the participants is the lack of motivation to conduct research from external forces. They do not perceive that they are encouraged to engage in research by the institutions in which they work, the professional organizations in which they hold membership, and the colleagues with whom they interact. They perceive moreover that they are hindered from conducting research by the volume of the everyday tasks that they are required to perform. What is heartening, however, is that the participants have a positive attitude toward research and they perceive that they have the ability to conduct research. Ajzen (2006) noted that people with a positive attitude toward a behavior are likely to engage. A noteworthy recommendation by Nichols et al. (2004) is to implement a program that allows faculty to mature as researchers. They recommended a mix of soft change management approaches, such as research quantum management which requires annual research targets as an input, and the minimum output requirement, and hard operational research techniques such as goal setting, scheduling, and monitoring to develop faculty research ability and improve productivity.

In the FCS program in Jamaica, this might entail educators meeting at the beginning of a school year to establish program and faculty goals for research regarding reasonable output. Based on the targets, groups or individuals could decide on the project(s) to undertake, and schedule meetings in each semester for regular follow-up. This would provide support in terms of a sounding board for ideas, a resource for information on special or challenging topics, and a measure of accountability. Research accountability groups have also been useful in promoting research among groups of faculty.

Collaborative research and mentoring programs have also been successfully organized and implemented and also have merit for faculty improving research output as less experienced faculty are paired with more experienced faculty who act as advocates, help them navigate the challenges associated with integrating research and teaching, help them explore their interests, and provide advice on collaboration (Brown, Daly, & Leong, 2009). In the Jamaican situation, collaboration can take place either locally or with colleagues overseas.
Collaboration locally could involve one or more FCS faculty with faculty in another program. Projects involving food production and preparation can be successfully done with colleagues in engineering. At the University of Technology, Jamaica, small class projects have utilized solar dryers developed by the engineering department to make “flours” from local roots and tubers. Collaboration of this nature could be expanded into research projects that have potential for product development. Collaboration between FCS faculty and colleagues in the humanities and education can also be undertaken. Topics such as ‘reading in content areas’ can be addressed through this type of collaboration.

Faculty collaborating with students is another way to increase productivity. Faculty already supervise students’ research each semester. Faculty and students could identify topics together and work out the logistics of conducting the research as faculty/students teams. Faculty provide many opportunities for students to work in community settings as part of experiential learning. Such activities could be conceptualized as research projects from which faculty can teach students valuable skills in problem solving (Tinberg, Duffy, & Mino, 2007). Faculty in Colbeck’s (1998) study remarked about the benefits of working with their students in integrating their research and research training of their students. One said, “Having people that you do research with that you also teach is an efficient thing” (p. 643), another said, “My closest colleagues are my students […] that’s why a lot of faculty are successful” (pp. 643 – 644).

Collaboration can also be fostered between local educators and colleagues in programs in universities overseas. Colleagues who work in research-oriented universities could help Jamaican staff think through and develop areas of interests, provide an opportunity to work with different types of data, use different data analysis techniques, and undertake cross-cultural research which would enrich the experience for both sets of individuals. Exposure to mentors who work outside the institution expands faculty’s awareness of expectations for productivity, increases faculty’s knowledge and understanding of high standards of personal work patterns leading to productivity, and increases the likelihood of faculty receiving directed and specific guidance that will enhance their network potential (Mundt, 2001).

An important issue to be considered in collaboration is faculty personality impacting working relationships. In conversation with one professor, from a Research II university in the United States of America, who conducts research in collaboration with faculty in other departments and institutions, he pointed out the importance of faculty being able to get along
with those with whom the collaboration is formed. “It could be disastrous and certainly not beneficial to any of the parties if they cannot get along,” he said. “It is important that the faculty can work with each other.”

Not to be overlooked is the role of the institution in establishing the parameters of research. Faculty in the comprehensive university in Colbeck’s (1998) study had 14 activities that counted as research. In this study there was a significant correlation between type of institution and research production, supporting the important role of institutions in promoting research. Such delineation will facilitate faculty as it clarifies what counts as research in each type of institution. Faculty will be able to better allocate their time into focused areas in which they will achieve success. They can focus on improving research output in their areas of strength, for example creative works seem to have been an area of strength for persons in this study, while working to develop strengths in areas in which they identify weaknesses for the long term.

Administration must also decide on the model of research to be adopted by the FCS program and institution. Gray and Hoy (1989) proposed three models in which research and teaching can be linked. The institution must decide whether all faculty should do research (model 1), or whether certain members of faculty should concentrate on research and publications (model 2), or whether some faculty should work together to establish a concentration in research and gain expertise in grant applications while others concentrate on teaching. The institution or program may also decide on a hybrid model that is best suited to its mission. Regardless of the model selected, administration must give careful consideration to how the model will impact staff development, function, remuneration, and morale.

As the institutions move toward including research productivity in their promotional activities, consideration should be given to the weighting assigned to different types of research in which faculty are engaged. This is important because although some disciplines may discount the value of qualitative research (Guba & Lincoln, 1994; Stewart, 2009), FCS faculty may be more inclined to conduct this type of research as it allows for finding answers to questions relating to family issues that may be more difficult to quantify. This is especially so as many of the issues in family research have an emotional or social dimension.

