A Quasi-Experimental Study of a Health Patterning Modality about Childhood Vaginitis and Power in Haitian Primary Caregivers

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The Graduate Center, City University of New York
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A dissertation submitted to the Graduate Faculty in the Nursing Department in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

2017
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This manuscript has been read and accepted for the Graduate Faculty in the Nursing Program in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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THE CITY UNIVERSITY OF NEW YORK
Abstract

A Quasi-experimental Study of a Health Patterning Modality about Childhood Vaginitis and Power in Haitian Primary Caregivers

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Advisor: Eleanor T. Campbell

The purpose of the study was to appraise the power as knowing participation in change of primary caregivers of Haitian children aged 6 to 13 years old before and after participation in an education and resource health patterning modality related to risk factors and prevention of childhood vaginitis. The study was framed within the realm of Rogers’ Science of Unitary Human Beings and the conceptual framework of Barrett’s Power as Knowing Participation in Change. A pretest-posttest quasi experimental study was conducted. Descriptive statistics were used to answer the first research question “What are the power profiles of Haitian caregivers before and after the health patterning modality about childhood vaginitis?” and a t-test supported by a Wilcoxon Signed ranked test was done to answer the second question “To what extent does Haitian caregivers’ power profile change after the health patterning modality about childhood vaginitis?”

A purposive sample of 92 Haitian primary caregivers of female children aged 6 to 13 years old was recruited. The sample was delimitied to primary caregivers of girls who attended five selected schools. Participants completed the Haitian Creole translated Power as Knowing Participation in Change Tool Version II before and after their participation in the health
patterning modality. The Power of Haitian primary care givers was statistically significantly enhanced following participation in the health patterning modality that included education and resources.

The findings of this study though limited have many implications for nursing research and nursing practice. They support the unitary nature of power and reinforced the belief that power is an innate attribute that exists independent of contexts. Furthermore, statistically significant increase in power at posttest relates the importance of health patterning modalities in enhancing power.
Acknowledgements

This dissertation is dedicated to my parents Irmène and Louis Merveillé Leveillé, my beacons of strength, perseverance, determination, patience, wisdom, love of God and service. It is also dedicated to my nieces and nephews. May my accomplishment inspire them to value learning and education.

I want to express my sincere gratitude to my husband Joseph Paul Tulce who has been so patient through my ups and downs and whose love, and support helped me hold fast and persevere.

My heartfelt gratitude to my sponsoring committee; thank you Dr. Eleanor Campbell, for accepting to lead this process, thank you for your guidance, assistance and support. Dr. Arlene Farren, your simplicity, depth of knowledge and generosity had been an inspiration. You helped me attain a better understanding of the Science of Unitary Human Beings. Dr. William Gallo, your reassuring presence comforts, thank you for your statistical guidance. Thank you, Dr. Steve Bauman for your support and assistance in this process. Last but not least, Dr. Keville Fredrickson with whom this whole process started, thank you for strengthening my faith in nurses’ ability to care for each other. I can only hope to pay back by being as much a blessing to someone else as you have been to me.

My sincere gratitude to my professors at the Graduate Center nursing program, they have in a way or another provided guidance and contributed to the knowledge needed to complete this journey. I want to especially acknowledge Dr. Margaret Lunney, my scientific writing professor. Her writing expertise helped me become a better writer.
Thank you to Dr. Elizabeth Barrett for developing the power theory and the Power as Knowing Participation in Change Tool. Thank you for granting me permission to translate and use the tool.

Special thanks to those who participated in the translation of the tool in Haitian Creole, Dr. Cidna Valentin, Dr. Gilberthe Bastien, Dr. Jean Yves Plaisir, Joseph Paul Tulce MA, AdvCertPA, Myriam Augustin MS, M Ed., and Dr. Serge Madhere. This tool is an important addition to the few numbers of available Haitian Creole research tools.

Thank you to the schools’ directors who allowed me to use their schools for sample recruitment and implementation of the study. Heartfelt thanks to the study’s participants from whom I learned much.

Moreover, in this pandimensional world, many others have extended much needed supports. Special thanks to Dr. William Ebenstein for his supports and his dedication to the Chancellor Haitian CUNY Initiative.

Special thanks to my biggest cheerleaders, Marie Leveille, and Karine Previl Dunel; sisters, you never failed to cheer me up. Your prayers and words of encouragements meant a lot.

Special thanks to my sister- in- law Adelaide Tulce who helped me find the school sites, coordinated with the school directors in Les Cayes, and provided much needed assistance while conducted the study in Haiti.

Thank you to Rosette Previl, Huguette Dejean and my cousin Michelle Dupont for their encouragements and supports.

Special thanks to my classmates, Lucky cohort 7. Throughout it all, we supported and encouraged each other. Let’s continue to power up.
Most importantly, thank you to my God Almighty, the true catalyst of my power- as-freedom. Through Him, I am fully aware of my choices, free to act intentionally and fully involved in creating change for my well-being and the well-being of others.

This dissertation was partially supported by grants from:

Graduate Center CUNY Philosophy of Nursing (PhD) Oral Proposal/Dissertation Fellowship Grant

Mu Upsilon Chapter, Sigma theta Tau International Staten Island Chapter Research Grant

Society of Rogerian Scholars Martha E Rogers Scholars Fund Scholarship
# Table of contents

Abstract 

iv

Acknowledgement 

vi

List of Tables 

xi

List of Figures 

xii

Chapter 

1 Introduction 

1

Background of the Study 

1

Statement of the Problem 

6

Purpose of the Study 

7

Significance of the Study 

8

Definition of Terms 

9

Theoretical Framework 

9

Research Questions 

11

Limitation 

11

Delimitation 

11

Assumptions 

12

2 Review of the Literature 

13

Power 

13

Power –as- Control 

14

Power and Haitians 

18

Power and Empowerment 

19

Power- as- freedom 

19

Health Patterning Modality 

22

Vaginitis 

27
3 Method

   Sample 32
   Instruments 34
   Power as Knowing Participation in Change Tool, Version II 34
   (PKPCT VII)
   Demographic Data Form 38
   The Health Patterning Modality 38
   Data Collection Procedure 41
   Data Analysis 42

4 Results 44

   Preliminary Analysis 44
   Description of the Sample 49
   Evaluation of the Haitian Creole Translated Power as Knowing Participation in Change Tool Version II (HC PKPCT VII) 55
   Main Analysis 57
   Research Questions 60
   Research Question 1 60
   Research Question 2 60
   Ancillary Analysis 61

5 Summary, Discussion, Implications, Recommendations, and Conclusions 68

   Summary of the Study 68
   Discussion of the Findings 70
   The sample 70
   The Haitian Creole translated PKPCT VII 72
   Research Question One 74
Research Question Two 75
Ancillary Analyses 78
Implications for Practice 81
Recommendation for Future Research 83
Conclusions 85

Appendices

A1 Pattern knowing and Appreciation and Voluntary Mutual Patterning 87
(Barrett, 2010)

B (1a) Demographic Data Form English 92
B (1b) Demographic Data Form Haitian Creole 95
B2a Demographic Data Form English posttest 98
B2b Demographic Data form Haitian Creole posttest 99

C1 PKPCT VII Haitian Creole 100
C2 PKPCT VII English 103

D1 Flyer English 106
D2 Flyer Haitian Creole 107

E1 Poster English 108
E2 Poster Haitian Creole 109

F1 Request for Permission to Recruit (English) 110
F2 Request for permission to Recruit (Haitian Creole) 111

G1 Permission to Request English 116
G2 Permission to request Haitian Creole 121

References 126

List of Tables

1 Number of Questionnaires Removed from Analysis and Number of Missing 48
Items per Questionnaires at Pretest and at Posttest
2 Number and Percentages of Participants Included in the Data Analysis and their Number of Missing items
3 Participants’ Age, Gender, Work Status, Community of Residence, and Level of Education
4 Participants’ Self-reported Level of Knowledge about Childhood Vaginitis at Pretest and at Posttest
5 Age and Schools of Participants’ Girls
6 Possible and Actual Scores, Means, and Standard Deviation for the PKPCT
7 Reliability of the Subscales and Total PKPCT Pretest and Posttest
8 Scores, Means, Standard Deviations, Skewness and Kurtosis for the PKPCT VII at Pretest and Posttest
9 Mean differences, SD, Significance, and Effect Sizes of PKPCT Total and Subscales at Pretest and at Posttest
10 Differences in Power Based on Demographics
11 Association of Level of Knowledge about Childhood Vaginitis with Power and Significance
12 Inter-correlations of Subscales and PKPCT total at Pre-test and at Posttest
13 Inter-correlations at Pretest and Post-test

List of Figures
1 Number of Participants who Registered and Completed the Study
2 Age of Primary Caregivers
Introduction

Background of the study

Power is something all people have and can enhance. It is the capacity that people have to make the changes they want. People’s power is their “capacity to knowingly participate in change” (Barrett, 2010, p. 48). It is their power to participate knowingly in actualizing their potential for well-being (Barrett, 2010). This form of power is power-as-freedom. It is not to be confused with power-as-control, another form of power which also integrates the notion of knowing participation in change. Actualizing potential for well-being is precisely what makes the difference between power-as-freedom and power-as-control (Barrett, 2010, 2015).

Everybody has power. While power is a universal inherent trait, it can manifest from lower to higher frequency and people may at times experience feelings of powerlessness (Barrett, 2010). Power as knowing participation in change can be enhanced by the use of health patterning modalities (Barrett, 2000).

Health patterning is the process whereby nurses in mutual process assist clients with their knowing participation in change (Barrett, 1988). Involvement in mutual process means people do not act in isolation but rather are experiencing and changing with their environment. This mutual process is unpredictable and is not causal (Barrett, 2010). Health patterning focuses on assisting clients to make the changes they wish to make including life style issues or other challenges (Barrett, 1990b). Power is essential to the health patterning process (Barrett, 1988).

Health patterning modalities are the specific ways used to help clients participate in creating change (Barrett, 2000). They are tools that can facilitate power enhancement, that is, assist people in using their capacity to participate knowingly in actualizing their potential (Barrett, 2000). The use of health patterning modalities such as health education through
voluntary mutual patterning can facilitate people’s involvement in creating the changes that they want (Barrett, 1990b). Engagement in health modalities such as exercise (Wall, 2000), and a support group (Larkin, 2007) were found to significantly increase power.

Haiti has most often been coined the most impoverished country in the western hemisphere. A striking percentage of the population (78%) lives on less than two dollars per day (Maternowska, 2006; Shaw, 2010; World Bank, 2012). In addition, to the low socioeconomic status, there is a lack of health resources in Haiti (Guilbaud & Preston, 2006). Many assistance programs have implemented modalities that are very often paternalistic and that do not take into account the Haitian people’s capacity to knowingly participate in the change they want (Farmer, 2003; Maternowska, 2006).

The Haitian people’s manifestation of power as knowing participation in change in health promotion endeavors has been noted to be hindered by methods of health promotion that lack the mutual patterning process and that Haitians perceived as domineering (Maternowska, 2006). In addition, Farmer (2003) identified Haitians health problems as manifestations of power –as - control and labeled them pathologies of power. This study engaged the health modalities of freely choosing to participate in education and choosing resources in an effort to enhance power in Haitian primary caregivers of female children age 6 to 13. The health patterning modality included a discussion of risk factors and prevention of vaginitis and distribution of resources.

The study focused on school age children between the ages of 6 and 13 years, because the incidence of vaginitis was found to increase during school age when parents supervising and monitoring of their children’s toileting behavior decreases (Mcgreal & Wood, 2010). Although this study only focused on educating primary caregivers about vaginitis in school age children, vaginitis in girls 7months to 18years has also been found to be an important health issue.
Thirteen percent (13%), (55 of 426) girls aged 7 months to 18 years old reported symptoms related to vaginitis and 89% reported recurrence of symptoms during a health assessment conducted at an annual health mission clinic in Les Cayes (Leveille-Tulce, 2013). In addition, Haitian parents’ lack of knowledge and means to engage in preventing vaginitis in their children were reported by participants in a study that sought to understand Haitian stakeholders’ attitudes, beliefs and behaviors toward childhood vaginitis. Moreover, parents were also reported to be important to the mitigation of the incidence of vaginitis in their children (Leveille-Tulce, 2014). Though the common gynecological symptoms for which prepubertal children seek care, vaginitis is more frequently seen in women than in children and prepubertal girls (Gor, 2014). The occurrence of vaginitis in children may have implications for their long-term health as vaginitis increases the risk for sexually transmitted diseases and may have serious consequences in childbearing age (Center for Disease Control and Prevention CDC, 2010; Gor, 2014; Porth & Matfin, 2009).

In addition, studies have shown that education about risk factors such as poor hygiene and adoption of hygienic measures contribute to mitigating the occurrence and recurrence of vaginitis in children (Dei, Di Maggio, Di Paolo, & Bruni, 2009; Jasper, 2009; Joishy et al., 2005; Stricker et al., 2003). In Haitian children, incidences of vaginitis have been attributed to use of unsanitary water for toileting and bathing (Leveille-Tulce, 2013). However, the children/caregivers assessed in Les Cayes, Haiti reported many other risk factors associated with vaginitis. For example, 40% reported that they wipe themselves from back to front, 51% touch their genital area with dirty hands, and 71% reported a history of intestinal parasites (Leveille-Tulce, 2013). Education about the presence of these risk factors is important as greater knowledge about diseases and their risk factors had been associated to manifestation of raised
awareness and adoption of prevention-laden behaviors (Kershaw et al., 2006; Kyle, et al., 2013; Souganidis et al., 2012).

Knowledge has been identified as source of power (Cowling, 2004) and knowledge and availability of resources have been found to be important contributors to adoption of healthy behaviors and health promotion (Guilbaud & Preston, 2006; Sougandis et al. 2012). Moreover, face to face education that provides knowledge about risk factors has been found to be related to raising awareness (Kyle, Nicoll, Forbat, & Hubbart, 2013). In fact, knowledge has the potential to increase participation in health promotion (Ayisi et al., 2012). A study by Kim, Smith, and West (2012) that examined the relationship between power and participation of employees in breast health education revealed a higher score for all dimensions of power on individuals who rated higher on having an annual mammogram and on the effectiveness of all the educational sessions. There is a need for studies that address the use of education and resource health modalities and Haitian caregivers’ power as knowing participation in change.

A pretest- posttest quasi-experimental study was conducted to examine Haitian primary caregivers’ power before and after participants’ voluntary mutual patterning in an education and resource health patterning modality related to risk factors and prevention of childhood vaginitis. The modality’s components “are used in the interest of power” (Barrett, 2010, p 50). The approach used in the study is derived from Barrett’s (1988) Rogerian practice methodology which encompasses two phases, pattern manifestation knowing and appreciation, and voluntary mutual patterning (Barrett, 2010, 2015). Barrett (1988) defined pattern manifestation knowing and appreciation as the identification of the human and environmental manifestation related to current health events, and voluntary mutual patterning as deliberate, continuous pattern of the environmental field by nurses and clients to promote harmony related to health events. These
two phases are neither sequential nor separable. Although a continuous and integral process, in this study, pattern manifestation knowing and appreciation relates to the appraisal of participants’ power profile before and after the health modality. Moreover, voluntary mutual patterning refers to the researcher and participants’ participation in the health modality. More details about the process is provided in chapter 3 and in appendix A1.

A purposive sample of at least 50 primary caregivers of females aged 6 to 13 years old from five elementary schools in the Les Cayes area was recruited to participate in the study. The Haitian Creole translated Power as Knowing Participation in Change Tool Version II (PKPCT VII) was used to appraise participants’ power profile before and after participation in the health patterning modality. The tool was blind back translated in Haitian Creole and piloted by the researcher (Leveille-Tulce, 2015).

Barrett’s Power as Knowing Participation in Change theory (2010) was used as the theoretical framework for the study. Power as Knowing Participation in Change theory was selected as it reveals that power is innate and that at times individuals may experience feelings of powerlessness, (Barrett, 2010). Power as Knowing Participation in Change theory focuses on the importance of being aware of the choice made, feeling free to do it and completing it intentionally without outside pressure (Barrett, 2010, 2015). Barrett (1986) conceptualized power in the realm of Rogers’ (1970) Science of Unitary Human Beings (SUHB). SUHB is a unitary worldview wherein humans and environment continuously and mutually pattern (Rogers, 1992). Knowing participation in change is the pattern manifestation of power, which when used for the betterment of human beings is “power as freedom” (Barrett, 2010).

Barret (2010) differentiates between power as freedom and power as control. Both forms of power are defined as power as knowing participation in change and both include the four
dimensions, awareness, choices, freedom to act intentionally, and involvement in creating change. The differences between the two forms of power are distinguished by what one does with power and the context in which power operates. Power as control is mechanistic and includes the understanding of parts; while power as freedom is conceived in the unitary worldview and is related to the understanding of the manifestation of the whole human field and environments mutually patterning in a world without temporal or spatial border. In addition, Power as freedom is used for the well-being of human kind. The four dimensions of power awareness, choices, freedom to act intentionally, and involvement in creating change have been related to behaviors that promote health and prevent diseases (Kim, et al., 2012; Kirton & Morris, 2012; Wynd, 1990).