Consideration should also be given to promotional awards based on authorship of research articles. While FCS faculty are working in collaborative teams with mentors and advocates to build capacity and expertise, it will be useful to award equal publication points
across the board to team members. FCS faculty may also work in groups because female faculty tend to place great emphasis on collegiality and interaction in their departments while men place emphasis on salary, benefits, and research time (Corley, 2005). This team effort should not be discredited by awarding different weightings to authors in groups.

Research.

Further research in this area is warranted. This study was only exploratory. It provides useful preliminary data into research among faculty in Jamaica. The methodologies used in this study are basic and can be extended to include more sophisticated analyses and designs as are appropriate. A larger sample size and expanding the groups of faculty would correct this.

This study can be extended to examine research productivity among the faculty in different disciplines in each of these institutions. This study may also be extended to compare faculty research productivity across disciplines and across institutions. Colbeck (1998) found that faculty in physics exhibited similarities and differences in their approach to integrating teaching and research because of the fundamental differences in the disciplines. Faculty in English found that the flexibility of their field allowed them to include a number of topics under “umbrella” courses. Like the faculty in physics, there is a high degree of “accepted knowledge” in FCS. Faculty could have the flexibility of English teachers because of the dynamic nature of the discipline. Family issues are contextual and ways of integrating them in teaching allows for some degree of flexibility.

With regards to FCS professionals, in particular, the study could be expanded to senior faculty at the secondary level of the education system. The population at this level is much larger and multiple regressions and path analyses performed to determine whether research among faculty predict research among the students who are graduates of these programs.

A sequential study that involves collecting data on successive cross-sectional samples (Papalia, Olds, & Feldman, 2009) may also be appropriate to examine program graduates from different years to determine if a change in faculty research habits has an impact on the research practices of the graduates. Their research practices can also be assessed by conference participation, especially local conferences that are less costly to attend than ones overseas.

Because this study showed that participants have the requisite attitude and perceived behavioral control to form a behavioral intention, an implementation study that provides the
catalyst for action would be appropriate. A needs analysis seems appropriate to ascertain the perceived needs of the participants. Data from this can be used to develop a plan of for research activities, such as workshops that can be undertaken to strengthen the faculty’s skills. Program evaluation research could emerge from these workshops.

Lack of resources and funding could be a particular concern for FCS education researchers in Jamaica. This suggests the potential for faculty to learn the grant seeking process and in so doing develop their skills in conceptualizing research and bringing it to fruition. Two interview participants also spoke the need for developing research skills.

Although this study explored the factors that impact the behavior of engaging in research other theories may be relevant to studying different perspectives of the issue. The Social Exchange Theory could possibly explain the reasons faculty’s intentions have not been transformed into actual behavior. “Are faculty satisfied that the exchange between the institution and themselves is fair?” “Are they getting from the institution, the remuneration that equates with their perceived input?” “Is there a chance of getting something better from doing something else?” (for example, “Is being involved in entrepreneurial activities better for them?”) This theory could possibly guide the gathering of indepth data through qualitative research.

Another theory of note is the Engagement Theory. Marcum’s (2000) interpretation of this theory is that engagement is constructed on self determination, interest, enjoyment, participation, and challenge. He noted that this concept is emerging as a replacement for motivation. According to Marcum, people choose to be engaged, the engaging work must reside within the subject area of competence and expertise, and engagement requires direct participation; one does not become engaged through observation, but through direct, tactile experience. I think FCS educators could make this theory applicable to their work.

The Social Role Theory, defined as behavior that belong to a specific office or position has been applied in studying research and teaching among faculty (Colbeck, 1998). This could also be applied in studying the present population as faculty play different roles, not only in their programs, but are also expected to satisfy the role of a faculty in the wider institutional context of being teacher, researcher, and service provider. This has implications for whether faculty perceive themselves as being able to be productive in all these roles. The role strain they experience when confronted with competing and conflicting role expectations could be explored.
Conclusion

Some important findings emerged in this study. Over the past five years, research productivity among FCS educators in post-secondary institutions in Jamaica has been low. This is true of the three types of institutions studied. Educators in 4-year colleges, especially those over 46 years old, were the most productive researchers. Participants’ marital status was not significant in differentiating research productivity but the ages of their children were. Not unexpectedly, participants with older children were more productive researchers than those with children who were 18 years old or younger. Three participants were exceptional in their output, producing between 11 and 14 publications. While one of these individuals was a Ph.D. graduate with up to 30 years of service in the field of education, the other two were holders of baccalaureate and master’s degrees with up to 10 years of experience. Such highly productive researchers should be studied through survey, interviews, and observations to identify qualities associated with their success.

Despite their low level of productivity, participants by and large perceived that research is valuable, that others want them to engage in research, and that they have the requisite personal attributes to conduct research. Because faculty seem to possess the favorable qualities that “lead to the formation of a behavioral intention” (Ajzen, 2006), they were expected to perform the behavior especially if the opportunity presents itself and perceived obstacles are removed. Contradictory to the prediction of the theory, higher scores for individual attitudes, norms, and abilities did not lead to greater productivity in this study. This unexpected result suggests that research should move to the departmental, institutional, and professional levels.