**Statement of the problem**

Power as Knowing Participation in Change theory has been used extensively in studies that link power and other concepts such as self-transcendence, uncertainty and quality of life (Farren, 2010), hope (Wall, 2000), adherence (Kirton & Morris, 2012), and well-being (Kim, Park, & Kim 2008) and modalities such as, education (Kim et al., 2012), therapeutic touch (Smith, 2000), exercise (Wall, 2000), meditation (Kim, et al., 2008), imagery (Wynd, 1990), support group (Larkin, 2007), music (Siedlecki & Good, 2006), and feminist pedagogy (Falk-Rafael, Chinn, Anderson, Heather, & Rubotzky, 2004). However, there are no studies that examine power in parents interested in promoting the health of their children. Additionally, Leveille-Tulce (2013) reported the presence of many risk factors of vaginitis in Haitian children and the lack of resources that can facilitate engagement in health promotion activities related to the condition. Haitian caregivers’ responsibilities in mitigating the incidence of vaginitis in their children has also been noted (Leveille-Tulce, 2014).
Childhood vaginitis is a major health problem. It may be manifestation of possible sexual abuse in children and may lead to serious consequences later in life such as higher risk for sexually transmitted diseases (Gor, 2014). Furthermore, it may have major consequences in childbearing age. Bacterial vaginitis, for example, is reported to increase the risk for preterm birth, preterm labor, pelvic inflammatory disease, and premature rupture of membranes (Center for Disease Prevention, 2010; Gor, 2011, Port & Matfin, 2009); bacterial vaginitis may also be associated to low birth weight (Center for Disease Control and Prevention CDC, 2010). To date, there are no national efforts addressing health promotion modalities related to decrease the incidence of vaginitis in Haitian children, nor data related to managing its risk factors, and providing knowledge and access to resources. Mainly, there is no study of an education and resource modality related to health promotion of vaginitis and of Haitian caregivers’ power as knowing participation in change. People’s capacity to knowingly participate in change is a manifestation of their power (Barrett, 2010). Everyone has power, thus, helping Haitian caregivers to identify their power profile, and using a health patterning modality that may help them enhance their power to knowingly participate in change can help them facilitate their children’s unitary well-being (Barrett, 2000).

**Purpose of the study**

The purpose of the study was to appraise the power as knowing participation in change of primary caregivers of Haitian children aged 6 to 13 years old, who wished to learn more about promoting the health of their female children in an effort to reduce their children’s risk of vaginitis before and after participation in an education and resource health patterning modality related to risk factors and prevention of childhood vaginitis.
Significance of the study

The study attempted to learn how the health patterning modality might enhance power in primary caregivers to engage in health practices for the well-being of their children. The use of the Power as Knowing Participation in Change theory as a nursing theoretical framework provides the theoretical lens that guides the study and enhances the knowledge base of the profession (Milton, 2013).

This study will contribute new knowledge about how this health patterning modality through education, and distribution of resources enhances power as knowing participation in change. Depending on their situation, individuals may fluctuate from lower to higher power profile. They may even sometimes be trapped and need assistance in boosting their power (Barrett, 1989). Power represents the pattern manifestation of participants and their environments to knowingly participate in change. The components of the health patterning modality, sharing knowledge of risk factors and health promotion measures, and distribution of resources, are health modalities that may enhance power. Results from the study may contribute to a better understanding of such health patterning modality in enhancing power of a disadvantaged and underserved population to participate in change.

Sixty percent (60%) of the Haitian population do not have access to basic health care services (UNICEF, 2010). Yet, the barriers to health resources are more prominent in areas such as Les Cayes (Guilbaud & Preston, 2006). Findings from the study may raise health professionals’ interests in the use of education and resource health patterning modalities that can help enhance caregivers’ knowing participation in change in the promotion of their female child’s health. It may also increase health professionals’ interests in facilitating health patterning modalities that individuals and group may choose to participate in to enhance their power and promote
manifestations of healthy behaviors. Power has not been studied in the Haitian population. Results from the study may guide future research and increase the usefulness of Power as Knowing Participation in Change theory in identical population.

**Definition of terms**

*Primary Caregivers* are mothers, fathers, or any individual who assumes primary responsibility for the care of a female child between the ages of 6 and 13 years old for a minimum of 6/hours/day. It was recorded on the demographic data form (See Appendix B₁a, English and B₁b Haitian Creole before the modality and B₂a English and B₂b Haitian Creole after the modality).

*Health Patterning Modality* is “specific ways to help clients participate in creating change” (Barrett 2000, p. 5). For the purpose of this study, it is a participatory education session and sharing of resources that includes storytelling and reflection.

*Power* is “the capacity to participate knowingly in change” (Barrett, 2010, p.49) and has four integral dimensions awareness, choices, freedom to act intentionally, and involvement in creating change (Barrett, 2010). Power was measured by the PKPCT V II (Barrett, 2010) Haitian Creole translation (See Appendix C₂ Haitian Creole Version).

*Vaginitis* is an inflammation of the vaginal mucosa (Soper, 2015). In this study, the term is used interchangeably with vaginosis, and vulvovaginitis. Incidence of vaginitis was assessed by primary caregivers report on the demographic data form (See Appendix B₁a, English and B₁b Haitian Creole before the modality and B₂a English and B₂b Haitian Creole after the modality).

**Theoretical framework**

*Power as Knowing Participation in Change Theory.*
The Power as Knowing Participation in Change theory derives from Roger’s (1970) Science of Unitary Human Beings (SUHB). The integral dimensions of power are awareness, choices, freedom to act intentionally, and involvement in creating change. Barrett, (1986), first described the theory as emerging from Rogers’ (1970) attention to knowing participation in change, which Barrett (1983) identified as power. Barrett (2010) proposed that the power theory is consistent with Rogers’ SUHB postulates of energy fields, openness, pattern, and pandimensionality and the homeodynamic principles of helicy, resonancy, and integrality (Barrett, 2010). Energy fields are basic units of all living and non-living substances. The fields are constantly open and have no boundaries; the individual and the environment are in mutual process and are “irreducible and indivisible” (Rogers, 1992). Furthermore, the postulate openness relates to the universe (one open system), pattern refers to identification of the energy field, and pandimensionality to the absence of spatial or temporal attributes of energy fields (Rogers, 1992). Additionally, the principle of helicy relates to the nature and direction of change (Barrett, 1986), and implies that change is continuous, innovative, unpredictable, and increasingly diverse; resonance refers to the pattern of change from lower to higher frequency, and integrality to the continuous mutual changing nature of human and environmental fields (Caroselli & Barrett, 1998).

The Power as Knowing Participation in Change theory is specifically derived from the principle of helicy (Barrett, 1986). Power as Knowing Participation in Change theory explains “how people can make a difference in their own lives and the lives of others” (Caroselli & Barrett, 1998, p. 14). The acausal nature of power implies that people cannot necessarily control life situations; rather, they can choose to act in “ongoing mutual process” with self and others, their immediate world and the universe. Living power is related to wellness and well-being for
self and those, our paths cross, if our choices promote health based on our own health definition (Barret, 2010). Although the theory has been used to frame health promotion and prevention studies (Kim et al., 2012; Kirton & Morris, 2012; Wynd, 1990), there are no published studies of power that examine the power profile of primary caregivers after participation in an education and resource health modality nor are there studies in the Haitian population.

Participants’ power profile was measured by the Haitian Creole translated PKPCT V II. The dimensions of power are pattern manifestations that identified primary caregivers’ power before and after the health patterning modality that promoted knowledge of risk factors and prevention measures, and resources. Congruency of the dimensions of power, within these contexts, conveys the unitary nature of power (Barrett, 1990a).

**Research questions**

1. What are the power profiles of Haitian caregivers before and after the health patterning modality about childhood vaginitis?

2. To what extent does Haitian caregivers’ power profile change after the health patterning modality about childhood vaginitis?

**Limitation**

The study had the following limitations: A non-random sampling technique was used. The Haitian Creole translated PKPCT V II was used in adults that did not have the proposed educational level of high school or its equivalent.

**Delimitation**

Only primary caregivers of female children aged 6 to 13 years old participated in the health patterning modality and completed the questionnaires. Primary caregivers of female children who attend 5 selected primary schools in the Les Cayes area was recruited. The sites
were selected because of their locations in area where the researcher has previously found cases of childhood vaginitis.

Assumptions

This study included the following assumptions: a) the Haitian Creole translated PKPCT V II would accurately measure caregivers’ power profile before and after participation in the health patterning modality that promote education about risk factors, health promotion measures of vaginitis and distribution of resources; b) the data collected would accurately reflect the phenomenon studied; c) all individuals have the power to knowingly participate in change but sometimes experience feelings of powerlessness related to life situations; d) health patterning modalities such as education and availability of resources would be reflective of participants’ self-perceived needs and might increase participants’ power to knowingly participate in change.
Chapter II

Review of the literature

The power of Haitian primary caregivers to knowingly participate in change relevant to prevention of childhood vaginitis in their children was examined in this study. Power is a multifaceted concept that has been studied and used widely across disciplines. Most often, it is related to control (Dahl, 1957; French, 1956; Maner, Gailliot, Butz, & Peruche, 2007; Raven and French, 1958; Scheepers, Ellemers, & Sassenberg, 2013; Smith and Bardagh, 2008), influence (Dahl, 1957; French, 1956; Raven and French, 1958; Smith and Bardagh, 2008), and authority (Dahl, 1957). Power as Knowing Participation in Change is a unitary nursing concept that denotes the capacity to knowingly participate in change (Barrett, 1983). In this way, it refutes the notion of control and embraces the dimension of awareness, choices, freedom, and knowing participation (Barrett, 1983, 1986, 2010, 2015). It is within these perspectives that the power of Haitian primary caregivers was examined. The following literature review highlights the foundation for the study and includes literature relevant to the study such as power, health patterning modality, and vaginitis.

Power

Within the realm of this study, power is knowing participation in change (Barrett, 1983, 1986, 1988, 2010, 2015), and it is Power as Freedom (Barrett, 2010). It is a natural phenomenon which is innate to humans but yet at times can be latent or manifest. It is the capacity that humans have to pattern with their environment and knowingly participate in change (Barrett, 1983, 2010). Change evolves from the mutual process of human and environment which are integral with each other (Rogers, 1992). “Power as freedom” differs from “power as control”; both involve knowing participation in change (Barrett, 2010) but “power as control” is the
ability to control or to have control over others (Maner et al., 2007; Scheepers et al., 2013; Smith & Bargh, 2008). The following literature depicts the different forms of power as control, and Barrett’s concept of power-as-freedom.

**Power-as-control.**

Researchers from a myriad of fields have studied power over decades. It has been studied in many contexts and forms and in relationship to many aspects of life. The relationship of power to control, influence, interpersonal interaction, force, (Dahl, 1957; French, 1956; Maner et al., 2007; Raven & French, 1958; Scheepers et al., 2013; Smith & Bardagh, 2008), freedom (Foucault, 1982; Handgraaf, Dijk, Vermunt, Wilke, & De Dreu, 2008), resources (Guinote, 2007; Manner et al., 2007; Sen, Carey, Vanable, & Seward, 2009), sex and gender (Maternowska, 2006; Senn et al., 2009; Zukoski, Harvey, Oakley, & Branch, 2011), politics (Dahl, 1957), and health (Farmer, 2003) resonates throughout the literature. It is a subject of interest in sciences such as politics, sociology, psychology and nursing. The notion of control and influence prevails even when power is conceived by some as an interpersonal experience (French, 1956) and by others as an intrapersonal experience (Maner et al., 2007). When power-as-control is exercised it also seeks to result in change in self or in others.

According to Scheepers et al. (2013, p. 246), “having power always means having control.” In like manner, Smith and Bargh (2008) view power as “having control” versus “lacking control.” Interpersonal power also viewed as control, is the amount of power that an individual can exert over someone else minus the maximum resistance force that this individual can mobilize to resist a force (French, 1956). It indicates the presence of influence and interpersonal interaction, and is conceived as the influence exerts by someone over someone else (French, 1956; Raven and French 1958). The basis of this interpersonal power is the persisting
relationship between an individual A and B (French, 1956). Similarly, Hawks (1991) acknowledged the interpersonal notion of power but highlighted the aspect of mutual agreement in the process. Hawks defined power as “the actual or potential ability or capacity to achieve objectives through an interpersonal process in which the goals and means to achieve the goals are mutually established and worked toward” (p 754). Hawks distinguished between “power to” and “power over.” Power over is related to forcefulness and power to, to effectiveness.

Power is also conceived as a universal experience, which is experienced by most, if not all people at one or another point of their lives (Galinski, Gruenfeld, & Magee, 2003; Smith & Bargh, 2008). Galinski et al. (2003) characterized this universal experience of power as “metamorphic” that is, it transforms into taking actions. Those who have power are self-sufficient and do not depend as much on the resources of others. This universal experience of power may be a reflection of individuals’ personal sense of power. Personal sense of power has great impact on the individual’s thoughts, feelings and actions. However, individuals’ perception of their level of power is related to definite degrees of influence (Cameron, John, & Keltner, 2012).

Personal sense of power is coherent within the social context the individual is evolving. It is specific to particular relationships with moderate coherency across relationships and related to not only socio-structural factors but also personality variables (Cameron, et al., 2012). The type of decision that people make, risky versus conservative, depends on both intrapersonal and situational factors (Maner et al., 2007). Likewise, social contexts are important determinants of power (Raven & French, 1958). Social influence can determine the nature and type of power an individual exhibits. The bases of power such as informational, reward, coercion, legitimate, expertise and referent are motivational factors that help those who want to influence to
accomplish their goals (Raven, 2008). Inasmuch, Relationship between contexts, roles, and resources mainly decides the nature of power outcomes may they be positive or negative (Overbeck & Park, 2006).

Goal achievement has been found to be related to power (Guinote, 2007; Slabu & Guinote, 2010). Those who are powerful have not only the ability to actively create goals but also uphold the ability to receive (Overbeck & Park, 2006). Powerful individuals are more likely to pursue their goals than those who may be feeling powerless (Guinote, 2007). A study by Guinote (2007) showed that powerlessness affects people’s ability to take decision and to implement these decisions even when they identified what to do.

The influence of roles on power has also been studied. Joshi and Fast (2013) conducted a pilot study and three experiments to examine whether or not roles that grant power convey identification with the role, or liberation from the expectation of the roles. Both the pilot study and the experiments were consistent in revealing the influence of roles on identifying one’s sense of power. Participants, \( n = 98 \) were significantly more likely to identify with their roles when their roles granted them power \( (p = .008) \). In addition, expectations associated with higher power roles determine the individual self-definition and behaviors. Results from this study suggested that external factors may play a big influence on people who occupy high power roles and that cultural notion of power may play a role in how people react to power in different culture. Torelli and Shavitz (2011) related the influence of power on the effect of cultural orientation on cognition. They asserted that when power is strong, cultural orientation determines cognitive direction.

Yet, paradoxically, some conceived power as non-existent without the presence of factors such as freedom, dependence on each other, action (Foucault, 1982; Handgraaf et al., 2008), and
resources (Guinote 2007; Manner et al., 2007; Senn et al. 2009). Foucault (1982) believes that power includes freedom, it is exercised only in the presence of freedom, and can only be exercised over free subjects. However, this dependence of power over freedom is a nihilistic relationship because freedom disappears when this type of power is exercised (Foucault, 1982). Others stipulated that individual dependence on each other is at the source of power evolution (Handgraaf et al., 2008).

Power has also been linked to resources (the ability to provide or withhold it to others) (Manner et al., 2007). Individuals who have fewer resources were found to be less powerful and to have less ability of influencing others (Guinote, 2007). Furthermore, contribution of resources was found to be attributed to relationship power (Senn et al. 2009).

The premise that power is directly linked to actions also pervades the literature (Cameron et al., 2012; Foucault, 1982; Galinsky et al., 2003; Smith & Bargh, 2008). According to Foucault (1982), action is the manifestation of power. The existence of power is manifest only when it is put in action and in the presence of action. As such, it is “a mode of action upon the action of others” (p.790). The relationship of power does not have a direct or immediate action on others but on action may this action be in the present or in the future. In this way, power is a form of government and defines the direction of individuals and group conduct (Foucault, 1982).

Likewise, Galinsky et al. (2003) argued that power is integral with action and considered power as the catalyst of action. “Action taken is often power exercised” (p. 453). They concluded that conditioning, learning, and growing up in an environment that convey power may lead people to associate themselves with power. Having power in one context can result in action in another regardless of contexts affiliation (Galinsky et al., 2003). Similarly, Smith and
Bargh (2008) concluded that power can also convey different types of actions and relayed that high level of power may lead to approach and low power to avoidance.

Power can have both positive and negative effects. Power can feed abusive tendencies and also lead to responsible and generous behavior (Handgraaf et al., 2008). Handgraaf et al. (2008) focused on the different power between two individuals without regard to their social context. Their studies refuted previous findings that connoted a total negative view of power and embraced the views that power feeds abusive and exploitive tendencies and in the same way leads to responsible and generous behaviors. Likewise, pastoral power is a form of power that not only commands but also serves; it is associated with salvation of the world and with health and well-being (Foucault 1982).

**Power and Haitians.**

In Haiti, power has mostly been studied from a control perspective and in the context of national and global politics, economic, health, gender, and structural forces (Farmer, 2003; Kershaw et al., 2006; Maternowska, 2006). Farmer (2003) related many of the health problems in Haiti to structural factors caused by imbalance in power structures and labeled them “pathologies of power”. He highlighted the influence of social conditions in determining these pathologies of power. In addition, power was found to be both an element and an explaining factor of the failure of international efforts to bring family planning to Haiti. Methods of primary health care interventions were perceived as forms of domination and the intended recipients’ resistance and revolt highlighted their absence of power and contributed to unintended outcomes (Maternowska, 2006). Struggles against power are struggles against the effects of power, “which are linked with knowledge, competence, and qualifications: struggles against the privileges of knowledge. But they are also an opposition against secrecy,
deformation, and mystifying representations imposed on people” (Foucault 1982, p. 781). In addition, the relationship of this form of power as control placed clients in a powerless position from healthcare workers. These factors may be disempowering and hindered the Haitian population’s ability to knowingly participate in change relevant to improving their health (Maternowska, 2006). To influence the dynamic of power in Haiti, Maternowska, (2006) suggested strategies that reflect the people’s realities. Thus, health patterning modalities that take into account the integrality of the Haitian people and their environment and the mutual, continuous, innovative, increasing and unpredictable nature of this engagement may enhance Haitian caregivers’ power as knowing participation in change.

**Power and empowerment.**

The relationship of power to empowerment and personal power has also been explored. Barrett, Caroselli, Smith, and Smith (1997) asserted that power as knowing participation in change should not be equated to empowerment and personal power. According to their view, empowerment implies endowing power to someone and personal power implies individuality which are incompatible with the integrality and mutual process of human and environmental fields. However, Shearer and Reed (2004) reformulated empowerment as a unitary concept and defined empowerment as “a complex and participatory process of changing oneself and one’s environment recognizing patterns and engaging inner resources for well-being” (p 257).