FCS faculty are faced with challenges of workload, inadequate resources, and a perceived lack of power to control situations in the work environment. Despite this, faculty recognize the undeniable import and value of research to their professional and personal development. This should encourage them to engage in research. A clear message for institutions, especially those where research is regarded as important, is to create opportunities for FCS faculty to engage in more research; thus, assigning faculty to manageable workloads, giving them resources, and lessening environmental demands. It could be constructive to conduct this study among a wider cross-section of faculty, including those in other disciplines in the same institutions in Jamaica and those in the same discipline who are operating under similar conditions to find out how the institutions differ in the way they foster the attitudes, norms, and ability among the faculty.
It was also interesting that the FCS educators in this study fell into the typical patterns for home economics faculty as well as for women in academia. Their productivity level was relatively low, but they generally produced more research as they reached middle age and as their children grew older. Research from a feminist perspective, which measures research output around the strength and lives of women, can perhaps contribute to more flexible views of research productivity.

A reminder from Ramsden (1999) may be relevant at this juncture as FCS faculty consider how they can overcome the challenges to engage: even in the “present age of mass higher education,” research performance is possibly the most important factor for assessing the standing of the modern university, or as in the case of institutions in Jamaica, “new” universities. He emphasized that even in a period of a more market-driven environment for higher education, “reputation or prestige is an indispensable component of academic culture. High status institutions add social value to their students and enable graduates to access the absolutely scarce commodity of elite occupations” (p. 342). As FCS educators compete with other professions for the scarce resource of students, and as off-shore universities mushroom on the island with offerings similar to those in the national institutions, it is expedient to consider improving the status and value of the programs and the profession through research engagement.
APPENDIX A

ONLINE SURVEY QUESTIONNAIRE

<table>
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<tr>
<th>1. Research Engagement Survey</th>
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<tr>
<td>Research Engagement Survey of Family &amp; Consumer Sciences Educators in Post-Secondary Institutions</td>
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The purpose of this survey is to discover and document the state of research engagement among Home Economics/Family & Consumer Sciences educators in post-secondary institutions in Jamaica. By research engagement I mean conducting research and publishing the findings, writing book chapters, developing creative works such as new designs and other such activities.

Please read each question carefully and provide your best answer. There is no correct or incorrect response.

The information that you provide in this survey is completely confidential. I have no way of identifying you individually in this online survey.

The data will be retained for about six months after data collection is closed. The surveys will be accessed by a password available only to the researcher and major professor.

One copy will be printed for easier reading of the data. Your name will not appear on this document. The document will be shredded as soon as the dissertation has been submitted.

I assure you that the answers you provide in this study will only be used for research purposes.

Thank you for participating.
# 2. Research Engagement Questionnaire

Some questions in this survey may appear repetitive. It is not an error. The questions are purposely prepared that way. They provide answers to different constructs.

Many questions in this survey make use of rating scales with 7 places; please check/click on the number that best describes your opinion. For example, if you were asked to rate "The Weather in Jamaica" on such a scale, the 7 places should be interpreted as follows:

The Weather in Jamaica is:

bad: 1=extremely; 2=quite; 3=slightly; 4=neither; 5=slightly; 6=quite; 7=extremely; good

If you think the weather in Jamaica is "extremely good", then you would check the number 7 if you think it is "quite bad", check the number 2.

Please proceed to answering the questions.

1. **Using a scale of 1 to 7, where 1 is Undesirable and 7 is Desirable, please rate the following statements**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Undesirable 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Desirable 7</th>
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<tr>
<td>For me to do something positive for the institution in which I work is</td>
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<td>For me to do something positive for my profession is</td>
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<td>For me to sharpen my skills in conducting research is</td>
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<td>Developing a better understanding of the courses I teach through research engagement is</td>
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<td>Having an opportunity to interact regularly with my colleagues regarding professional issues is</td>
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<td>Being able to publish journal articles, creative works, and books regularly is</td>
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<td>Staying current with developments in my profession is</td>
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<td>Improving my chance for promotion on my job through engaging in research is</td>
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2. **How much do the following situations matter to you? Indicate the degree to which they do using the scale of 1 to 7, where 1 is "Not at all" and 7 is "Very much"**

| Statement                                                                 | Not at All 1 | 2 | 3 | 4 | 5 | 6 | Very Much 7 |
|--------------------------------------------------------------------------|--------------|---|---|---|---|---|             |
| Generally speaking, I care about what other educators in post-secondary institutions do |               |   |   |   |   |   |             |
| Generally speaking, I care about what the supervisors on my job think I should do |               |   |   |   |   |   |             |
| Generally speaking, I care about what my colleagues at my job think I should do |               |   |   |   |   |   |             |
| Generally speaking, I care about what colleagues who are not in my profession think I should do |               |   |   |   |   |   |             |
3.

1. How often are you faced with the following situations?

<table>
<thead>
<tr>
<th>Situation</th>
<th>Rarely 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Frequently 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often do you encounter unanticipated events that place demands on your time?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>How often does your employment place unanticipated demands on your time?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>How often do regularly scheduled activities at work place heavy demands on your time?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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</tr>
<tr>
<td>How often does lack of resources make it difficult for you to engage in research?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>How often do family obligations place unanticipated demands on your time?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>How often do you feel ill, tired, or listless</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

2. Please indicate whether you agree with the following statements, on a scale where 1 is "Disagree" and 7 is "Agree".

<table>
<thead>
<tr>
<th>Statement</th>
<th>Disagree 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Agree 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engaging in research regularly will give me an opportunity to interact with my colleagues professionally</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Engaging in research regularly will ensure my publishing journal articles, creative works, and books</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Engaging in research in my work regularly will help me sharpen my skills in conducting research</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Engaging in research in my work regularly will help me develop a better understanding of the courses I teach</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Engaging in research will make me feel that I am making a positive contribution to the institution in which I work</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Engaging in research will make me feel that I am doing something positive for my profession</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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</tr>
<tr>
<td>Engaging in research regularly will help me stay current with developments in my profession</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Engaging in research in my work regularly will improve my chance for promotion on my job</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
1. Please indicate the degree to which you agree/disagree with the following statements

<table>
<thead>
<tr>
<th>Statement</th>
<th>Disagree 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Agree 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am confident in my ability to engage in research in my work regularly</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>I plan to engage in research in my work regularly</td>
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<td></td>
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<tr>
<td>It is possible for me to engage in research in my work regularly</td>
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<tr>
<td>Whether or not I engage in research in my work is completely up to me</td>
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<td></td>
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<tr>
<td>It is valuable for me to engage in research in my work</td>
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<tr>
<td>Most of the educators with whom I am acquainted engage in research regularly</td>
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<tr>
<td>It is easy for me to engage in research regularly</td>
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</tbody>
</table>

2. How often have you encountered the following situations?
(1 = Rarely : 7 = Frequently)

<table>
<thead>
<tr>
<th>Situation</th>
<th>Rarely 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Frequently 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often do other activities at your work or employment place</td>
<td></td>
<td></td>
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<td>heavy demands on your time?</td>
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</tr>
<tr>
<td>How often does the lack of resources, e.g. funding make it difficult</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>for you to engage in research on your job?</td>
<td></td>
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</tr>
<tr>
<td>How often do family obligations place unanticipated demands on your time?</td>
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<td></td>
</tr>
<tr>
<td>How often do you feel ill, tired, or listless?</td>
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<td></td>
</tr>
<tr>
<td>How often do you encounter unanticipated events, e.g. faculty meetings,</td>
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<td></td>
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<tr>
<td>that place demands on your time?</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>How often does your work load place unanticipated demands on your time?</td>
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<td></td>
</tr>
</tbody>
</table>

3. Indicate the number of the following types/pieces of work that you have done over the past two years.

- Published articles in a journal
- Published book reviews
- Research projects supervised
- Published book
- Wrote articles for the newspaper
- Wrote text books
- Wrote monographs
- Wrote chapters in edited volumes
- Developed creative works

Specify type(s) of creative work
1. Please answer using a scale of 1 to 7, where 1 is Disagree and 7 is Agree

<table>
<thead>
<tr>
<th></th>
<th>Disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Agree 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educators in other post-secondary institutions think I should</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>should engage in research regularly</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Supervisors on the job think that I should engage in research</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>regularly</td>
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<td></td>
</tr>
<tr>
<td>My colleagues at my job think that I should engage in research</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>regularly</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My colleagues in my profession think that I should engage in</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>research regularly</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Please indicate the number of hours you taught in the Fall (August - December) 2008 semester. For each class, indicate the number of students in the class and the hours of class for the week.

Please select from the options in the drop-down menu

<table>
<thead>
<tr>
<th>Class</th>
<th>No. of students</th>
<th>No. of hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Please indicate the number of hours you taught for the Spring (January - April) 2009 semester. For each class, indicate the number of students in the class and the hours of class for the week.

Please select from the options in the drop-down menu

<table>
<thead>
<tr>
<th>Class</th>
<th>No. of students</th>
<th>No. of hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
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</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6.

1. Please indicate whether you agree with the following items.
(Disagree= 1; Agree= 7)

<table>
<thead>
<tr>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>If I encountered unanticipated events that placed demands on my time, it would be difficult for me to engage in research on my job regularly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If my work load placed unanticipated demands on my time, it would be difficult for me to engage in research on my job regularly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If other activities at work, e.g. faculty meetings, placed heavy demands on my time, it would be difficult for me to engage in research on my job regularly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If I encountered lack of resources for research, it would be difficult for me to engage in research on my job regularly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If I had family obligations that placed unanticipated demands on my time, it would be difficult for me to engage in research on my job regularly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If I encountered unanticipated events that placed demands on my time, it would be difficult for me to engage in research on my job regularly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If I felt ill, tired, or listless, it would make it more difficult for me to engage in research on my job regularly</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

2. On the average, approximately how many hours of service do you give in the following areas per week?

<table>
<thead>
<tr>
<th>Area</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>The college community (e.g., serve on committees)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Communities in the college environs (e.g., conducting seminars)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other communities, e.g., where I worship or live</td>
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<td></td>
</tr>
</tbody>
</table>
7.

1. In which type of institution do you work? Please select from drop-down menu

   Type of Institution

2. What is your highest qualification? Please select one from the drop-down menu.

   Qualification

3. Did you complete a research project as part of the requirement for the degree/diploma/certificate program you completed?
   - YES
   - NO

4. If you did a research, have you published the research?
   - YES
   - NO
   - I plan to
   - I had not thought about it
   - I did not do a research

5. In which age group do you fall? Please indicate using drop-down menu

   Age Group

6. For how long have you been teaching at the post-secondary level? Please state in years.

   ________________________________

Thank you so much for participating in this research. I appreciate your assistance with this activity.