**Power-as-freedom.**

Power as knowing participation in change exists irrespective of forms, types or contexts. It does not annihilate freedom; it is integral to freedom (Barrett, 2010). The aforementioned notions of power agree in some ways with Barrett’s concept of power as a metamorphic phenomenon experienced by all; however, they depart from her worldview of Power as an
innate, acausal, and integral phenomenon that manifests as knowing participation through the mutual process of humans and environmental fields (Barrett, 1983). For example, despite the fact that personal sense of power implies coherency to the individual evolving context, it is different from power as knowing participation. According to Barrett et al. (1997), personal power implies individuality which is contrary to the integrality and mutual process of human and environmental fields.

In addition, Barrett’s Power as Knowing Participation in Change theory differs from the traditional worldview of control, domination and causality and embraces processes that are acausal, innovative, unpredictable, mutual and simultaneous (Barrett, 1986). Even though power is power and is always about change (Barrett, 2010), the pursuit of goals through power is incongruous with power as knowing participation in change. It is deeply rooted in the principle of Rogers’ Science of Unitary Human Beings (SUHB), helicy, which assumes that change is increasing, continuous, innovative, and unpredictable (Rogers, 1992). In line with this worldview, power is the capacity to knowingly participate in changes that impact one’s life. It is the manifestation of the engagement of humans and their environment to substantiate the choices they make and share that reality (Barrett, 1986). Involvement in creating changes varies according to the nature of awareness, the choices people make, and their freedom to act intentionally (Barrett, 1986).

Barrett specifically differentiates between power as control and power as freedom. Power as control repressed and must be taken from someone else (Barrett et al., 1997). “Power cannot be given or taken, it is a life force belonging to all humans since they exist” (Florczak, 2009, p. 290). Power as freedom, is related to the acausal, unpredictable nature of freedom that implies continuous and mutual involvement with others and the environment (Barrett, 2010).
The fundamental difference between power as freedom and power as control resumes in how “we use it”; power as freedom conveys wellness and well-being for self and others (Barrett, 2010). Practicing knowing participation in change transforms and emancipates (Cowling & Repede, 2010).

In the context of this study, Power relates to Barrett’s conceptualization of power as knowing participation and refers to “being able.” “To be powerful is to be able relatively speaking to exercise one’s capacity to participate in creating what happens by bringing about specific changes, which are ongoing yet non-repeating and increasingly diverse” (Caroselli & Barrett, 1998, p. 14). Power as freedom (Barrett, 2010) is a dynamic, unitary process conceived in the context of Rogers’ Science of Unitary Human Beings (Barrett, 1986, 2000). Awareness, choices, freedom to act intentionally and involvement in creating change are the characteristics (the observable manifestations) of power. Power is innate, and always evolving despite the fact that people may at times experience feeling of powerlessness (Barrett, 2010).

“Power as knowing participation in change, is integral to one’s capacity for living one’s beliefs and experiences of health and well-being” (Barrett, 2000, p.6). The Power as Knowing Participation in Change theory has been used as framework in both qualitative and quantitative studies. Barrett and Caroselli (1998) affirmed that both methods are tools that are not “only useful but necessary” (p. 21). To measure power, Barrett developed the Power as Knowing Participation in Change Tool (PKPCT) (Barrett, 1983). The tool instructions were analyzed for clarity and adopted after a five-phase study (Barrett, Farren, Kim, Larkin, & Mahoney, 2001). The PKPCT has been used extensively since in diverse populations to examine power individually or in relationship to other concepts, and or health patterning modalities.
Health Patterning Modality

Health patterning enhances power and increases people’s potentials for change (Barrett, 1990b). It is the process whereby different ways, to make the changes they want, are explored with people (Barrett, 2015). In the same vein, health patterning modalities are specific tools that can be used in the health patterning process to help people actualize their potentials for change (Barrett, 2000). Health patterning modality such as health education was cited by Barrett (1990b) as a form of modality that fits the “unitary human field practice modality” (p106) and that can help enhance power. In addition, resources have been found to be linked to health promotion (Guilbaud & Preston, 2006) and to power (Guinote, 2007; Manner et al., 2007; Senn et al., 2009). Power, when used in mutual patterning for the betterment of self and others is power-as-freedom (Barrett, 2010). While there are no reported studies that examined the power profile of Haitian caregivers before and after participation in a health patterning modality, that includes education and resources, researchers have used the Power as Knowing Participation in change theory and tool in studies using modalities such as breast health education (Kim et al., 2012), reminiscent storytelling (Bramlett & Gueldner, 1993), music (Siedliecki & Good 2006) exercise (Ackerman, 2005; Wall, 2000), Ericksonian hypnotherapeutic support group (Larkin, 2001, 2007). These studies have shown the importance of such health patterning modalities in enhancing power.

An indication of enhanced power after participation in health patterning modalities has been demonstrated in a quasi-experimental longitudinal study, \( n = 63 \) of Korean adults, to observe changes in power and well-being after participation in a meditation chakra program in comparison to a control group that did not use chakra. Participants were either university employees or students or medical center affiliated with the university, and were divided in
meditation and no meditation group. Findings revealed a significant increase in power scores in the meditation intervention group after two weeks ($p < .001$) and no increase in the no meditation group. Power positively significantly correlated with well-being at baseline week and at week 4 of the study ($p < .001$). The Korean translated version of the tool was used in this study (Kim, et al., 2008).

Kim et al. (2012) showed the importance of health educational sessions in enhancing power and power’s relation to adoption of health promoting behavior. This breast cancer health educational modalities and power enhancement study is of greatest relevance to the current study. Kim et al. (2012) examined the relationship between power and participation of employees in breast health education. The researchers evaluated the effectiveness of a breast health education program for women employees of a healthcare system and examined the relationship of participation at the education program to power and its postulates. Participation at the educational session ($n = 184$) was found to significantly relate to having an annual mammogram ($X^2 = 9.085, df = 1, p = .003$). The study also revealed a higher score for all dimensions of power for individuals who rated higher on the influence of the effectiveness of almost all the proposed educational sessions for having an annual mammogram at the exception of one session. Employees who obtained mammograms had a significantly higher power ($p = .006$) than those who did not have mammograms. However, Choice was significantly higher for employees who participated in the educational session ($p < .01$) (Kim et al., 2012).

In like manner, Bramlett and Gueldner (1993) found a significant increase in power ($p = 0.003$) after participation in a reminiscent story telling modality between posttest one (immediately after the modality), and posttest two (five weeks after the modality). They investigated reminiscent storytelling as a health patterning modality to enhance power in healthy
elderly in a quasi-experimental study \((n = 81)\). However, while both the control and the experimental group experienced a decrease in power between pretest and posttest 1, both groups experienced a significant increase in power between posttest one and posttest two \((p = 0.003)\). Power consistently moved in the same direction in both groups. The authors attributed this fact to possible social exchange during the test administration conducted in one to one interview format and differences in reminiscence experience among groups. The usual format and use of the tool was altered in this study. The bipolar adjectives were printed on a presentation board and an interview format was used.

Moreover, Siedliecki and Good (2006) investigated the effects of music on power in 60 patients with chronic non-malignant pain (CNMP) using a randomized controlled clinical trial study. The questionnaires were completed prior to and day 9 after using the music modalities. They also found a statistically significant difference \((F (1, 57) = 4.090, p = 0.048)\) between the two groups \((n = 40)\) that received music therapy (selected music and pattern music) and the control group \((n = 20)\). Participants in the two music groups showed more power and less pain, depression and disability than the control group.

In contrast, in a study to determine the relationship between power and adherence, Kirton and Morris (1992) examined power and adherence in a sample \((n = 65)\) of adults with HIV or AIDS who were prescribed two or more antiretroviral drugs. They found no statistically significant difference in power scores for adherent and non-adherent subjects, \((p =.069)\). The researchers suggested that the non-significant result was related to the small size of the sample.

The notion of power as a personal factor that can influence health behavior was also examined. Wynd (1990) investigated the influence of power on alteration in smoking behavior. Participants, \((n = 84)\) were divided in three groups guided power imagery \((n = 28)\), simple
relaxation imagery \((n=29)\) and a control group \((n=27)\). The guided power imagery group was instructed to imagine themselves in situations where they act with power such as self-confident, free and active; the relaxation imagery was taught relaxation imagery and simple images such as scenes that are pleasant and calm. Instructions in power imagery were provided to the control group after data collection. Imagery was provided in seven sessions during a smoking cessation program. Wynd used guided imagery as a modality to help participants learn about power and incorporate it in their lives. The researcher found a higher increase in power from guided power imagery, mean power score = 6.02 (SD = 0.79) than from the relaxation imagery group, mean score 5.37 (SD=0.70). Both the relaxation imagery and the power imagery group showed a significant increase in power scores and decrease in smoking rate compared to the control group \((p < .05)\). However, in the power imagery group, increase in power occurred incrementally.

Wynd also obtained qualitative data that showed the need for guidance and direction for those who seek health promotion. The researcher concluded that the behavioral change success noted was not necessarily due to a sense of power, but rather to the essence of the program and the interventions. Thus, it is necessary to not only help patients learn about power, but also to assist them in choosing a degree of participation that can help them succeed in their quest for health. Wynd’s conclusion, confirmed the power theory’s views that power is not an isolated phenomenon but an integrative and mutual process. Personal sense of power is not power and it is ineffective without the mutual patterning of the human field and the environment (Barrett et al., 1997). Wynd’s recommendation for continuing activities that can boost power and promote behaviors that are healthy support the use of health modalities that can enhance power.

Variations in power were found in a study that examined the variation in power and hope, and variations between power and hope over time in relation to participation in preoperative
exercise in lung cancer patients, \(n = 104\) (Wall, 2000). Findings showed that there was a statistical difference in the manifestation of power for both groups over time \(F(2,190) = 12.09, p=.001\). There was a statistically difference increase in power in the exercise group from T1 to T2 \((t(51) = -2.68, p=.01)\) and a steady increase in power in the exercise group from T1 to T3 \((t(48) = -3.73, p = .001)\), there was also a statistically significant decrease in power in the no exercise group from T1 to T2, \((t(50) = 2.72, p < .01)\). Wall concluded that exercise may have had a sustaining effect on power and suggested that tangible activities that necessitate choices and knowing participation may be related to enhancing or inhibiting power.

Variations in power were also found in a study that investigated changes in power and self-defined health promoting goals for people with chronic conditions in two different groups, \(n = 50\) (Larkin, 2001). Those who participated in an Ericksonian hypnotherapeutic support group were compared to those who participated in a support group with traditional non Ericksonian hypnotherapeutic methodologies. Both groups, significantly improve power from T1 to T7 \((p <.001)\). There was no statistically significant difference in power and self-defined health promoting goals between the traditional support group and the Ericksonian hypnotherapeutic group from T1 to T7. Larkin suggested that the lack of statistically significantly difference may be due to the small sample size used and background homogeneity of the facilitators in unitary nursing.

The above literature provided information related to the different forms of power. It also included studies that investigated and showed the link between power as freedom and the use of health patterning modality. This study seeks to learn how a health patterning modality related to education and resources about childhood vaginitis may enhance caregivers’ power as freedom. Following are literature findings about vaginitis in prepubertal girls.
Vaginitis

Vaginitis is the most common gynecological problem for which prepubertal children seek care (Eyk et al., 2009; Garden, 2011; Jasper, 2009; Makwela, 2008; McGreal & Wood 2010). However, it is more common in women than in prepubertal children (Gor, 2014). The presence of vaginitis in Haitian children and the lack of a systematic measure to prevent it (Leveille-Tulce, 2013) warrant the need to examine the power of caregivers to knowingly and actively participate in change relevant to health promotion in this population. A search of the literature found no studies that specifically addressed childhood vaginitis and its prevention in Haitian children. This section provides general background on the causative agents of vaginitis, its diagnostic, consequences and its management in children.

Vaginitis in children may be caused by an array of factors. It is reported to be caused by pathogens and non-pathogens microorganisms (Stricker et al., 2003; Tartaglia et al., 2013). In a retrospective study of vaginal secretions of non-reported sexually active prepubertal girls, n = 80, aged 2 to 12 years with vulvovaginitis, researchers isolated pathogens and non-pathogens microorganisms (Stricker, et al., 2003). Bacterial pathogens are reported to be more common in prepubertal girls than other types of vaginitis (Randjelovic, Kocic, Stonajanovic, Msic, & Mladenovic, 2005). In one study, pathogenic bacteria accounted for 29 (36%) of the pathogens microorganisms found (Stricker, et al., 2003). In another study 55% revealed at least one bacteria and 22% more than one type (McGreal & Wood, 2013). Yet, in another study, ninety-three percent (93.3%) of girls n = 90 were positive for bacterial pathogens (Tartaglia et al., 2013).

Other pathogenic microrganisms, such as Candida, though less common in children (Gor, 2014; Hayes & Creighton, 2007; Stricker et al., 2003; Tartaglia et al., 2013), may be found in
children with predisposing factors such as use of skin disease and immunosuppression (Gor, 2014) antibiotics, diabetes (Gor, 2014; Hayes & Creighton, 2007; Joishy et al., 2005), or diaper use (Hayes & Creighton, 2007; Joishy et al., 2005). In one study, the higher case of candida infection was found to be related to the frequent occurrence of napkin candidiasis in the less than 3 years old and to hormonal influence in the 9 years old and up (Banerjee, Curtis, De San Lazaro, and Graham, 2004). In addition, in some cases, sexually transmitted microorganisms can be found and require investigations (Jasper, 2009) for sexual abuse (Joishy et al., 2005). Threadworm was also found to be a major cause of vulvovaginitis (Banerjee et al., 2004; Dennie & Grover, 2013; Garden, 2011; Gor, 2014; Joishy et al., 2005; Rajpal, Mottaghi, Keith, & Patel, 2014) especially if the child presents with nocturnal perineal pruritus (Gor, 2014; Joishy et al., 2005) and distressing vaginal pain (Dennie & Grover, 2013; Gor, 2014). Respiratory organisms may also cause vulvovaginitis (Banerjee, et al., 2004; Jasper 2009; Joishy et al. 2005; McGreal & Wood, 2013; Stricker et al., 2003) which can be spread from hand to the perineal area (Joishy et al. 2005) or from the throat to the vulva area (McGreal & Wood, 2013).

When a specific pathogen is not isolated, vulvovaginitis may be caused by other irritating factors (Joishy et al., 2005). Between 25% and 75% of vulvovaginitis in prepubertal girls are found to be nonspecific, 68% of these cases can be related to coliform bacteria. Leveille-Tulce (2013) related that 71% of children seen at a health clinic in Haiti and who complained of symptoms of vaginitis reported history of intestinal parasites. In addition to the nature of the vaginal mucosa, and its pH, obesity, local irritants (Jasper, 2009) such as shampoo, bubble baths, colored or scented toilet papers (Gor, 2014) are also contributing factors of vulvovaginitis. A review of the literature revealed that anatomical and physiological feature of the vagina (Joishy
et al. 2005; Rajpal et al., 2014; Yilmaz, Celik, Soylu, Donmez, & Yuksel, 2012), and nylon underwear may also put the prepubertal girl at risk for vulvovaginitis (Joishy et al. 2005).

Moreover, anatomical abnormalities (Gor, 2014; Jasper, 2009) such as double vagina with fistula, ectopic ureter, Crohn disease with fistula, pelvic abscess, and vaginal tumor may be related to vaginitis (Jasper, 2009). Similarly, poor hygiene is related to vaginitis (Gor, 2014; Jasper 2009; Joishy, et al. 2005; Rome, 2008; Randjelovic et al., 2005). Although it is categorized as a major cause (Banerjee et al., 2004), and the most common finding associated with vulvovaginitis (Jasper 2009), some highlighted the hormonal and anatomical nature of the vagina as more important risk factors for vaginitis than factors related to behavior such as poor hygiene (Dei, Di Maggio, Di Paolo, and Bruni, 2009). In addition, it is important to highlight the importance to acknowledge the influence of hormonal factor over chronological age when evaluating vulvovaginitis (Stricker et al. 2003).

Despite reports that deny long term sexual and reproductive health implications for children with vulvovaginitis (Hayes & Creighton, 2007), recurrent vaginitis may nevertheless have long-term health and sexual implications as vaginitis increases the risk for sexually transmitted diseases and may have serious consequences in childbearing age (Center for Disease Control and Prevention CDC, 2010; Gor, 2014; Port & Matfin, 2009). Previous studies reported data which suggested that vaginal infections associated with spontaneous preterm birth are rather chronic and may be present before pregnancy (Goldenberg, Andrews, & Hauth, 2002). In addition, bacterial vaginitis, for example, is reported to increase the risk for preterm birth, preterm labor, pelvic inflammatory disease, and premature rupture of membranes (Center for Disease Prevention, 2010; Gor, 2014; Port & Matfin, 2009); bacterial vaginitis may also be associated to low birth weight (Center for Disease Control and Prevention CDC, 2010).
While, vaginal discharge is the most common symptoms identified in children with vaginitis (McGreal & Wood, 2010, 2013; Stricker et al., 2003; Tartaglia et al., 2013), children experience other symptoms such as dysuria, redness, itching (Gor, 2014; Tartaglia et al., 2013), pain (Gor, 2014; McGreal & Wood, 2010; Tartaglia et al., 2013), and malodor (McGreal & Wood, 2010). Accurate diagnosis of childhood vulvovaginitis warrants a thorough evaluation and use of laboratory tests (Dei et al., 2009; Esmaelli, Mansouri, and Ghane, 2007; Jasper, 2009). Findings underscored the importance of thorough examination along with vaginoscopy for any child that presents with recurrent vulvovaginitis that does not respond to “improved perineal hygiene.” For instance, without a comprehensive examination, the presence of a foreign body as the cause of vaginal discharge in childhood can be easily dismissed (Esmaelli, et al., 2007). In addition, identification of the right microorganism is important as it can help guide prevention and treatment strategies. Routine culture is the most accurate way to identify cases of vaginal candidiasis (Banerjee, et al., 2004). A well-child pediatrician visit should also include routine examination of the child’s vulvovaginal area (Rome, 2008).