Leonie Clarke
APPENDIX B

HUMAN SUBJECTS APPLICATION AND COMMITTEE APPROVAL

Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673 · FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 6/4/2009
To: Leonie Clarke
Address: 1491
Dept.: FAMILY & CHILD SCIENCE
From: Thomas L. Jacobson, Chair
Re: Use of Human Subjects in Research
Factors impacting Family & Consumer Sciences educators' engagement in research

The application that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and two members of the Human Subjects Committee. Your project is determined to be Expedited per 45 CFR § 46.110(7) and has been approved by an expedited review process. The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.
If the project has not been completed by 6/2/2010 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.
Cc: Marsha Rehm, Advisor
HSC No. 2009.2587
LETTER TO HEADS OF DEPARTMENTS/PROGRAM DIRECTORS

Colleague (name of colleague)
Name of Institution
Institution’s Address
Jamaica
Dear (add name),
I am pursuing studies toward a Ph. D. in Family Relations at Florida State University. I am happy that I am now preparing the prospectus for the dissertation. For the dissertation I am interested in finding out the extent to which lecturers with qualification in Family & Consumer Sciences (FCS)/ Home Economics education are engaged in research in their work. I am motivated to examine this for two reasons:

1. FCS professionals are desirous of making a valuable contribution to the body of knowledge in their field in Jamaica but face constraints. I am interested in documenting these so that we can identify effective strategies to address them.

2. FCS professionals are implored by their professional organizations such as Caribbean Association of Home Economists (CAHE) and International Federation for Home Economics (IFHE), among others, to use research as a tool to improve the quality of life of the people we serve.

I am seeking your assistance in identifying the staff in your institution who have FCS/Home Economics qualification. These include persons who are teaching in your department as well as other faculty who have home economics qualification whether at the certificate, diploma, baccalaureate, master’s, or Ph. D level, but teach in other departments. I would appreciate if you would send me a list of their names along with their email addresses, where available, so that I may contact them personally to solicit their participation in the study.

I appreciate your assistance in compiling this list of names and hope you and your faculty will be willing to participate in the study by responding to a questionnaire sometime in June 2009 when I start data collection.
Please respond to me by email at the following address: lpc06c@fsu.edu. If you prefer, you may send by post to 175 Brittain Drive, Apt. # 1, Tallahassee, FL 32310.

The study has been approved by the Institutional Review Board (IRB) of the Florida State University. Should you need further information, please feel free to contact my Major Professor, Dr. Marsha Rehm at mrehm@fsu.edu. Her address is: 242 Sandels Building, Florida State University, Tallahassee, FL 32306-1490, telephone 850-644-7776.

I am grateful for your assistance.

Leonie Clarke
Ph. D. Candidate, Family & Child Sciences
APPENDIX D

INFORMED CONSENT FOR ONLINE SURVEY PARTICIPANTS

INFORMED CONSENT FORM

“Family & Consumer Sciences Educators’ Engagement in Research”

Principal Investigator: Leonie Clarke

I, being 18 years of age or older, freely and voluntarily and without undue inducement or any element of force, fraud, deceit, duress, or other form of constraint or coercion, consent to be a participant in the above named research project, to be conducted at the Florida State University. The researcher at Florida State University will not have any information about me or any way to connect my participation with the answers provided.

Purpose of the research: I understand that the purpose of this research project is so that the researcher can understand better my opinions about engagement in research.

Procedures for the research: I understand that participation in this project involves usual procedures; i.e. agreeing to this informed consent form and filling out a questionnaire. I understand that by agreeing to participate in this project, I consent to complete the online questionnaire about my opinion of research engagement. The total time commitment for this study will be approximately 30 minutes.

Potential risks or discomforts: I understand there is a minimal level of risk involved if I agree to participate in this study. I might experience distress while answering questions about my opinion of engagement in research. I am able to stop participation at any time I wish. In case of distress, I can contact the person conducting the study to offer me referrals for psychological support.

Potential benefits to you or others: I understand there may be benefits for participating in this research project such as strategies to improve research engagement, if this is my desire. There may also be training to sharpen my skills and improve my confidence in conducting research.

Compensation: This study is based on a voluntary participation and there will be no compensation involved with this study.

Confidentiality: All my answers to the questions will be kept confidential and my confidentiality will be protected to the full extent allowed by law. My name will not appear on any of the surveys or results. No individual responses will be reported. Only group findings will be reported. Any identifying information will be shredded.

I understand that this consent may be withdrawn at any time without prejudice or penalty. I have been given the right to ask any question I have concerning the study. Questions, if any, should be answered to my satisfaction.
I understand that I may contact the Principal Investigator, Leonie Clarke (c/o tel: 850-644-5756), lpc06c@fsu.edu for answers to questions about this research or my rights. Group results will be sent to me upon request.

**Statement of Consent:**
By completing the questionnaire online, I acknowledge my consent to participate in the study. I have read the procedures to be followed in this research and their purposes, any risks, discomfort, and benefits associated with participation in this study, and the measures which will be taken to ensure confidentiality of the information obtained.

If I have questions regarding my rights as a research subject, I will contact the FSU Institutional Review Board at 850-644-8633 or Ms. Julie Cooper at jjcooper@admin.fsu.edu.
APPENDIX E

SCORING THEORY OF PLANNED BEHAVIOR INSTRUMENT

Determine scores for the three independent variables (a) attitude (behavioral beliefs + outcome evaluation), (b) subjective norm (normative beliefs + motivation to comply), and (c) perceived behavioral control (control beliefs + power of control) in the following way:

(1) Label each item in each dimension of each construct. Items for behavioral beliefs, normative beliefs, and control beliefs are labeled “a, b, c, and so on depending on the number of items, while corresponding items for outcome evaluation, motivation to comply, and power of control are labeled with the continuing letters, based on the number of items in each dimension.

Attitude = Behavioral Beliefs (eight items): a, b, c, d, e, f, g, h; Outcome Evaluation (eight items): i, j, k, l, m, n, o, p.

Subjective Norm = Normative Beliefs (four items): a, b, c, d; Motivation to Comply (four items): e, f, g, h.

Perceived Behavioral Control = Control Beliefs (six items): a, b, c, d, e, f; Power of Control (six items): g, h, i, j, k, l.

(2) Recode values on the Likert scale for each item comprising “outcome evaluation”, “motivation to comply”, and “power of control” by transforming the scores. Transform scores for these items by subtracting 4 from each score on the Likert scale. That is, scores of 1, 2, 3, 4, 5, 6, 7 are converted to -3, -2, -1, 0, +1, +2, +3.

The scores for the items measuring the “behavioral beliefs”, “normative beliefs”, and “control beliefs” retain their original values of 1, 2, 3, 4, 5, 6, 7.

(3) Compute the value for each construct by summing the product of the new and old values appropriately, i.e.:

Attitude = (a * i) + (b * j) + (c * k) + (d * l) + (e * m) + (f * n) + (g * o) + (h * p)

Subjective Norm = (a * e) + (b * f) + (c * g) + (d * h)

Perceived Behavioral Control = (a * g) + (b * h) + (c * i) + (d * j) + (e * k) + (f * l)
(4) Determine ranges of scores by multiplying the product by the number of items in each dimension:

Attitudes = (7 * ± 3) * 8 = -168 to +168

Subjective Norms = (7 * ± 3) * 4 = - 84 to + 84

Perceived Behavioral Control = (7 * ± 3) * 6 = - 126 to + 126
Table E1

*Items for Measuring Attitude*

<table>
<thead>
<tr>
<th>Items</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Behavioral beliefs</strong></td>
<td>Disagree 1 2 3 4 5 6 7 Agree</td>
</tr>
<tr>
<td>a. Engaging in research will make me feel that I am making a positive contribution to the institution in which I work</td>
<td></td>
</tr>
<tr>
<td>b. Engaging in research will make me feel that I am doing something positive for my profession</td>
<td></td>
</tr>
<tr>
<td>c. Engaging in research in my work regularly will help me sharpen my skills in conducting research</td>
<td></td>
</tr>
<tr>
<td>d. Engaging in research regularly will help me develop a better understanding of the courses I teach</td>
<td></td>
</tr>
<tr>
<td>e. Engaging in research regularly will give me an opportunity to interact with my colleagues professionally</td>
<td></td>
</tr>
<tr>
<td>f. Engaging in research regularly will ensure my publishing journal articles, creative works, and books</td>
<td></td>
</tr>
<tr>
<td>g. Engaging in research regularly will help me stay current with the developments in my profession</td>
<td></td>
</tr>
</tbody>
</table>
Table E1 continued

<table>
<thead>
<tr>
<th>Items</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>h. Engaging in research regularly will improve my chance for promotion/advancement on my job</td>
<td>Disagree 1 2 3 4 5 6 7 Agree</td>
</tr>
<tr>
<td><strong>Outcome evaluations</strong></td>
<td>Undesirable</td>
</tr>
<tr>
<td>i. For me to do something positive for the institution in which I work is …</td>
<td>-3 -2 -1 0 +1 +2 +3</td>
</tr>
<tr>
<td>j. For me to do something positive for my profession is …</td>
<td>-3 -2 -1 0 +1 +2 +3</td>
</tr>
<tr>
<td>k. For me to sharpen my skills in conducting research is …</td>
<td>-3 -2 -1 0 +1 +2 +3</td>
</tr>
<tr>
<td>l. Developing a better understanding of the courses I teach through research engagement is …</td>
<td>-3 -2 -1 0 +1 +2 +3</td>
</tr>
<tr>
<td>m. Having an opportunity to interact regularly with my colleagues regarding professional issues is …</td>
<td>-3 -2 -1 0 +1 +2 +3</td>
</tr>
<tr>
<td>n. Being able to publish journal articles, creative works, and books regularly is …</td>
<td>-3 -2 -1 0 +1 +2 +3</td>
</tr>
<tr>
<td>o. Staying current with developments in my profession is …</td>
<td>-3 -2 -1 0 +1 +2 +3</td>
</tr>
</tbody>
</table>
Table E1 continued