Consequently, treatment should be tailored to each specific case (Jasper, 2009) and to the specific causes (Dei et al. 2009; Joishy et al., 2005) and pathogens (Dei et al. 2009; Dennie & Grover, 2013). For example, some studies oppose the use of antifungal cream in toilet trained prepubertal girls (Banerjee, et al., 2004). Antifungal cream as initial treatment is not recommended, because candida is less likely to be present in prepubertal girls. Similarly, antibiotic should only be used if a pathogen is identified (Joishy et al., 2005).

Above all, it is essential to educate both mothers and girls about hygienic measures in the treatment of vulvovaginitis (Dei et al., 2009; Rome, 2008). Hygienic measures are important factors in the prevention and treatment of vaginitis (Jasper, 2009; Joishy et al., 2005; Stricker et
al., 2003). Sometimes, it may be the only measure needed to accomplish full treatment (Jasper, 2009; McGreal & Wood, 2010, 2013). However, cautions must be taken not to solely use hygienic measures to treat vulvovaginitis not caused by specific pathogens (Stricker et al. 2003). In addition, avoiding the use of irritating agents can also lead to resolution of vulvovaginitis (Hayes & Creighton, 2007).

This chapter analyzed and highlighted the differences between the traditional forms of power and the power as knowing participation in change and the use of health modalities. It also demonstrated the association of health patterning modalities to variations in power. In addition, it provided in depth knowledge about the causative factors of vulvovaginitis, its consequences, and its management in prepubertal girls. There was no study of power as knowing participation in change of primary caregivers and an education and resource modality. The literature review confirms the need for research that focuses on identifying Haitian primary caregivers’ capacity to knowingly participate in change. This information can be used to structure and guide health patterning modalities that may enhance Haitian primary caregivers’ power. The following chapter provides information on the methodology, the sampling procedure, the tool used, the intervention, and analysis of the collected data.
Chapter 3

Method

The purpose of this study was to appraise the power as knowing participation in change of Haitian primary caregivers of children aged 6 to 13 years old before and after participation in a health patterning modality that encompassed education about risk factors and preventative measures of childhood vaginitis, and distribution of resources. The Haitian Creole translated Power as Knowing participation in Change Test – Version II (HC PKPCT VII) (Leveille, 2015) was used to measure power. The description of the modality and method used to examine power is described in this chapter. This chapter is structured into five sections: (a) sample, (b) tool, (c) intervention, (d) data collection, and (e) data analysis.

Sample

The sample consisted of primary caregivers of children 6 to 13 years old of selected primary school in the Les Cayes, Haiti area. A power analysis was conducted using the G*Power program, version 3.1.7. Assumptions used were alpha = .05, power of .80, and an effect size of $d = .35$. It was determined that a sample of 50 would be sufficient to detect this effect with 80% power and a sample of 100 would have sufficient power to detect an effect size of $d = .25$ (Faul, Erdfelder, Lang, & Buchner, 2007). Thus, a minimum of 50 participants was used. A larger number of participants may increase the likelihood of uncovering statistically significantly differences. In previous studies, lack of statistically significantly difference in power profile has been related to small sample size $n = 50$ (Larkin, 2001) and $n = 65$ (Kirton & Morris, 1992).

Participants were primary caregivers responsible for the care of female children ages 6-13 years old for a minimum of 6 hours per day (regardless of their child/children’s experience with
vaginitis). The eligibility criteria included: a) primary caregivers of female children 6 to 13 years old who live in the Les Cayes area and whose children attend selected primary schools, b) able to read and understand Haitian Creole, and c) voluntarily consent to participate. Reading ability was determined by self-report on the demographic form. The level of education of the study’s participants did not totally correspond to the minimum of high school education recommended for use of the PKPCT (Barrett & Caroselli, 1998). The literacy rate of the Haitian population is 61%. Furthermore, only 1.1% of the population has a college education, 21.5% has a high school education, and 35.2% of the population has a level of education up to junior high school (UNESCO, 2008). The tool has been used with people with less than high school education (Bramlett & Gueldner, 1993; Kirton & Morris, 2012; (Reis, 2011; Shearer, Cisar, & Greenberg, 2007). Kirton and Morris (2012) reported that 32% of their study’s subjects had less than a high school education. Bramlett and Gueldner (1993) study’s included subjects with as few as two years of education. Participants were recruited from 5 selected primary schools in underserved and underprivileged area in Les Cayes, Haiti. The recruitment schools were selected because of their location in neighborhoods where cases of vaginitis have been found during the researcher’s involvement in health missions in Les Cayes. Moreover, obtaining participants from diverse sites can strengthen the study by reinforcing its external validity (Lunenburg & Irby, 2008). Participants were informed about the study through flyer advertisement (see Appendix D1 English and D2 Haitian Creole) and announcements in children’s schools.
Instrument

**Power as Knowing Participation in Change Tool, Version II (PKPCT V II).**

The PKPCT VI is designed as a self-report instrument to measure power as knowing participation in change. It is a modification of PKPCT V I which contains the contexts of myself, family and my occupation. The contexts were eliminated based on findings that revealed power generalization irrespective of contexts (Barrett, 1990a). PKPCT V II is a semantic differential instrument that consists of four integral dimensions, awareness, choices, freedom to act intentionally and involvement in creating change. Each of the dimensions is measured with 12 bipolar adjectives one pair of adjectives is included twice in order to measure internal reliability. The number of scores that participants can obtain may range from 1 to 7 for each pair of adjectives and from 12 to 84 for each dimension. Scores represent power manifestation in lower to higher frequency (Barrett, 1989).

The instrument measures the four dimensions of power. In line with the semantic differential technique, there are seven spaces between the bipolar adjectives. These spaces enable subjects to identify what the indicators best reflect for them (Barrett 1990a). Two types of scores can be used to obtain the instrument’s total score and sub-scales scores, factor scores and summation scores; however, although Barrett asserted her preference for factor scores because they facilitate greater precision (Barrett, 1990a), there are no statistically significant differences between them (Barrett & Caroselli, 1998). When summation is used, scores range from 12 to 84 for each power dimension, and from 48 to 336 for the total scores (Barrett, 1990a). Although Barrett and Caroselli (1998) asserted that the linearity nature of the semantic differential tool may be a disadvantage in testing constructs that emanate from Roger’s Science, reviews of
studies that used the PKPCT revealed that this tool has been extensively used in quantitative studies (Barrett, 2000; Barrett & Caroselli, 1998; Kim, 2009).

Reliability of the tool was initially confirmed in both pilot and validation studies. The initial reliability tests performed as variance of factor scores, revealed variances from .55 to .99. The retest reliability items coefficients of stability ranged from .57 to .90. In the validation study, reliability of the total scores ranged from .63 to .99, and the test retest items, .70 to .78 (Barrett, 1990a). The tool has been used extensively since then in diverse samples and in relation to a variety of concepts and modalities. The literature consistently revealed high reliability for individual items and total scoring of the tool. Most recently, a study by Kim et al. (2012) in women over 40 showed a Cronbach’s alpha of .97 for the total PKPCT score, .86 for awareness, .91 for choices, .92 for freedom to act intentionally, and .93 for involvement in creating change. In addition, Reis (2011) reported alpha .95 at time 1 and .97 at time 2 for the total PKPCT VII in a sample of pregnant women. Other studies such as Farren (2010), in breast cancer survivors showed Cronbach’s alpha of .96 for the total PKPCT. Furthermore, Caroselli and Barrett (1998) review of 25 studies reported total score reliability from .63 to .99 and test retest items reliability from .38 to .88. A similar review of the literature by Kim (2009) related reliability data for 28 studies of diverse samples; Total PKPCT’s Cronbach’s alpha reliability ranged from .93 to .99 with the exceptions of two studies that showed reliability of .72 in one study, and .52 pretest, .63 posttest in another study. Cronbach’s alpha means for each subscale ranged from .87 to .90; inasmuch, individual dimension Cronbach’s alpha score ranged from .81 to .97 for awareness, .58 to .96 for choices, and .79 to .97 for freedom to act intentionally, and from .86 to .98 for involvement in creating change.
For the purpose of this study PKPCT V II was blind back translated in Haitian Creole and piloted (see Appendix C). The sample consisted of 39 bilingual Haitians/Haitian Americans living in Brooklyn. The sample was diverse in gender, age, number of years living in the United States, region from Haiti, and level of education. 10.2% participants (n = 4) reported that their education level was lower than high school equivalency and, 42.1% (n = 16) reported that they were from the south of Haiti were Les Cayes is located. Data were imputed using mean substitution for those subjects who had one item missing per subscale or fewer. Reliability was tested using Cronbach’s alpha. Alpha for the total HC PKPCT VII was .95, and for the subscale of awareness, choices, freedom to act intentionally and engagement in creating change as .87, .85, .85, and .79 respectively. Test retest items Cronbach’s Alpha reliability were .82 for awareness, .78 for choices, .91 for freedom to act intentionally and .83 for engagement in creating change. The test retest items were also found to be highly correlated. Correlations were statistically significantly (r = .698 p < .01) for awareness, (r = .661, p <.01) for choices, (r = .0827, p < .01) for freedom to act intentionally, and (r = .719, p < .01) involvement in creating change (Leveille-Tulce, 2015).

Strong reliability has also been reported for other translated versions of the tool (Cruz, Pimenta, Pedrosa, Lima, & Gaidzinski, 2009; Kim et al., 2008). Cronbach’s alpha reliability for the total PKPCT ranged from .96 to .98 and from .88 to .96 for the subscales, in a study where the tool was translated into Korean (Kim et al., 2008). In addition, prior to a study in Brazilian nurses, a scale adaptation study of the Portuguese translated tool was conducted and revealed an internal consistency of Cronbach’s alpha from 0.87 to 0.96. Internal consistency for the actual study was Cronbach’s alpha 0.73 (Cruz et al., 2009).
As reported above, the tool most frequently exhibits a high level of internal consistency reliability which decreases the likelihood of random error (Waltz, Strickland, & Lenz, 2010). Nevertheless, the following may be a source of random error. First, even though it has been recommended that the PKPCT be used in individuals with a minimum of high school education (Barrett & Caroselli, 1998), the tool has been used with people with less than high school education (Bramlett & Gueldner, 1993; Shearer et al., 2007; Kirton & Morris, 2012). Second, difficulty understanding the direction of and completing the tool have been attributed to missing data (Shearer et al., 2007). Third, difficulty understanding certain words even by individuals that had a formal education of high school or greater has been reported in nursing home residents’ participants (Wijesinghe, 2008).

Education is not considered a predictor of power (Barrett, 1990a); despite the fact that Ciarcia (1998) found a positive correlation between power and education in nurses prepared at the masters’ level and those with associate degrees and diplomas, and the fact that Young, (1997) found a negative correlation in nurses with higher basic nursing education, a BSN, and those with lower education level, a diploma or associate degree (r = -.3774, p = .040). In addition, while difficulty with directions of the tool was found in a sample where participants were, on average, very well-educated and very few with a level of education as low as grade school, only 6.3%, and may have been attributed to the level of education of some participants (Shearer et al., 2007), difficulty with the language of the tool has been reported even in people with the recommended level of education (Wijesinghe, 2008).

The original construct validity of the PKPCT was determined by factor loadings of the four dimensions and ranged from .49 to .78 in a pilot study, and from .56 to .70 in the validation study (Barrett, 1990a). Although the literature revealed various forms of validity such as
construct validity, and concurrent validity (Barrett & Caroselli, 1998), construct validity was the most common form reported. Construct validity of the tool was assessed using factor loading. This approach facilitates the empirical justification of the tool dimensions and denotes consistency of the relationship among items and the concepts (Soeken, 2010).

**Demographic Data Form.**

The Demographic Data Form was designed by the researcher to obtain descriptive information about participants and to determine participants’ knowledge of vaginitis and their children’s incidence of vaginitis. It includes sociodemographic information such as participants’ name, participants’ child/children’s school name, participants’ age, gender, marital status, place of residence, level of education, employment status, occupation, age of their female child/children, incidence of child/children vaginitis. Sociodemographic data provides understandings of the sample studied (Plichta & Kelvin, 2013). Additionally, it appraises participants’ knowledge of vaginitis, its risk factors and related health promotion measures, and their need for information about vaginitis (see Appendix B1a, and B1b, B2a, and B2b).

**The Health Patterning Modality**

Health patterning is the process of assisting clients with their knowing participation in change (Barrett, 1988). “In the health patterning process, people are helped to become aware of feelings, thoughts and attitudes within a special environmental context” (Barrett, 1990b, p 105-106). The study process reflects Barrett’s Rogerian practice methodology (Barrett, 1988) phases, pattern manifestation knowing and appreciation, and voluntary mutual patterning (Barrett, 2010) and will last about three hours (see Appendix A1).

The pattern manifestation knowing and appreciation phase is the identification of the human and environmental manifestation as they relate to current health events (Barrett, 1988), in
this case, power as knowing participation in change of Haitian caregivers before and after participation in an education and resource health modality that addresses risk factors of and health promotion behaviors toward childhood vaginitis. The researcher provided an introduction to the concept of knowing participation in change. Participants used the Haitian Creole translated PKPCT VII (HC PKPCT VII) to appraise their power profile before and after participation in the health patterning modality and completed the demographic form. Besides descriptive information about the sample, the demographic form also appraised participants’ need to share and obtain information about childhood vaginitis and their knowledge of health promotion measures. The pre and post appraisal phases were scheduled to last about 20 to 25 minutes each.

Voluntary mutual patterning relates to the deliberate and continuous mutual patterning of the environmental field by nurses and clients to promote harmony related to health events (Barrett, 1988). In this phase, the researcher and participants voluntarily and mutually pattern the health patterning modality. Sharing knowledge with patients and facilitating access to the means they may need to promote health and prevent diseases are in line with Rogers’s worldview that noninvasive interventions can be used to promote health and well-being (Rogers, 1992) and Barrett’s beliefs that health modalities can enhance power (Barrett, 2000). Enhancing power and actualizing health promoting goals can be achieved through health modalities that enable people to continually build awareness, and realize their potential (Larkin, 2001).

In congruency with the Power as Knowing Participation in Change theory underlying principles which imply that nurses and clients continuously pattern the environment field to promote harmonious health events (Barrett, 1988), the educational modality integrated storytelling, reflection, and a poster (see Appendix E₁ English and E₂ Haitian Creole). It
encompassed sharing information and addressing issues related to risk factors and prevention of vaginitis, and distribution of resources such as cotton panties, small towels and unscented soaps. It was designed to last about one and a half an hour (1 ½) to two (2) hours depending on the need for mutual patterning among participants and researcher. The modality session was planned to accommodate groups of 20. Patterning was facilitated through researcher and participants experiencing the teaching and learning experience and mutually changing each other. Classes of 20 students allow students to exchange role with teachers, and become teachers, where teachers are co-learners with students (Hattie, 2006). Additionally, although there are no known Haitian gender taboos regarding discussing intimate body parts in mixed gender groups, if participants did not feel comfortable sharing information that they deemed sensitive within the group, a one to one conversation with the researcher was offered. The health patterning modality took place at selected primary schools in the Les Cayes area. A Portable Document Format (pdf) copy of the poster was given to participants to take home.

During the first 30 to 40 minutes of the health patterning modality participants told their stories. The researcher and participants engaged in discussion about their power as knowing participation in change, knowledge and experiences with vaginitis, its risk factors, participants’ ability or lack of ability to prevent vaginitis. Stories enable participants to examine different perspectives by identifying and clarifying their situations and experiences (Murray, Wenger, Downes, & Terrazas, 2011). Subsequently, in the next 30 to 40 minutes the researcher shared information with participants, with a focus on participants’ identified needs. The poster was used to help participants visualize and identify key concepts. The last 30 to 40 minutes consisted of reflection and feedback on information shared. Reflections enabled participants to connect their knowledge and new information received from the session to their everyday experiences
(Murray et al., 2011). Participants were also able to identify from the information and the resources offered what might help them the most to reduce risk factors and prevent vaginitis in their children. The health patterning modality outline and details are provided in appendix C1 and the poster in appendix F1.

Studies have shown that recurrence of vaginitis is at its highest around school age when parental supervision and monitoring of toileting are reduced (McGreal & Wood, 2013). The goal of the health patterning modality was to provide an opportunity for parents to develop awareness about risk factors and preventative measures of childhood vaginitis, and enhance their capacity to knowingly and intentionally choose to actively participate in actions that prevent vaginitis in their children. Together with the nurse, participants discussed and shared their previous knowledge about risk factors and prevention of vaginitis, identified areas where they needed assistance, reflected on their ability and or lack of ability to knowingly participate in change to prevent vaginitis or prevent its recurrence. The researcher also discussed and shared her knowledge about risk factors and prevention of vaginitis with participants.

**Data collection procedure**

The study protocol was presented to the Lehman College IRB and Comité Nationale de Bioéthique du Ministère de la Santé Publique et de la Population d’Haiti (Haiti’s Bioethical committee). Permission for recruitment at the selected sites was requested (see Appendix F1 and F2 for English and Haitian Creole permission letter) and obtained from the schools’ principals (see Appendix G1 and G2 for English and Haitian Creole permission letter). Participants were informed of the study through flyers and announcement at selected primary schools. A snack was provided at the end of the modality and a tote bag was offered to those who completed the study. Prospective participants were able to contact the researcher via telephone to get
information about the study. Initiation of the study occurred after final approval by the IRB. Written consent was obtained from the participating caregivers. Participants completed a demographic form and the Haitian Creole translated PKPCT-V II. The researcher provided information on the PKPCT-V II and the demographic form and on how to complete them. The Haitian Creole translated PKPCT-VII was used to examine participant’s power as knowing participation in change profile. Barrett’s Haitian Creole translated PKPCT VII helped understand caregivers’ power manifestation before and after the health patterning modality. Presence of vaginitis in children and effectiveness of health patterning modality was measured by caregivers’ self-report on the demographic form. The researcher provided caregivers who reported presence of vaginitis in their children with local health clinic and hospital names and encouraged them to have these children checked. One on one interviews were conducted to accommodate participants who had questions regarding completing the questionnaire and those with lower reading ability. This method simulates Bramlett and Gueldner’s (1993) used of the tool in nursing home residents.

Data analysis

A pretest- posttest quasi-experimental study was conducted to examine Haitian caregivers’ power profile before and after participation in the education and resource health modality. The data were entered into Statistical Package for the Social Sciences (SPSS) Version 21 program. Accuracy of data entry was checked and evaluated at least twice by someone who speaks Haitian Creole and the researcher. In addition, data was cleaned and analyzed. Data frequencies were carefully examined for invalid, unusual, and missing data. Descriptive statistics were used to describe the sample. Descriptive statistics comprised frequency, percentages, and central tendencies and dispersion measures. Z-scores were calculated to detect normality of
distribution. Depending on distribution, a t-test was used to examine the degree of power as knowing participation in change of participants (Plichta & Kelvin, 2013). Regression analysis was planned to be done depending on statistical significance difference. Cronbach’s alpha reliability was also calculated to determine the reliability of the tool in the study.

This chapter described the method that was used to examine Haitian caregivers, power as knowing participation in change. It provided information on the sample, the tool, the health patterning modality and data analysis plan. Participants were purposively recruited from different selected elementary schools. The study integrated Barrett’s Rogerian methodology practice phases of pattern manifestation knowing and appreciation, and voluntary mutual patterning.
Chapter 4

Results

The study was conducted to appraise the power as knowing participation in change of primary caregivers of female Haitian children aged 6 to 13 years old, before and after participation in an education and resource health patterning modality related to risk factors and prevention of childhood vaginitis that comprised education and resources. This was achieved by examining participants’ self-reported power on the Haitian Creole translated PKPCT VII. This chapter relates the results of the data analysis for the study’s two research questions.

The following results report descriptive statistics comprising frequency, percentages, central tendencies, and dispersion measures. Report of findings reflect the demographics of the sample such as gender, age, education level, work status, level of knowledge about risk factors and prevention of vaginitis and information about participants’ girls such as age, school, and presence of vaginitis. A paired sample t-test was used to answer the two research questions: “What are the power profiles of Haitian caregivers before and after the health patterning modality about childhood vaginitis?” and “To what extent does Haitian caregivers’ power profile change after the health patterning modality about childhood vaginitis?”

Preliminary analysis

Five schools were invited to participate in the study based on their location in neighborhoods where cases of childhood vaginitis were found. All five schools chose to participate. The researcher met with all the schools’ directors or a designated assistant prior to conducting the study in order to discuss recruitment and to schedule the health patterning modality sessions. Three of the five schools organized school meetings and allowed the researcher to attend these meetings. During these meetings the researchers made announcements
about the study eligibility and requirements, and distributed flyers. Additionally, together with caregivers and school directors, times and dates to conduct the study were scheduled. Primary caregivers who wished to participate in the study registered to attend the scheduled health patterning modality sessions. In one of these three school meetings, primary caregivers agreed to have the health patterning modality session right after the meeting. Those who self-identified as prepared to participate in the study remained for the study. The other two schools did not have school meetings due to difficulties of getting parents to attend. In these two schools, the director in one, and the director assistant in another distributed the flyers to their students to take home. Primary caregivers who wished to participate in the study registered at their children’s respective schools.

Some of the school directors did not agree to have primary caregivers from other schools attend their school health patterning modality sessions. As a result, participants attended their children’s corresponding school health patterning modality sessions. In total, seven sessions of the health patterning modality were conducted in order to accommodate primary caregivers’ schedules and minimum number of required participants per session. Three sessions were completed in the morning and four in the afternoon. Five of the sessions were conducted in classrooms, one in a church hall and another in a school conference room. Double health patterning modality sessions were conducted in two of the five schools.

Although, the health patterning modality sessions were planned to accommodate 20 participants, the number of participants in each session ranged from a minimum of 7 and a maximum of 22. The health patterning modality sessions lasted between 2 ¾ and 3 hours. The number of participants did not seem to affect either length of session or voluntary mutual patterning. Pretest segments lasted longer than predicted about 45 minutes at times because
participants needed assistance with completion of the questionnaires. Some participants experienced and reported difficulties understanding concepts meanings and directions of the Haitian Creole translated PKPCT VII. As requested by participants, the researcher provided one on one assistance with how to complete the form and meaning of terms. Participants completed the consent form before their participation in the study; their right to leave the study at any time was emphasized.

The health patterning modality sessions were very engaging. Mutual patterning occurred through primary caregivers’ active participation in the discussions and through telling their stories. Both the researcher and primary caregivers were able to examine and clarify different perspectives about childhood vaginitis. Primary caregivers asked questions and shared their knowledge and concerns about childhood vaginitis. They related lively narrative about their use of folk medicines such as local herbs and leaves and expressed their beliefs in their effectiveness. The use of the poster and leaflets reinforced the information shared by the researcher.

Since primary caregivers preregistered before the study and submitted their children’s ages, resource packages were pre packed according to ages; participants chose their resources before completing the posttest questionnaires. Snacks were served at the end of sharing information and distribution of resources. The posttest questionnaires, the Haitian Creole translated PKPCT VII, and the demographic data form were completed immediately after the educational and resource health patterning modality. The researcher reminded participants to complete the Haitian Creole translated PKPCT VII in relation to their capacity to adopt health promotion practices related to vaginitis in their children. Even though, information was given to participants and individual assistance was provided at pretest, participants still required much
assistance to complete the questionnaires at posttest. A tote bag was given to each participant who completed the study.

In all, 110 people chose to register to participate in the study; 92 attended the health patterning modality sessions; after the researcher introduced the study, three of the 92 self-eliminated due to inability to complete the questionnaires; they left before the start of the health modality. In the end, 89 attended the whole health modality sessions and completed the questionnaires (see Figure 1).

Figure 1

Number of Participants Who Registered and Completed the Study

All the 89 participants who completed the study returned their questionnaires. However, nine questionnaires with excessive missing data were eliminated; they had 10% of missing data or more on either the pre-test or the posttest that is more than five (5) missing items on the power scale. Of the nine questionnaires with excessive missing items, three completed both pre and posttest Haitian Creole translated PKPCT VII incorrectly. Another did not complete the Haitian Creole translated PKPCT VII on posttest and another one had 25 missing items on pretest (see Table 1). In all, n = 80 were included in the analysis. Of the 80 sets of questionnaires available for analysis, 59.6% (n = 53) had no missing data at pretest versus 73% (n = 65) at posttest; only 12.5% (n = 10) at pretest and 8.75% (n = 7) at posttest had between 2 and 5 missing data (see Table 2).
Table 1

Number of Questionnaires Removed from Analysis and Number of Missing Items per Questionnaires at Pretest and at Posttest

$N=9$

<table>
<thead>
<tr>
<th># Questionnaires</th>
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<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># Missing Items</td>
<td># Missing Items</td>
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<td>52</td>
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</table>

Missing data were handled using mean imputation. Data analyses were performed using SPSS version 21. Accuracy of de-identified data entry was checked and evaluated three times. A priori significance was set at $p = .05$. 
Table 2

Number and Percentages of Participants Included in the Data Analysis and their Number of Missing items

*N* = 80

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<thead>
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<td>5</td>
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</tbody>
</table>

**Description of the sample**

All participants reported that they were primary caregivers of a girl between the ages of 6 and 13 and were able to read and understand Haitian Creole. Participants ranged in age from 19 to 56 years with an average age of 33.89 (*SD* = 9.66), with more (37.5%) between the ages of 20 and 29 years of age (see Figure 2).
Table 3 shows participants’ gender, work status, community of residence and highest level of education. The majority of participants 90% (n = 72) were women and 57.5% (n = 46) reported that they were not working. Most participants, 60% (n = 48), live between Dèyè Fò 32.5% (n = 26) and La Savann 27.5% (n = 22). Anecdotally, these communities fare among the most economically disadvantaged communities in Les Cayes. They are neighborhoods where most specifically the researcher had previously encountered cases of vaginitis. Four of the five schools are located in these 2 communities. Out of the 80 participants, 1.3% (n = 1) did not report the level of education, 37.6% (n = 30) reported level of education of high school or more.
Table 3
Participants’ Age, Gender, Work Status, Community of Residence, and Level of Education

\( N = 80 \)

<table>
<thead>
<tr>
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<th>( Percent )</th>
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<td>Community of Residence</td>
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</tbody>
</table>
| Deksy 
| Dèyè Fò                           | 26     | 32.5        |
| Jele                              | 2      | 2.5         |
| Kat Chemen                        | 1      | 1.3         |
| La Savann                         | 22     | 27.5        |
| Mitan Vil la                      | 5      | 6.3         |
| Sen Michel                        | 1      | 1.3         |
| Vënè                              | 4      | 5.0         |
| Other                             | 18     | 22.5        |
| Highest Level of Education        |        |             |
| Less than Sixth Grade             | 6      | 7.5         |
| Sixth Grade                       | 14     | 17.5        |
| Junior High School                | 29     | 36.3        |
With the exception of one participant, all others $n = 79$ reported their marital status. Marital status varied between single 35% ($n = 28$), married 26.3% ($n = 21$), not married but living with partner 28.7% ($n = 23$), and separated 8.8% ($n = 7$).

Table 4 reports participants’ self-reported level of knowledge about childhood vaginitis at pretest and at posttest. Participants were asked to rate their level of knowledge about risk factors and prevention measures of childhood vaginitis, using a scale of 1 to 10 (with 1 = very little knowledge and 10 = very knowledgeable). All possible scores from 1 to 10 were selected at both pretest and posttest with the majority of scores in the lower half on the pretest 60% ($n = 48$) and the majority in higher half on posttest 81.3% ($n = 65$) with an average of 5.09 ($SD = 2.57$) at pretest and an average of 7.44 ($SD = 2.07$) at posttest. A paired samples t-test revealed a significant increase in the mean difference between the level of knowledge at pretest and at posttest 2.35 ($SD = 2.48$), $p < 0.01$. In addition, all participants ($N = 80$) reported that they would like to know more about the risk factors and prevention measures of childhood vaginitis.
Table 4

Participants’ Self-reported Level of Knowledge about Childhood Vaginitis at Pretest and at Posttest

*N*= 80

<table>
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<th>Posttest</th>
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<td>13</td>
<td>16.3</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>5</td>
<td>6.3</td>
<td>10</td>
<td>14</td>
<td>17.5</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td></td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additionally, age and schools of the participants’ girls are included in table 5. Names of the schools reflect the five schools that chose to participate in the study. Participants’ girls ages were between 6 and 13 years old with an average age of 9.49 (SD = 2.31).
The primary caregivers were queried regarding the history of vaginitis in their girls. The majority 58%, $n = 47$ reported at least one episode of vaginitis in their girls and 41.3% ($n = 33$) reported no history of vaginitis. Of those who reported history of vaginitis, the number of episodes ranged from one to ten with an average number of 2.39 ($SD = 1.77$) episodes.
Evaluation of the Haitian Creole Translated Power as Knowing Participation in Change

Tool Version II (HC PKPCT VII)

The Haitian Creole translated PKPCT VII was used to measure participants’ Power as Knowing Participation in Change before and after the health patterning modality. The four dimensions of the instruments: awareness, choices, freedom to act intentionally, involvement in creating change are measured by 12 bipolar adjectives. Possible score for each dimension of the Haitian Creole translated PKPCT VII ranges from 12 to 84, and total score for the total Haitian Creole translated PKPCT VII from 48 to 336 (Barrett, 1983). In this study, total scores ranged from 186 to 336 with mean 258.58 (SD = 35.02) at pretest and from 180 to 336 with mean score 273.73 (SD = 273.73) at posttest. Scores, means scores, and SD for each dimension are presented in table 6
Table 6
Possible and Actual Scores, Means, and Standard Deviation for HC PKPCT VII

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Possible Scores</td>
<td>Actual Scores</td>
<td></td>
<td>Min</td>
<td>Max</td>
<td>Min</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Awareness</td>
<td>80</td>
<td>12</td>
<td>84</td>
<td>41</td>
<td>41</td>
<td>84</td>
<td>62.82</td>
</tr>
<tr>
<td>Choices</td>
<td>80</td>
<td>12</td>
<td>84</td>
<td>46</td>
<td>46</td>
<td>84</td>
<td>64.45</td>
</tr>
<tr>
<td>Freedom to Act</td>
<td>80</td>
<td>12</td>
<td>84</td>
<td>40</td>
<td>40</td>
<td>84</td>
<td>65.18</td>
</tr>
<tr>
<td>Intentionally</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involvement in</td>
<td>80</td>
<td>12</td>
<td>84</td>
<td>43</td>
<td>43</td>
<td>84</td>
<td>66.14</td>
</tr>
<tr>
<td>Creating Change</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total HC PKPCT</td>
<td>80</td>
<td>48</td>
<td>336</td>
<td>186</td>
<td>186</td>
<td>336</td>
<td>258.58</td>
</tr>
</tbody>
</table>

|                   | Posttest                                                               |                                                                 |                                                                 |                                                                 |                                                                 |                                                                 |                                                                 |
|                   | Possible Scores | Actual Scores |                                  | Min | Max | Min | Max | Means | SD |
|                   |                  |               |                                  |     |     |     |     |       |    |
| Awareness          | 80               | 12            | 84                         | 44  | 84  | 68.38 | 9.28 |
| Choices            | 80               | 12            | 84                         | 30  | 84  | 68.21 | 10.86|
| Freedom to Act     | 80               | 12            | 84                         | 49  | 84  | 68.62 | 8.83 |
| Intentionally      |                  |               |                            |     |     |     |     |       |    |
| Involvement in     | 80               | 12            | 84                         | 36  | 84  | 68.52 | 9.89 |
| Creating Change    |                  |               |                            |     |     |     |     |       |    |
| Total HC PKPCT     | 80               | 48            | 336                        | 180 | 336 | 273.73| 36.30|

Moreover, Cronbach alpha reliabilities for the total Haitian Creole translated PKPCT VII were high, .89 at pretest and .90 at posttest. The subscale reliability scores were lower and had
more variability (see Table 7). Pearson correlation for the test retest items were all statistically significant at \( p < .01 \) and varied between moderate and strong. They were at pretest: Awareness \( (r = .46) \), Choices \( (r = .77) \), Freedom \( (r = .46) \), Involvement in Creating Change \( (r = .67) \), and at posttest: Awareness \( (r = .62) \), choices \( (r = .86) \), Freedom \( (r = .32) \), Involvement \( (r = .61) \).

Table 7

Reliability of the Subscales and Total HC PKPCT VII Pretest and Posttest

<table>
<thead>
<tr>
<th>HC PKPCT VII</th>
<th>N</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pretest</td>
</tr>
<tr>
<td>Awareness</td>
<td>12</td>
<td>.58</td>
</tr>
<tr>
<td>Choices</td>
<td>12</td>
<td>.61</td>
</tr>
<tr>
<td>Freedom to Act Intentionally</td>
<td>12</td>
<td>.67</td>
</tr>
<tr>
<td>Involvement in Creating Change</td>
<td>12</td>
<td>.65</td>
</tr>
<tr>
<td>Total HC PKPCT VII</td>
<td>48</td>
<td>.89</td>
</tr>
</tbody>
</table>

These findings are consistent with previous reported studies (Barrett, 1983; Barrett & Carroselli, 1998; Kim, 2009; Kim, et al., 2012, Leveille-Tulce, 2015).

Main Analysis

Descriptive statistics was used to report minimum and maximum ranges, and means scores for the HC PKPCT VII subscales and total. Measures of central tendency comparing the difference in means between pretest and posttest scores reveal increases in the means Haitian Creole translated PKPCT VII total and subscales at posttest. Higher scores indicate higher power profile. A test for the assumption of t-test showed that power was negatively skewed both at pretest and at posttest, indicating that participants self-defined as normally having high power. In
addition, the Skewness and Kurtosis of the subscales and total Haitian Creole translated PKPCT VII indicate that the data are not normally distributed. A t-test was done to determine the extent of change in participants’ power profile after the health patterning modality and was significant. Since the assumption for normal distribution was not met, the Signed ranked test, a non-parametric alternative, was applied to determine the robustness of the t-test procedure. Table 8 reports the minimum and maximum scores for the total Haitian Creole translated PKPCT VII and each subscale at pretest and at posttest.
Table 8

Scores, Means, Standard Deviations, Skewness and Kurtosis for the HC PKPCT VII at Pretest and Posttest

\( N = 80 \)

<table>
<thead>
<tr>
<th>HC PKPCT VII</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pretest</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Awareness</td>
<td>41</td>
<td>84</td>
<td>62.82</td>
<td>9.35</td>
<td>-.22</td>
<td>-.49</td>
</tr>
<tr>
<td>Choices</td>
<td>46</td>
<td>84</td>
<td>64.45</td>
<td>10.05</td>
<td>-.028</td>
<td>-.79</td>
</tr>
<tr>
<td>Freedom to Act</td>
<td>40</td>
<td>84</td>
<td>65.18</td>
<td>9.52</td>
<td>-.447</td>
<td>-.01</td>
</tr>
<tr>
<td>Intentionally</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involvement in Creating</td>
<td>43</td>
<td>84</td>
<td>66.14</td>
<td>9.51</td>
<td>-.308</td>
<td>-.55</td>
</tr>
<tr>
<td><strong>Creating Change</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total HC PKPCT</td>
<td>186</td>
<td>336</td>
<td>258.58</td>
<td>35.02</td>
<td>-.11</td>
<td>-.71</td>
</tr>
<tr>
<td><strong>Posttest</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Awareness</td>
<td>44</td>
<td>84</td>
<td>68.38</td>
<td>9.28</td>
<td>-.371</td>
<td>-.17</td>
</tr>
<tr>
<td>Choices</td>
<td>30</td>
<td>84</td>
<td>68.21</td>
<td>10.86</td>
<td>-1.04</td>
<td>1.41</td>
</tr>
<tr>
<td>Freedom to Act</td>
<td>49</td>
<td>84</td>
<td>68.62</td>
<td>8.83</td>
<td>-.18</td>
<td>-.65</td>
</tr>
<tr>
<td>Intentionally</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involvement in Creating</td>
<td>36</td>
<td>84</td>
<td>68.52</td>
<td>9.89</td>
<td>-.69</td>
<td>.74</td>
</tr>
<tr>
<td><strong>Creating Change</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total HC PKPCT</td>
<td>180</td>
<td>336</td>
<td>273.73</td>
<td>36.30</td>
<td>-.49</td>
<td>-.24</td>
</tr>
</tbody>
</table>

It also reports their mean percentages, Standard Deviations, Skewness and Kurtosis. Participants’ power profile, before and after their participation in a health patterning modality, and the extent of the changes in their power after their participation, was investigated.
Research Questions

Research question 1: What are the power profiles of Haitian caregivers before and after the health patterning modality about childhood vaginitis? The means, standard deviation of the subscales and total Haitian Creole translated PKPCT VII at pre and at posttest were shown in table 8. Participants rated themselves high on the power scale both at pretest and at posttest with mean range for the total Haitian Creole translated PKPCT VII $M = 258.58$ ($SD = 35.02$) at pretest, and $M = 273.73$ ($SD = 36.30$) at posttest. These findings suggest that participants reported high power before and after the health patterning modality as indicated by the subscales and total scores on the Haitian Creole translated PKPCT VII.