<table>
<thead>
<tr>
<th>Items</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>p. Improving my chance for promotion/advancement on my job through engaging in research is …</td>
<td>Undesirable</td>
</tr>
<tr>
<td></td>
<td>-3 -2 -1 0 +1 +2</td>
</tr>
<tr>
<td></td>
<td>Desirable</td>
</tr>
<tr>
<td></td>
<td>+3</td>
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</tbody>
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Table E 2  

*Items for Measuring Subjective Norms*

<table>
<thead>
<tr>
<th>Items</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Normative Beliefs</strong></td>
<td></td>
</tr>
<tr>
<td>a. Educators in other post-secondary institutions think I should engage in research regularly</td>
<td>Disagree 1 2 3 4 5 6 7 Agree</td>
</tr>
<tr>
<td>b. Supervisors on the job think that I should engage in research regularly</td>
<td>Disagree 1 2 3 4 5 6 7 Agree</td>
</tr>
<tr>
<td>c. My colleagues at my job think that I should engage in research regularly</td>
<td>Disagree 1 2 3 4 5 6 7 Agree</td>
</tr>
<tr>
<td>d. My colleagues who are not in my profession think that I should engage in research regularly</td>
<td>Disagree 1 2 3 4 5 6 7 Agree</td>
</tr>
<tr>
<td><strong>Motivation to Comply</strong></td>
<td></td>
</tr>
<tr>
<td>e. Generally speaking, I care about what other educators in post-secondary institutions do</td>
<td>Not at All Very Much</td>
</tr>
<tr>
<td>f. Generally speaking, I care about what supervisors on the job think I should do</td>
<td>Not at All Very Much</td>
</tr>
<tr>
<td>g. Generally speaking, I care about what my colleagues at my job think I should do</td>
<td>Not at All Very Much</td>
</tr>
<tr>
<td>h. Generally speaking, I care about what colleagues who are not in my profession think I should do</td>
<td>Not at All Very Much</td>
</tr>
</tbody>
</table>
### Table E 3

*Items for Measuring Perceived Behavioral Control*

<table>
<thead>
<tr>
<th>Items</th>
<th>Response Options</th>
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</thead>
<tbody>
<tr>
<td><strong>Control Beliefs</strong></td>
<td></td>
</tr>
<tr>
<td>a. How often do other activities, e.g. faculty meetings, at your work or employment place place heavy demands on your time?</td>
<td>Rarely</td>
</tr>
<tr>
<td>b. How often does lack of resources, e.g. funding, make it difficult for you to engage in research on your job?</td>
<td>Rarely</td>
</tr>
<tr>
<td>c. How often do family obligations place unanticipated demands on your time?</td>
<td>Rarely</td>
</tr>
<tr>
<td>d. How often do you feel ill, tired, or listless?</td>
<td>Rarely</td>
</tr>
<tr>
<td>e. How often do you encounter unanticipated events that place demands on your time?</td>
<td>Rarely</td>
</tr>
<tr>
<td>f. How often does your work load place unanticipated demands on your time?</td>
<td>Rarely</td>
</tr>
<tr>
<td><strong>Power of Control</strong></td>
<td></td>
</tr>
<tr>
<td>g. If other activities at work, e.g. faculty meetings, placed heavy demands on my time, it would be difficult for me to engage in research on my job regularly</td>
<td>Disagree</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>-3</th>
<th>-2</th>
<th>-1</th>
<th>0</th>
<th>+1</th>
<th>+2</th>
<th>+3</th>
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<td>Items</td>
<td>Response Options</td>
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<tr>
<td>h. If I encountered lack of resources for research, it would be</td>
<td>Disagree</td>
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<tr>
<td>difficult for me to engage in research on my job regularly</td>
<td>Agree</td>
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<td></td>
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<tr>
<td>i. If I encountered unanticipated events that placed demands on</td>
<td>Disagree</td>
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<td></td>
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<tr>
<td>my time, it would be difficult for me to engage in research on</td>
<td>Agree</td>
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<td>my job regularly</td>
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<td>j. If my work load placed unanticipated demands on my time, it</td>
<td>Disagree</td>
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<tr>
<td>would be difficult for me to engage in research on my job</td>
<td>Agree</td>
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<td>regularly</td>
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<tr>
<td>k. If I had family obligations that placed heavy demands on my</td>
<td>Disagree</td>
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<td></td>
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<tr>
<td>time, it would be difficult for me to engage in research on my</td>
<td>Agree</td>
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<td>job regularly</td>
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<tr>
<td>l. If I felt ill, tired, or listless, it would make it more</td>
<td>Disagree</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>difficult for me to engage in research on my job regularly</td>
<td>Agree</td>
<td></td>
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</tr>
</tbody>
</table>

Table E3 continued
REFERENCES


BIOGRAPHICAL SKETCH

Professional Preparation

2010  Ph.D. Family Relations, Florida State University.

Dissertation title: An Exploratory Study of Jamaican Family and Consumer Sciences Educators’ Attitudes toward Research Engagement, Perceptions of Research Norms, and Perceived Control over Conducting Research and Engagement in Research in Jamaica

Dissertation Supervisor: Dr. Marsha Rehm


Thesis Title: Development of a Nutritionally Improved Snack for Jamaican School Children

Thesis Supervisor: Dr. B. McFarlane


1985  B. S. Nutrition (cum laude). Howard University, Washington, D.C.

Major - Human Nutrition, Minor – Chemistry.


Professional Experience

2006 – 2009  Graduate Teaching Assistantship, Florida State University. Facilitated students’ learning in the following courses:

FOS 3026 – Food Fundamentals

FAD 3220 – Individual & Human Development

HEE 4054 – Educative Process

1998 – 2006  Program Director, Family & Consumer Studies Program, Faculty of Education & Liberal Studies, University of Technology, Jamaica – Developed, administered, reviewed, and revised full and part time programs in Family & Consumer Studies, Food Service Production & Management, and Apparel Design, Production & Management. Supervised undergraduate student research projects.
Supervised eight to nine lecturers serving approximately 400 students each year.

Since 1994 Senior Lecturer, Family & Consumer Studies (FCS) Program, Faculty of Education & Liberal Studies, University of Technology, Jamaica – Developed, reviewed, and revised courses and supervised undergraduate student research projects.

1995 – 2004 Administered the part-time summer degree program and carried out other administrative duties as assigned in the FCS program.

1989 – 1994 Lecturer, Home Economics Education, Faculty of Education & Liberal Studies, University of Technology, Jamaica - Developed, reviewed, and revised courses and supervised undergraduate student research projects.

As a member of the Examination Committee, co-managed the student examination process for the Faculty and the FCS program.

1997 –1999 Chairperson, Home Economics Board of Studies, Joint Board of Teacher Education. Coordinated program revision and examination activities that related to teacher education in home economics in six teachers’ colleges in Jamaica.


**External Moderator**

2002-Present Moderate examinations for Caribbean Advanced Proficiency Examinations (CAPE) in Food and Nutrition.

2005 Assessed teachers in Bahamian secondary schools enrolled in the Commonwealth of Learning Diploma in Education program.
Honors and Awards

2009  Cora B. and Ross Evans Scholarship, College of Human Sciences, Florida State University

2009  Dissertation Award Grant, College of Human Sciences, Florida State University

2009  Invited to join Kappa Omicron Nu Honor Society, College of Human Sciences, Florida State University

2009  Invited to join Golden Key International Honor Society

2008  Ruth Pestle Award for Research, College of Human Sciences, Florida State University

2008  Beryl Wood Scholarship Book Grant, Caribbean Association of Home Economists

2006 – 2009  Caribbean & Latin American Scholarship, College of Human Sciences, Florida State University

1989  Listed in Who’s Who Among International Students in American Colleges and Universities

1987 –88  National Dean’s List Honoree (USA)

1985  Member, Omicron Nu, Home Economics Honor Society, Howard University

1982 & 1985  Member, Dean’s List, School of Human Ecology, Howard University

Membership in Professional Organizations

Caribbean Association of Home Economists, Chairperson, Research Committee

National Food and Nutrition Coordinating Committee, Food Security Subcommittee, University of Technology, Jamaica’s Representative

Jamaican Home Economics Association, active member

International Federation for Home Economics, active member

Jamaican Association of Professionals in Nutrition and Dietetics

TEACHING

Courses Taught

Methodology, Instructional Technology, Family and Consumer Studies Education, Introduction to Family Counseling, and Nutrition for Healthy Living

New Course Development
Participated in developing, and or led the development of Nutrition in World Perspective, Life Cycle Nutrition, Introduction to Food and Nutrition, Family in World Perspective, Parenting, Family and Consumer Studies Teaching Methodology, Family and Consumer Studies Education, and Nutrition for Healthy Living

SCHOLARLY ACTIVITIES

Publication

Refereed Journal Article Published

Presentations


Other Publishing and Presentation Activities


Nov. 2000  Participated in and led specialist group in reviewing the Caribbean Advanced Proficiency Examination syllabus in food and nutrition in Jamaica.

July 2000 & August 2000  Conducted workshops on ‘Social Graces’ for Senior Police Officers and graduates of the Jamaica Special Constabulary Force

March 2000  Participated in developing competency profile for Technical Vocational Teachers

SERVICE

Community Relations

2005-2006  Presenter at parenting workshops for parents of pre-school through to high school children.

April 2001  Presentation to special education learners, School of Hope, Mona, Jamaica “Career Choices in the Food Service Industry”.

1992 – 1997  Food and Nutrition Presenter. Participated in orientation of various groups of & 2002  U. S. A. Peace Corps Volunteers, teaching them to prepare locally grown foods and incorporating them into their diets. Advised host families about incorporating local foods into dishes that are culturally acceptable to their guests from the U.S.A.

Aug. 1995  Developed food items for low-income earners from a soy-based cereal. Demonstrated the use of this soy-based cereal to residents of an inner-city community in Kingston, Jamaica.
President  Jamaica Seventh Day Baptist Women’s Board. Planned and organized activities, such as seminars for the spiritual upliftment of the women of the denomination. Instrumental in organizing the denomination’s first annual Women’s Conference in November 2000. Initiated island-wide Women’s Expositions, May-June, 2003 and annual Couple’s Retreat, February 2004. Served also as member of the Jamaica Seventh Day Baptist Conference Executive.

Moderator  Kingston Seventh Day Baptist Church. Served as member of Advisory Committee of the Kingston Seventh Day Baptist Church with responsibility for conducting business meetings