Research question 2: To what extent does Haitian caregivers’ power profile change after the health patterning modality about childhood vaginitis?”

A paired samples $t$-test showed participants reported significantly higher power at posttest ($M = 273.73$, $SD$ 36.30), $t (79) = -5.69$, $p < .01$ than at pretest ($M = 258.58$, $SD =35.02$). The signed ranked test supports the significant difference for the Haitian Creole translated PKPCT VII total and subscales at $p < .01$. In addition, the effect size was in the medium to high range ($d = .64$) showing that participants’ scores increased on average 0.64 standard deviations. This also supports the adequacy of the sample size to detect differences and demonstrates that the health modality resulted in a significant increase in power. Table 9 reports the mean differences, SD, significance and effect sizes of the mean differences between pretest and posttest.
Table 9
Mean differences, SD, Significance, and Effect Sizes of the HC PKPCT VII Total and Subscales at Pretest and at Posttest

N=80

<table>
<thead>
<tr>
<th>PKPCT</th>
<th>Mean Difference</th>
<th>95% CI</th>
<th>t</th>
<th>df</th>
<th>p</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Posttest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Awareness</td>
<td>5.57</td>
<td>6.99</td>
<td>-7.12</td>
<td>-4.01</td>
<td>-7.12</td>
</tr>
<tr>
<td></td>
<td>Choices</td>
<td>3.77</td>
<td>9.71</td>
<td>-5.93</td>
<td>-1.61</td>
<td>-3.47</td>
</tr>
<tr>
<td></td>
<td>Freedom to Act</td>
<td>3.44</td>
<td>7.29</td>
<td>-5.06</td>
<td>-1.82</td>
<td>-4.22</td>
</tr>
<tr>
<td></td>
<td>Intentionally</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Involvement</td>
<td>2.38</td>
<td>7.92</td>
<td>-4.14</td>
<td>-0.62</td>
<td>-2.686</td>
</tr>
<tr>
<td></td>
<td>in Creating</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Change</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>total PKPCT</td>
<td>15.15</td>
<td>23.81</td>
<td>-20.45</td>
<td>-9.85</td>
<td>-5.69</td>
</tr>
</tbody>
</table>

Ancillary Analyses

The data was checked for differences in power based on demographics such as age group, gender, level of education, schools locations, work status, and presence of vaginitis in participants’ girls. One-way ANOVA and Tukey post hoc tests determined that there were no
statistically significant differences in the mean power based on any of the demographics both at pretest and at posttest (see Table 10).

Table 10
Differences in Power Based on Demographics

<table>
<thead>
<tr>
<th>Demographic</th>
<th>One way ANOVA Pretest</th>
<th>One way ANOVA Posttest</th>
<th>Tukey post-hoc Pretest</th>
<th>Tukey post-hoc Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>$(F(4, 75) = 1.341, p = .26)$</td>
<td>$(F(4, 75) = .714, p = .59)$</td>
<td>$p = .59$</td>
<td>$p = .89$</td>
</tr>
<tr>
<td>Gender</td>
<td>$(F(1,78) = .004, p = .95)$</td>
<td>$(F(1,78) = .76, p = .39)$</td>
<td>***Not performed</td>
<td>***Not performed</td>
</tr>
<tr>
<td>Level of education</td>
<td>$(F(5, 73) = .98)$, $p = .437$</td>
<td>$(F(5,73) = .74, p = .60)$</td>
<td>$p = .65$</td>
<td>$p = .41$</td>
</tr>
<tr>
<td>Community of Residence</td>
<td>$(F(8,71) = .1.08)$, $p = .39$</td>
<td>$(F(8,71) = .93)$, $p = .50$</td>
<td>***Not performed</td>
<td>***Not performed</td>
</tr>
<tr>
<td>Schools of Participants’ Girls</td>
<td>$(F(4, 75) = .193, p = .94)$</td>
<td>$(F(4, 75) = .511, p = .73)$</td>
<td>$p = .96$</td>
<td>$p = .74$</td>
</tr>
<tr>
<td>Work Status</td>
<td>$(F(1,76) = .17, p = .68)$</td>
<td>$(F(1,76) = 1.88, p = .18)$</td>
<td>***Not performed</td>
<td>***Not performed</td>
</tr>
<tr>
<td>Presence of Vaginitis</td>
<td>$(F(1,78) = 1.02, p = .32)$</td>
<td>$(F(1,78) = .87, p = .35)$</td>
<td>***Not performed</td>
<td>***Not performed</td>
</tr>
</tbody>
</table>

***Not performed because fewer than 3 groups

Similarly, there was no significant difference in presence of vaginitis in participants’ girls between the different school sites as revealed by one-way ANOVA $(F (4, 75) = .79, p=.53)$ and Tukey post hoc test $p = .29$. There was no significant difference in presence of vaginitis in
participants’ girls between the different community of residence as revealed by one-way ANOVA \( F(8.71) = 1.04, p = .42 \).

In addition, Independent sample \( t \)-tests, Pearson correlations, and Spearman correlations were conducted to determine whether any of the demographic variables were associated with Power. There were no statistically significant associations between the Haitian Creole translated PKPCT VII scores and age, gender, level of education, work status, or presence of vaginitis in the girls that participants were caring for. Only self-rated level of knowledge about childhood vaginitis at pre-test was significantly associated with all the instrument subscales and Haitian Creole translated PKPCT VII total at pre-test and at posttest, and with two of the subscales: awareness and freedom at post-test (see Table 11).
Table 11

Association of Level of Knowledge about Childhood Vaginitis with Power and Significance

\( N = 80 \)

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Pretest Level of Knowledge</th>
<th>Posttest Level of Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r</td>
<td>(p)</td>
</tr>
<tr>
<td>Pretest Awareness</td>
<td>.379**</td>
<td>.001</td>
</tr>
<tr>
<td>Pretest Choices</td>
<td>.273*</td>
<td>.014</td>
</tr>
<tr>
<td>Pretest Freedom to Act</td>
<td>.403**</td>
<td>.000</td>
</tr>
<tr>
<td>Intentionality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest Involvement in Creating Change</td>
<td>.293**</td>
<td>.008</td>
</tr>
<tr>
<td>Pretest Total HC</td>
<td>.369**</td>
<td>.001</td>
</tr>
<tr>
<td>PKPCT VII</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posttest Awareness</td>
<td>.287**</td>
<td>.010</td>
</tr>
<tr>
<td>Posttest Choices</td>
<td>.212</td>
<td>.058</td>
</tr>
<tr>
<td>Posttest Freedom to Act</td>
<td>.254*</td>
<td>.023</td>
</tr>
<tr>
<td>Intentionally</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posttest Involvement in Creating Change</td>
<td>.170</td>
<td>.132</td>
</tr>
<tr>
<td>Pretest Total HC</td>
<td>.245*</td>
<td>.028</td>
</tr>
</tbody>
</table>

**significant at 0.01

*significant at 0.05
Furthermore, findings of the study suggest an increase in self-reported knowledge about childhood vaginitis at posttest. There was a significant increase in participants’ self-reported knowledge about childhood vaginitis at posttest. This implies that as power increased, so did self-reported knowledge. In addition, a paired-sample statistics showed a statistically significant different mean difference between pretest and posttest $p < .01 \ t(79) = -8.473$. There was a moderate statistically significant relationship in the level of participants’ self-reported knowledge at pretest with the Haitian Creole translated PKPCT VII total at pretest $r = .37 \ p < .01$ and a weaker yet statistically significant relationship with the Haitian Creole translated PKPCT VII total at posttest $r = .245 \ p = .028$. However, there was no statistical significant relationship between level of knowledge at posttest with the Haitian Creole translated PKPCT VII total at pretest $r = .173 \ p = .125$ and at posttest $r = .215 \ p = .055$.

All correlations among subscales and correlations between subscales and total Haitian Creole translated PKPCT VII were strong and highly significant at $p < 0.01$. Table 12 and 13 relate correlations among subscales and correlations of subscales with total Haitian Creole translated PKPCT VII at pretest and at posttest.
Table 12

Inter-correlations of Subscales and HC PKPCT VII Total at Pre-test and at Posttest

<table>
<thead>
<tr>
<th>Pretest HC PKPCT VII</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Awareness</td>
<td>---</td>
<td>.754**</td>
<td>.749**</td>
<td>.746**</td>
<td>.889**</td>
</tr>
<tr>
<td>2. Choices</td>
<td>.754**</td>
<td>---</td>
<td>.775**</td>
<td>.785**</td>
<td>.912**</td>
</tr>
<tr>
<td>3. Freedom to Act</td>
<td>.749**</td>
<td>.775**</td>
<td>---</td>
<td>.836**</td>
<td>.921**</td>
</tr>
<tr>
<td>Intentionally</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Involvement in</td>
<td>.746**</td>
<td>.785**</td>
<td>.836**</td>
<td>---</td>
<td>.923**</td>
</tr>
<tr>
<td>Creating Change</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Pretest Total</td>
<td>.889**</td>
<td>.912**</td>
<td>.921**</td>
<td>.923**</td>
<td>---</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Posttest HC PKPCT VII</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Awareness</td>
<td>---</td>
<td>.824**</td>
<td>.886**</td>
<td>.861**</td>
<td>.952**</td>
</tr>
<tr>
<td>2. Choices</td>
<td>.824**</td>
<td>---</td>
<td>.757**</td>
<td>.784**</td>
<td>.908**</td>
</tr>
<tr>
<td>3. Freedom to Act</td>
<td>.886**</td>
<td>.757**</td>
<td>---</td>
<td>.887**</td>
<td>.938**</td>
</tr>
<tr>
<td>Intentionally</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Involvement in</td>
<td>.861**</td>
<td>.784**</td>
<td>.887**</td>
<td>---</td>
<td>.943**</td>
</tr>
<tr>
<td>Creating Change</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Posttest Total</td>
<td>.861**</td>
<td>.784**</td>
<td>.887**</td>
<td>.943**</td>
<td>---</td>
</tr>
</tbody>
</table>

** Significant at the 0.01 level
Table 13

Inter-correlations at Pretest and Post-test

<table>
<thead>
<tr>
<th></th>
<th>Post Awareness</th>
<th>Post Choices</th>
<th>Post Freedom to Act Intentionally</th>
<th>Post Involvement in Creating Change</th>
<th>Post Total</th>
</tr>
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<td>.670**</td>
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</tr>
<tr>
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<td>.707**</td>
<td>.720**</td>
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<tr>
<td>Pre Freedom to Act Intentionally</td>
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<td>.608**</td>
<td>.687**</td>
<td>.677**</td>
<td>.721**</td>
</tr>
<tr>
<td>Pre Involvement in Creating Change</td>
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<td>.486**</td>
<td>.669**</td>
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<td>.675**</td>
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<tr>
<td>Pre Total</td>
<td>.800**</td>
<td>.619**</td>
<td>.758**</td>
<td>.746**</td>
<td>.778**</td>
</tr>
</tbody>
</table>

** Significant at the 0.01 level

This chapter highlighted the study findings and presented analyses of the study data. The data indicated that the health patterning modality resulted in significant increases in the mean difference scores of power after the health patterning modality. The following chapter will present a summary of the study along with discussion of findings, implication for research and practice and conclusion.
Chapter 5

Summary, Discussion, Implications, Recommendations and Conclusions

Summary of the study

The previous chapter reported the study data and analyses of the data. This chapter includes a summary of the study, discussion of the findings, implications for practice, recommendations for future research, and conclusions. The purpose of the study was to appraise the power of Haitian primary caregivers of girls 6 to 13 years old before and after their participation in a health patterning modality that comprised education about risk factors and prevention of childhood vaginitis and resources such as cotton panties, soaps, and small towels. The sample was recruited from the schools that primary caregivers’ girls attended. The schools were selected because of their locations in neighborhoods where the researcher has found cases of childhood vaginitis. The study was conducted at the school sites.

The study was a pre-posttest design study and used Barrett’s (1983) Power as Knowing Participation in Change theory as framework. Power as Knowing Participation in Change emerges from Rogers’ (1970) Science of Unitary Human Beings and is congruent with the science’s postulates of energy fields, openness, pattern, and pandimensionality and the homeodynamic principles of helicy, resonancy, and integrality (Barrett, 2010). The principle of helicy from which Barrett’s power as knowing participation in change specifically derives, implies that change is continuous, innovative, unpredictable, and increasingly diverse (Caroselli & Barrett, 1998).

Barrett (2010) asserts that power is an innate attribute that all human beings have. However, with life changes circumstances, at times people may experience feeling of powerlessness. Power may fluctuate in lower and higher frequency (Barret, 2010). According to
Rogers (1992), “the nature of change is unpredictable and increasingly diverse” (p 31). In the same way, Barrett asserts that you cannot assume that if you do this, that will happen, instead, it should be if you do this let’s see what happens (Barrett, 2010, 2015). Nevertheless, Barrett conveys that resources such as money for example, and knowledge may be used in the interest of power (Barrett, 2010, 2015). It is within this context that the researcher developed the health patterning modality that provided resources and education in order to see how participants would report their power before and after their participation in the health patterning modality. The health patterning modality followed Barrett’s two phases practice modality, pattern manifestation knowing and appreciation, and voluntary mutual patterning (Barrett, 2010, 2015). Pattern manifestation knowing occurred with participants appraising their power before and after the health patterning modality and voluntary mutual patterning with participants and researcher participating in the health patterning modality.

Invitation was made through flyers and announcements at selected schools. To determine participants ‘power, the study consisted of two research questions. “What are the power profiles of Haitian caregivers before and after the health patterning modality about childhood vaginitis?” and “To what extent does Haitian caregivers’ power profile change after the health patterning modality about childhood vaginitis”? Participants completed the Haitian translated PKPCT VII before and after the health patterning modality. One on one assistance with completion of the tool was provided to those who requested it. Participants’ means scores on the Haitian Creole translation of the PKPCT VII provided answers to question 1, and a paired samples t-test supported by a significant signed rank test provided answers to question 2. The findings provide support for the researcher’s assumption and theoretical reasoning. Findings resulting from the two questions revealed that participants have strong perception of their power as knowing
participation in change and that their power significantly increased after participation in the health patterning modality.

**Discussion of the findings**

Power has been studied extensively, but in a more limited way, in relation to health promotion studies (Kim et al., 2012; Kirton & Morris, 2012; Wynd, 1990). The current study sought to show Haitian primary care givers’ power profile before and after their participation in a health patterning modality that provided resources and education about childhood vaginitis and the extent to which their power profile changed after the health patterning modality. This process is called pattern manifestation knowing appreciation. Butcher (2006) labeled this process the identification and appreciation of manifesting patterns that emerge from the human and environmental mutual field process. The study’s findings are analyzed and discussed in consistence with Roger’s (1970) SUHB philosophical tenets and Barret’s (1983) Power as Knowing Participation in Change theory premises. Congruency and consistency with SUHB require an approach to practice and inquiry that is shaped within the conceptual and philosophical tenets of the science (Butcher, 2006).

**The sample.**

The study sample consisted of Haitian primary caregivers of girls 6 to 13 years old who attended the five selected schools. The sample was recruited according to plans via flyer advertisements and announcements in the schools. A sample of $n = 89$ Haitian primary caregivers participated in the study and $n = 80$ participants’ questionnaire sets, eight males and 72 females, were included in the data analysis. The sample was fairly young, an average age of 33.89 (SD = 9.66). Participants had low reading ability and needed much assistance with completing the questionnaires. They resided in the most economically disadvantaged
community in Les Cayes. Only 40% \( (n = 32) \) reported that they were working. While these findings may reflect characteristics of a social and economically disadvantaged group, participants’ demographic characteristics did not seem to influence their strong perception of power. They reported high power both at pretest and at posttest. In addition, there was no significant difference in power based on any of the demographic characteristics. These findings are further discussed in the ancillary analyses and are compared to other studies that found differences in power based on demographics (Ackerman, 2005; Farren, 2006; Ciarcia 1998; Young, 1997) and others that did not (Barrett, 1983; Leveille-Tulce, 2015). The less than economically and socially favorable characteristic of the Haitian population has been reported (Farmer, 2003; Guilbaud & Preston, 2006; Maternowska, 2006; Shaw, 2010, World Bank, 2012) but has not been investigated in relation to their power as knowing participation in change.

In addition, other characteristics such as participants’ self-rated knowledge about childhood vaginitis and history of vaginitis in participants’ girls were also analyzed. Participants reported an increase in their level of knowledge about childhood vaginitis at posttest indicating that they were willingly and actively engaged in the health patterning modality and benefited from it. All participants manifested willingness to know more about childhood vaginitis at pretest. The expressed willingness of participants to learn more about childhood vaginitis, the reported history and frequency of episodes of vaginitis in participants’ girls, and the choice to participate in the health patterning modality indicate that participants were aware of the need for patterning the environment for their girls’ health promotion.

In contrast, the Haitian Creole translated pilot’s study sample consisted of \( n = 39 \) bilingual Haitians born in Haiti and who live in Brooklyn, New York. The two samples differ in terms of community of residence, level of education, and work status. In the pilot study, all lived
in Brooklyn; only 23% were between 21 and 39 years old and the remaining 77% was between 40 and 89 years old. In addition, 89.8% had the required high school equivalency education level or higher compared to 37.6% in the current study. Moreover, almost everybody in the pilot study reported a type of occupation; only three reported they were retired and had no occupation. Similarly to the current study, participants in the pilot study scored themselves high on the power scale; the pilot study showed no significant difference in power based on demographics (Leveille-Tulce, 2015).

**The Haitian Creole translated PKPCT VII.**

In the current study, total scores for the Haitian Creole translated PKPCT VII varied between moderate and high both at pretest and at posttest (see Table 6). Although Cronbach alpha reliabilities for the dimensions were much lower, showing more variability, the total Haitian Creole translated PKPCT VII was high both at pretest and at posttest (see Table 7). Cronbach’s alpha was lower at posttest than at pretest for the dimension Freedom. In addition, the test retest items were analyzed for correlation and showed moderate to strong statistical Pearson correlation. All correlations were significant at $p < .01$. Pearson correlations were lower at posttest than at pretest for two of the dimensions’ subscales, Freedom and Involvement in Creating Change.

The lower alpha coefficient at posttest for one of the dimensions and the lower Pearson correlation for two of the dimensions test-retest items might be due to the fact that participants inadvertently scored themselves on the power scale in the opposite direction, therefore, showing a decrease in reliability for these items. Moreover, participants experienced difficulty understandings meaning of concepts and completing the instrument. Besides difficulty with completing the questionnaire, the lower reliability of the dimensions might be related to the
number of items 12 for each dimension compared to 48 for the total Haitian translated PKPCT VII total. According to Kimberly and Winterstein (2008, p. 2277) the “greater the number of items in a summated scale, the higher Cronbach’s alpha tends to be.” Likewise, Wijesinghe (2008) alluded that the length of items for the PKPCT total may have been responsible for the higher total PKPCT’s reliability found in her study.

Yet, the fact that the scores and reliability for the Haitian Creole translation PKPCT VII total remained high at pretest and at posttest demonstrates that the low reliabilities of the dimensions did not affect participants high perception of power and speaks to the inseparable and integral characteristic of the power tool four dimensions. “The whole cannot be understood when it is reduced to its parts” (Rogers, 1992, p 129). To understand how humans and environment knowingly participate in the continuous creation of change we need to appraise manifestations of the whole not the parts (Barrett, 2010). In addition, these findings indicate that the Haitian Creole translated PKPCT VII has the potentiality to appreciate pattern of power in this population, and support the use of the instrument in this group provided that proper assistance is offered. Alpha coefficients for the subscales and total Haitian Creole translated PKPCT VII and the test- retest items were higher in the pilot study than those found in the current study (Leveille-2015) (see Chapter 3).

Although this was the first time the Haitian Creole translated PKPCT VII was used in a monolingual Haitian Creole speaking population, the recorded alpha coefficients reflect previous findings that reported a variety of alpha coefficients for PKPCT VII total and its dimensions’ subscales (Barrett, 1983; Barrett and Carroselli, 1998; Kim, 2009; Kim, et al., 2012, Leveille-Tulce, 2015). Variances of factor score reliability for the PKPCT VII’s pilot study ranged from .55 to .99 for the subscales and .63 to .99 for the test- retest items, and in the final study, .60 to
.90 for the subscales and .70 to .78 for the test retest items (Barrett, 1983). Furthermore, a review of 25 studies by Barrett and Carroselli (1998) showed a range of alpha of .63 to .99 for the total PKPCT. Likewise, Kim’s (2009) review of 28 studies showed a range of Cronbach alpha from .52 to .99 for the total PKPCT and Cronbach alpha for individual scale as low as .58 and as high as .97. Moreover, Kim et al. (2012) reported alpha of .97 for total PKPCT, .86 for awareness, .91 for choices, .92 for freedom to act intentionally, and .93 for involvement in creating change. Alpha coefficients for the subscales and total HC PKPCT VII were higher in the pilot study than those found in this study (see Chapter 3). Additionally, Pearson correlation as reported by previous studies showed correlation range from $r = .40$ to .92 (Barrett & Carosselli, 1998) and from .78 to .94 (Larkin, 2001). In addition, there were strong statistically significant correlations at $p < .01$ of all the Haitian Creole translated PKPCT VII dimensions with each other and with the total Haitian Creole translated PKPCT VII. These results are consistent with the unitary and irreducible worldview of the SUHB and the power as knowing participation in change theory premise that the dimensions of power are inseparable (Barrett, 2015).

Research Question One.

The first question asked “What are the power profiles of Haitian caregivers before and after the health patterning modality about childhood vaginitis?” The findings from question one indicate that participants have a high perception of their power as knowing participation in change; on average, participants reported high power both at pretest 258.58 ($SD = 35.02$) and at posttest 273.73 ($SD = 36.30$). This high perception of power also manifested in all the dimensions of power (see Table 6). The reported high scores show that Haitian primary care givers, despite their less than favorable situation, are very well aware of their capacity to
knowingly participate in changes that can impact their children’s health; these findings are congruent with Barret’s assertion that power is an innate and evolving phenomenon (Barrett, 2010). They attest to Barrett’s (2010) belief that power exists independent of contexts and Florczack (2009), ideas that Power “is a life force belonging to all humans since they exist” (p 290).

In addition, the notion that power is an innate entity and the pattern of reporting high power profile are supported by previous studies. Wall’s (2000) study of lung cancer patients, in relation to a preoperative exercise health patterning modality, suggested that participants possessed high capacity to knowingly participate in change. Although, power steadily decreased in the no exercise group, both those in the no exercise group, and those in the exercise group reported high power profile at T1 and through T3. Furthermore, high manifestation of power was reported even by those who opted not to participate in a health promotion behavior, such as not having a mammogram, after participation in a breast health education program (M = 271.54, SD = 41.06) and by those who participated (M = 291.02, SD = 36.82), t (191) = -2.77, p = .006 (Kim, et al., 2012). Lastly, participants in the Haitian Creole translated PKPCT VII pilot study also reported high power profile (83.93% of the total PKPCT) an average of 282.03 (SD=32.94) n = 37 (Leveille-Tulce, 2015).

Research Question Two.

The second question asked “To what extent does Haitian caregivers’ power profile change after the health patterning modality about childhood vaginitis?” Power as knowing participation in change is based on the principle of helicy which concerns the nature and direction of change (Barrett, 1986). Change is the essence of the health patterning process (Barret, 1988). The findings resulting from this question indicate that participants’ power
changed to a significantly higher power profile at posttest. There was a significant increase in the mean difference of power after participation in the health patterning modality. This indicates that participants perceived a stronger sense of power after their participation in the health patterning modality.

The current study findings are consistent with other studies that showed significant increases in power in relation to health patterning modalities. Larkin (2007) reported significant increase in power from T₁ through T₇ for participants in both a traditional support group (18%), and Ericksonian hypnotherapeutic support group (33.9%). In addition, Wall (2000) observed a maintained increase in power from T₁ to T₃ in those who participated in an exercise health patterning modality, and a steady decreased in those that did not participate. Likewise, participants in a health education program also demonstrated higher power as knowing participation in change for adoption of health promotion behavior such as having an annual mammogram (Kim et al. 2012).

The current findings additionally imply that the health patterning modality about childhood vaginitis facilitated a situation conducive to positive change. It enhanced Haitian primary caregivers’ power and potentially facilitated their participation in health promotion behaviors for their girls’ well-being. Power is the way humans participate in the nature of unitary human development, and situations in which humans are involved in creating change vary (Barret, 1986). The current study is the first study in which a health patterning modality and the concept of power as knowing participation in change were used in Haiti in a Haitian Creole monolingual sample. The health patterning modality facilitated voluntary mutual patterning. It provided participants with education to facilitate their knowing participation in change, and enabled them to choose resources they wanted to help them efficiently deal with childhood
vaginitis. The health patterning modality was a new way in which Haitian primary caregivers engaged in mutual process with the environment and learned how to participate in change for the wellbeing of their children, and through which they can continue to enhance their knowing participation in change.

As has been noted, health patterning enhances power, increases people’s potential for change and helps them deal with lifestyle issues (Barrett, 1990). Health patterning is a manifestation of humans in mutual process with the environment that promotes changes (Barrett, 1988). The current findings support previous findings that activities that necessitate choices and knowing participation enhance power (Wall 2000). Haitians manifestations of power as knowing participation in change had been found to be compromised by modalities that do not reflect their realities, are not conducive to mutual patterning, and do not facilitate choices (Maternowska, 2006). The current findings highlight the usefulness of health patterning modalities developed in the realm of SUHB in boosting power and promoting healthy behaviors (Wynd, 1990) in people wherever they are.

In addition, experience of pattern appreciation in the health patterning modality sessions may have contributed to the significant increase in Haitian primary caregivers’ power at posttest. During the health patterning modality, participants and the researcher actively and openly engaged in sharing their experiences with childhood vaginitis. The current findings provide support for Larkin (2001) proposition that group facilitators and group members’ experience of intense rapport, meaningful dialogue and pattern appreciation positively influence power.

However, although, the findings are consistent with the study’s theoretical underpinnings, cautions must be used when analyzing these findings. The posttest was given immediately after the study and in the same room. The short period of time between the health modality session
and the posttest questionnaires might have boosted participants’ knowing participation in change and contributed to the higher power profile reported at posttest. In addition, participants were able to communicate with the researcher and with each other. Thus, participants and the researcher, engaging in mutual process in the current study, might have influenced the results. Similarly, earlier researchers, Bramlett and Gueldner (1993), examined power in older adults in a rural community who had less than high school education and required assistance with completion of the instrument. They concluded that personal nature of the research environment and engagement with the participants might have contributed to findings that power was enhanced in participants. Moreover, difficulty with completing the Haitian Creole translated PKPCT VII might have also affected the results; participants experienced difficulty understanding conceptual meanings and direction of the tool. Issues with difficulty completing the PKPCT had been reported in previous studies (Shearer et al., 2007; Wijesinghe, 2008).

Furthermore, those who felt that they were not able to participate in the study abstained from participating even after attempting to attend. Those who self-selected as eligible participants might have a stronger self-perceived power than those who did not choose to participate. In addition, the higher scores at posttest might have also been influenced by practice effect. It has been reported that cognitive tests that are similar at pretest and at posttest may be affected by practice effect (Knapp, 2016).

**Ancillary analyses.**

The current study sample was analyzed for differences in power based on demographics and for association between power and the demographics. Ancillary analyses showed no significant differences in power based on age, gender, and level of education, community of residence, school of girls, work status, and presence of vaginitis in participants’ girls (see Table
In addition, they revealed no significant association between power, and demographics such as age, level of education, and work status. These findings may explain why participants reported high power scores even before the health patterning modality. They suggest that, Haitian primary caregivers possessed the capacity to knowingly participate in change to pattern the environment for their girls’ well-being regardless of their situations or demographic characteristics. The findings, additionally, support the notion that power is an innate attribute that belongs to all and exists independently of context.

The current study findings are consistent with those of the Haitian Creole translated PKPCT VII pilot study that showed no significant differences in power based on demographic such as age, gender, and level of education (Leveille-Tulce, 2015). In the same way, Barrett (1983) found no statistical significance difference in power based on gender, education, and age. In contrast, other studies such as Ciarcia (1998) showed a positive correlation and Young (1997) a negative correlation between education and power. In addition, Ackerman (2005) investigated men and women’s perception of the relationships among monitored exercise, social support, power, and quality of life in a cardiac rehabilitation program and found significant differences in all the dimensions scores for men $p = < 0.0001$, $0.0002$, $0.0004$, and $0.0005$ for awareness, choices, freedom, involvement in creating change respectively and statistical difference in only awareness for women $p = 0.0277$. Moreover, difference in power total scores pre and post cardiac rehabilitation was statistically different for men $p = 0.0071$ and not significant for women. Farren’s (2006) study of breast cancer survivors showed statistical significant differences in association between power and income $p = .013$, and in the mean difference of power based on income. Participants with lower income reported a lower power profile than those with upper middle income.
Since the school sites were chosen based on previous experiences with known cases of vaginitis in the school neighborhoods, the data were analyzed for differences in the presence of vaginitis in participants’ girls based on girls’ school and community of residence. The findings revealed no differences in reported history of vaginitis in participants’ girls between the different schools ($F(4, 75) = .79, p = .53$); Tukey post hoc test $p = .29$ and between community of residence ($F(71, 8) = 1.04, p = .42$) suggesting that there was no relation between school locations, community of residence and the reported history of vaginitis in participants’ girls. Although Leveille-Tulce, (2013) had identified cases of vaginitis in children living in these neighborhoods, there were no found studies that investigated the difference in presence of childhood vaginitis based on locations.

Ancillary findings also showed that participants reported a significant increase in both power and knowledge about childhood vaginitis after the health patterning modality suggesting that the health patterning modality might have contributed not only to an increase in power but also to an increase in knowledge about childhood vaginitis. The findings point to a direct relationship between increase in power and increase in knowledge about childhood vaginitis at posttest; as participants self-reported knowledge about childhood vaginitis increased, so did their power. However, although the increase in power and self-rated knowledge were statistically significant, there was no statistical significant association at posttest between self-rated knowledge and power. Though participants’ difficulty with completing the instrument might have influenced this finding, it most likely suggests that it was not education alone that contributed to the increase in power but the whole health patterning modality. Like Butcher (2006) suggested, the non-significant association between the increase in power and the increase in self-reported knowledge about childhood vaginitis at posttest implies that a health patterning
modality that encompasses, resources, sharing knowledge, and teaching can enhance knowing participation in change. In addition, it supports the position that while the development of health patterning modalities may focus on a specific pattern manifestation, it must take into consideration the integral and mutual process of human and environment (Barrett, 2010; Rogers, 1992; Wall, 2000). The focus should not be on the manifestation of the parts but on manifestation of the whole (Barrett, 2010; Rogers, 1992).

**Implications for practice**

The findings of the current study have many implications. They attest to the fact that research contributes to the testing of theories and generates new knowledge and meanings that enrich and strengthen nursing (Rogers, 1992). For nursing knowledge, the findings support the theoretical connection made by the researcher that health patterning modality enhances the power of Haitian primary caregivers. In addition, the strong significant association among all power dimensions, and between the dimensions and total power, supports the unitary and innate nature of the power as knowing participation in change theory. The findings enrich the knowledge base of a nursing paradigm construed in the irreducible nature of human and environment. “Apprehension of manifestations of patterning, emerging from the human/environmental energy field mutual process, is the source of information and knowledge” (Butcher, 2006, p 14).

For nurses and other health professionals, findings from the study provide insights into how the use of education and resource in a health patterning modality enhances Haitian primary caregivers’ knowing participation in change in the promotion of their female child’s health. The power of Haitian primary caregivers was appreciated in relation to their knowing participation in change for the wellbeing of their girls before and after engaging in a health patterning modality.
These findings emphasize the need for health professionals to engage in developing health patterning modalities that individuals and group may choose to participate in to enhance their power and promote manifestations of healthy behaviors.

In addition, the use of health patterning modalities as non-invasive procedures is supported by the unitary science and should be promoted (Rogers, 1992). The health patterning modality, as it was developed, facilitated mutual process among participants and the researcher. Patterning in mutual process places nurses in key position to acknowledge the different ways people manifest their pattern within health modalities (Kim et al., 2008) and may guide nurses in tailoring health modalities that facilitate people’s continuous involvement in creating the changes that they need for health-betterment.

Moreover, participants expressed strong self-perception of power even before their participation in the health patterning modality. Nurses and other health professionals should acknowledge people’s capacity to knowingly participate in change for their well-being and the well-being of those they care for. They should ensure that health patterning modalities evolve in “atmosphere of openness and freedom so that clients can freely participate in the process of knowing participation in change (Butcher, 2006, p 25).

For community, public, and global health nursing, the findings highlight the importance of continuous and mutual patterning of the environment for the well-being of all people regardless of their social, educational or economical background. The findings underscore the ability of health patterning modalities conceived in unitary worldview to enhance power of all humans wherever they are and whatever their circumstances. It is Rogers’ beliefs that nurses should promote health and well-being for all people regardless of where they are (Rogers, 1992) and address issues of social inequalities that loom underprivileged population (Rogers, 1970).
Therefore, nurses and other health professionals should develop health patterning modalities that reflect “Rogerian –aesthetics” in other words, that recognize the human and environmental life process in all its integrality and nuances (Butcher, 2006). Thus, these health patterning modalities should transcend basic factors such as demographics and embrace all issues that can impede people’s participation in actualizing their well-being such as issues of inequalities (Butcher, 2000) and lack of resources.

Furthermore, although it is recommended that the tool is used in a population with a minimum level of high school education, the study showed that the tool can be used with people with lesser reading ability. Power is believed to be an innate characteristic belonging to all human kind. Therefore, Nurses should be able to appreciate the power of knowing participation in change of people of all walks of life. The findings of this study support the importance of engaging in pattern appreciation in health patterning modality; for, nurses will only be able to facilitate human potential for well-being by mutually participating in appreciating and mutually changing the flow of human-environment field mutual patterning (Butcher, 2000). The effectiveness of the Haitian Creole translated PKPCT VII in appreciating the power of this monolingual Haitian Creole sample expands the use of unitary power as knowing participation in change to the Haitian population and to other ethnic groups for whom the primary language is Creole. In practice, future use of the PKPCT VII and the Haitian Creole translated PKPCT VII in population with low reading ability should include face to face interviews coupled with one on one assistance.

**Recommendation for future research**

The goal of the study was to appraise Haitian primary caregivers’ power profile and the extent to which their power profile changes after participation in a health patterning modality.
that provided education about childhood vaginitis and resources. To that effect, data collection was based on two research questions. Consequently, analyses of the data showed consistent high power at pretest and at posttest and a significant increase in power at posttest. Future studies using the PKPCT VII and the Haitian Creole translated PKPCT VII may want to consider using the double pretest approach. Knapp (2016) posited that participants may be sensitized by the pretest and this may in return influence the outcome of the posttest. As a result, this may limit generalizability to pretested populations. For these reasons, Knapp (2016) suggested the use of two pretests before the implementation of interventions. The two pretests are compared between each other; subsequently, the difference between the two pretests is compared to the differences of each pretest between the posttest. The finding of change at posttest is better supported if “the difference between either pretest and posttest is much greater than the difference between the two pretests” (Knapp, 2016, p 4).

Next, it is essential to be able to appreciate everybody’s power regardless of who they are, where they are, and their reading ability. The sample from the current study was selected from an underserved and underprivileged population. It consisted of people that have low reading ability and who experienced difficulty with completing the instrument. Therefore, future research using the instrument should take these factors into consideration and provide assistance with conceptual meaning and direction of the tool. Changing the format of the tool to facilitate completion, and reading each word pair while pointing to the appropriate words have been shown to be helpful (Bramlett & Gueldner, 1993).

Although the translated tool was piloted before use in a bilingual Haitian sample in Brooklyn, this was the first time that power as knowing participation in change was studied in the Haitian population before and after a health patterning modality. Future research will expand
the use and understanding of the power as knowing participation in change theory and support its usefulness in similar population. Moreover, other studies have used multiple posttests design (Larkin, 2001, 2007; Wall, 2000); the current study findings could be strengthened by a follow up study. A longitudinal study would help appraise how the increase in power, which manifested right after participation in the health patterning modality, evolves over times. In the same way, findings from the study suggest that the significant increase in power might not be related to education alone but to the whole health patterning modality. In light of these findings and the unitary nature of power, future study should also include an inquiry into the relationship between availability of resources and power.

In addition, there is a need to replicate the study. Although findings from the study support the use of the health patterning modality in enhancing power, the study should be replicated in diverse groups of the Haitian population. It should also be replicated in relation to other health conditions to further demonstrate the usefulness of providing people with the mean they need to enhance their well-being.

Moreover, voluntary patterning in the health modality reflected lively narrative of participants coping patterns with their girls’ history of vaginitis. Future research aimed at appreciating power as knowing participation in change would benefit by using a mixed method of quantitative and qualitative components. Qualitative narrative would add to the quantitative data, provide more insights, and facilitate a better appreciation of participants’ knowing participation in change, thereupon, strengthening the findings.

**Conclusions**

This study shows that Haitian primary caregivers have the capacity to participate in change for their children’s well-being. It reinforced the belief that everyone has power and that
power exists independently of contexts. In addition, the health patterning modality conceived in the realm of the Science of Unitary Human Beings and within the conceptual framework of power as knowing participation in change contributed to a statistically significant increase in power as knowing participation in change after participants’ participation in the health patterning modality. Significant increase in the mean difference of power at posttest relates the importance of health patterning modalities in enhancing power. The findings of this study added to the work of other researchers that have been promoting the Science of Unitary Human Beings and support the worldview of the science that “the purpose of nurses is to promote health and well-being for all persons wherever they are” (Rogers, 1992, p 28). Power as knowing participation in change has not been studied before in the Haitian population. The findings expand the use of the Power as knowing participation in change theory to a new and diverse ethnic group. Although the study’s findings support the theory principles and are consistent with other findings in the literature, these findings are preliminary and limited; they cannot be generalized to others in the population.
Appendix A

PATTERN KNOWING and APPRECIATION AND VOLUNTARY MUTUAL PATTERNING (Barrett, 2010)

Introduction to study’s pattern

You have consented to participate in the study. The study seeks to appraise your power profile before and after participation in an educational and resource modality. The study consists of four parts: a) completion of the demographic form and the power profile tool at the beginning of the study that will last about 20 to 25 minutes, b) an educational session with distribution of resources that last about 1 ½ to 2 hours, c) completion of the PKPCT VII Haitian Creole translation and an abridged demographic form at the end that lasts about 20 to 25 minutes, and d) closing remarks 10 minutes. In whole the whole process may last about 3 hours.

I. PATTERN KNOWING and APPRECIATION

A. Pre-Test: Participants identify their power profile before the Health pattern modality

a. Participants are informed about the concept of power as knowing participation in change, the demographic form and the Power as Knowing Participation in Change Tool. For example, your power is your capacity to knowingly participate in change. The demographic form includes information about yourself and your child. The first two questions are exclusion questions. If you answer no to any of the first two questions you cannot participate in the study. In addition, the researcher reads the PKPCT’s instructions.

b. Participants are provided direction about how to complete both forms.
c. Participants are advised to think about vaginitis, their knowledge and ability to adopt health promotion practices related to the condition while answering the test questions.

d. Participants complete the demographic form and the Pre-test PKPCT V II

e. Participants received assistance with completing the test as needed

f. Referral for reported child infection or sexual abuse

II. VOLUNTARY MUTUAL PATTERNING

B. Education session

a. Participants and researcher are seated preferably in a circle

b. Presenter and participants discussed information through storytelling and reflection.

c. Researcher and participants identify area that need to be focused on.

Researcher encourage voluntary mutual patterning with sentences such as:
what would you like to know about vaginitis? Would you say you need info on….? What do you think you need to help you prevent vaginitis in your child?

d. Researcher is prepared to share info as needed on:

1. Different types of vaginitis

   i. Bacterial

   ii. Candidiasis

   iii. Trichomoniasis

2. Risk factors of vaginitis in children

   i. Antibiotic
ii. Poor Hygiene (especially when the child is self-cleaning)

iii. Touching genital area with dirty hands

iv. Poor wiping technique (from back to front)

v. Damp underwear

vi. Use of panties other than cotton

vii. Tight clothing

viii. Lack of hormone (estrogen) before puberty

ix. Proximity of vagina to the anus before puberty


xi. Inserting objects in vagina

xii. Unclean water

xiii. Obesity

xiv. Perfume soaps

3. Consequences of untreated and recurrent vaginitis

i. Risk for other type of vaginitis and HIV

ii. Risk for possible complications in child bearing age

iii. Sexual abuse

4. Symptoms

i. Vaginal itching

ii. Vaginal burning
iii. Vaginal discharge which may be clear or colored. It can be thin or thick with or without an odor. A white, cottage cheese-like vaginal discharge is typically seen in candida vaginitis.

iv. Occasionally pelvic or abdominal pain

5. Health promotion/Prevention

i. Good hygiene (essential to treatment and prevention may sometimes may be the only measure needed) (Dei et al., 2009; Jasper, 2009; Joishy et al., 2005; McGreal & Wood, 2010, 2013; Rome, 2008; Stricker et al., 2003)

ii. Keep genital area dry and clean, (also teach children how to clean themselves) clean genital area from front to back

iii. Use cotton panties at all times

iv. Avoid irritating objects such as perfume soap, powder, bubble baths

v. Pour water instead of sitting in basin to clean genital area

vi. Use clean towel to dry at all times. Do not share towels

vii. Pat dry, do not rub

viii. Use clean water to wash and bathe

ix. Get your child treated for intestinal parasites

6. Treatment

i. Take your child to the doctor as needed

ii. Take medication as prescribed

7. Presenter and participants reflect on information discussed
i. Verbalization of concerns
ii. Identification of variations in understanding
iii. Reinforcement as needed and requested

C. Identification and distribution of resources (cotton panties, small towel, unscented soaps)

III. Posttest: PATTERN KNOWING and APPRECIATION

a. Distributions of the Power as Knowing Participation in Change Test

b. Information is provided about how to complete the test: Now that you have discussed vaginitis and ways to prevent it, identified and received the resources you need, let’s see how your power profile is now. You are going to complete the same test you completed before we started. Remember that you are going to complete the questionnaire in relation to your capacity to adopt health promotion practices related to vaginitis in your child. If you have any questions about completing the tool, I will be around to answer your questions.

IV. Conclusion

D. Acknowledgement

E. Snacks
Appendix B (la) Demographic Data form English

Demographic Data Form

Before the health patterning modality

This questionnaire has two sections. Questions 1 to 11 pertain to you and questions 12 to 14 to your child.

**Information about you**

Code #_____________________

1. Do you have or are you the primary caregiver of any female child between the ages of 6 to 13? (please check one):
   
   Yes ☐ No ☐

2. Can you read and understand creole?
   
   Yes ☐ No ☐

   If you answer no to any of the above questions you cannot participate in the study

3. How old are you? _____________

4. Gender: (please check one) Female ☐ Male ☐

5. Marital Status (please check one):
   
   Single ☐ Married ☐ Not married but living with partner ☐

   Divorced ☐ Separated ☐ Widow ☐

6. Residence (please check one):
   
   Dèyè Fô ☐ La Savan ☐ Mitan Vil la ☐

   Gabyon ☐ Ti Gabion ☐ Mache Dimanch ☐

   Lilèt ☐ Kat Chemen ☐ Vènè ☐

   Nan Ti kok ☐ Site Militè ☐ Site Oxfam ☐
7. Highest level of education (please check one):

- Less than sixth grade
- sixth grade
- Junior High school
- High school
- Associate degree
- Bachelor’s Degree
- Master’s Degree
- Doctoral Degree
- Other (please write) ____________________________

8. Are you working? (please check one):

- Yes
- No

9. Occupation: (Please write) ____________________________

10. Rate your knowledge about the risk factors and health promotion measures of vaginitis at this time? check a number: 0 = no knowledge, 10 = very knowledgeable

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

11. Is childhood vaginitis a topic you want to know more about? (Please check one)

- Yes
- No

**Information about your female child**

12. How old is/are the female child/children in your care? (Please write)

__________________________

13. Name of your child/children’s School (please check):

- Frère polycarpe
- Les Mains Ouvertes
- Communautaire de Derrière Fort
- Congreganiste Marie Immaculee
14. Have any of the female children in your care been told that she had vaginitis? (please check one):

a. Yes □  No □

b. If yes, how many times you were told that the child you are taking care of had vaginitis? (Please write how many times) ______________
Appendix B (b) Demographic Data form Haitian Creole

**Fòm enfòmasyon Demografik**

**Avan patisipasyon nan modalite a**

Fòm sa a gen de pati kesyon, kesyon ki gen rapò ak ou, epi kesyon ki gen rapò ak pítit ou

**Enfòmasyon pa w**

Code #_________________

1. Èskè w genyen ou byen ap okipe youn ti fi ant laj 6 a 13 zan? (Tanpri cheke yon)
   - Wi □
   - Non □

2. Èskè w ka li epi konprann kreyòl
   Si ou reponn non a yon a kesyon nou sot mande w la a ou pap ka patisipe nan etid la a.

3. Ki laj ou: (tanpri ekri l) ________________

4. Sèks (tanpri cheke yon):  
   - Fi □
   - Gason □

5. Eta sivil (cheke yon):
   - Selibatè □
   - Marye □
   - Plase □
   - Divòse □
   - Separe □
   - Vèv/vèf □

6. Kote w rete (tanpri cheke yon):
   - Dèyè Fò □
   - La Savan □
   - Mitan Vil la □
   - Gabyon □
   - Ti Gabion □
   - Mache Dimanch □
   - Lilèt □
   - Kat Chemen □
   - Vènè □
   - Nan Ti kok □
   - Site Militè □
   - Site Oxfam □
   - De Mapou □
   - Laravinn □
   - Deksy □
   - Jele □
   - Sen Michel □
   - Finka □

Other □ (tanpri ekri l)________________________
7. Pi wo nivo edikasyon ou konplete (tanpri cheke yon):

Mwens ke sètifi a etid primè □
4° Segondè (9°) □
2 zan Invèsite □
Metriz □

Lòt □ (tanpri ekri l) _________________________

8. Eske w ap travay? (Tanpri cheke yon)

Wi □
Non □

9. Okipasyon (ekri l tanpri) ________________________________

10. Mezire konesans ou sou kòz epi mezi pou ou fè prevansyon enfeksyon vajinal nan moman sa a (Tanpri cheke yon nimewo): 0 vle di ou pa gen okenn konesans, 10 ou gen anpil konesans

1 □ 2 □ 3 □ 4 □ 5 □ 6 □ 7 □ 8 □ 9 □ 10 □

11. Èske ou ta renmen gen plis enfòmasyon sou vajinit kay ti moun?

Wi □
Non □

Enfòmasyon sou ti fi w ap okipe a

12. Ki laj ti fi w ap okipe a (yo)? (Tanpri ekri l)

______________________________

13. Non lekòl pitit fi ou a (tanpri cheke yon)

Frère polycarpe □
Communautaire de Derrière Fort □

Les Mains Ouvertes □
Congreganiste Marie Immaculee □
La Ste Famille □
14. Êske yo janm di w youn nan ti moun w ap okipe yo gen enfeksyon vajinal? (Tanpri cheke yon)
   a. Wi □ Non □
   b. Si wi Konbyen fwa yo te di w ti moun ou ap okipe a gen vajinit? (tanpri ekri konbyen fwa) _____________
Appendix B2. Demographic Data Form English posttest

Demographic Data Form

After the health patterning modality

Code # _______________________________

1. Age: ________________

2. Sex:   Female □  Male □

3. Rate your knowledge about the risk factors and prevention measures of vaginitis at this time? circle a number: 0 = no knowledge, 10 = very knowledgeable

1 □      2 □      3 □      4 □      5 □      6 □      7 □      8 □      9 □      10 □

4. Name of your child’s School (please check one):

    Frère polycarpe □       Les Mains Ouvertes □

    Communautaire de Derrière Fort □       Congreganiste Marie Immaculee □

    La Ste Famille □
Appendix B2b Demographic Data form Haitian Creole posttest

Fôm Demografik

Ranpli apre modalite a

Code # ________________________________

1. Ki laj ou: ________________

2. Sèks (cheke yon): Fi □  Gason □

3. Mezire konesans ou sou kòz epi mezi pou fè prevansyon enfeksyon vajinal nan moman sa a (Tanpri cheke yon nimewo): 0 vle di ou pa gen okenn konesans, 10 ou gen anpil

1 □  2 □  3 □  4 □  5 □  6 □  7 □  8 □  9 □  10 □

4. Non lekòl pitit fi ou a (tanpri cheke yon)

Frère polycarpe □  Les Mains Ouvertes □
Communautaire de Derrière Fort □  Congreganiste Marie Immaculée □
La Ste Famille □
ENTWODIKSYON A ZOUTI PKPCT BARRETT LA
Dezyèm Vèsyon
PKPCT fèt pou ede w dekri sans chanjman k ap fèt nan lavi w chak jou. Men Kat (4) endis eksperyans chanjman:

KONESANS
CHWA
LIBÈTE POU AJI AK VOLONTE
ANGAJMAN NAN KREYE CHANJMAN

L ap pran w apeprè 10 minit pou w konplete PKPCT a.

ENSTRIKSYON POU KONPLETE ZOUTI (PKPCT) BARRETT LA
Pou chak endis gen 13 liy. W ap jwenn mo sou de bout chak liy yo. Sans mo yo kontrè youn ak lòt. Gen sèt espas ant pè mo sa yo, e espas yo bay yon barèm pou repons ki posib. Mete yon X sou liy la a, nan espas ki bay pi bon sans endis li an: (KONESANS, CHWA, LIBÈTE POU AJI AK VOLONTE, OUBYEN ANGAJMAN NAN KREYASYON CHANJMAN) genyen pou ou, nan moman sa a.

Pa egzanp:
Anba endis CHWA a, si w konsidere CHWA w yo kòm chwa ki tou pre «chwa ki baze sou enfòmasyon», repons ou ka konse:

baze sou enfòmasyon ______ X ______ ______ ______ ______ ______ Pa baze sou enfòmasyon

Si w dekri CHWA w yo kòm chwa ki tou pre chwa ki «pa baze sou enfòmasyon» ou kapab reponn konse:

baze sou enfòmasyon ______ ______ ______ ______ X ______ pa baze sou enfòmasyon

Si w konsidere CHWA ou yo kòm chwa ki nan mitan “baze sou enfòmasyon” ak “pa baze sou enfòmasyon”, w ap mete yon X nan espas ki nan mitan liy lan. Lè sa a ou kapab reponn konse:

baze sou enfòmasyon ______ ______ ______ X ______ ______ ______ pa baze sou enfòmasyon

SONJE:
- Pa gen repons ki kòrèk, e pa gen repons ki pa kòrèk.
- Chwazi premye lide ki vin nan tèt ou pou chak pè mo yo.
- Ou ka mete yon X nan nenpòt espas sou liy ki bay sans sa ou vle di a pi byen nan moman sa a.
- W ap mete yon sèl “X” pou chak pè mo.
- W ap mete yon “X” pou chak pè mo.

TANPRI KÔMANSE RANPLI ZOUTI (PKPCT) BARRETT LA
(Tanpri TOUNEN PAJ LA pou kontinye)
ZOUTI (PKPCT) BARRETT LA, DEZYÈM VÈSYON

METE YON “X” JAN YO TE EKSPILKE NAN ENSTRIKSYON YO

KONESANS MWEN

<table>
<thead>
<tr>
<th>pwofon</th>
<th>__________</th>
<th>sipèfisyèl</th>
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<tbody>
<tr>
<td>ap evite</td>
<td>__________</td>
<td>ap chèche</td>
</tr>
<tr>
<td>gen valè</td>
<td>__________</td>
<td>pa gen valè</td>
</tr>
<tr>
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<td>__________</td>
<td>avèk entansyon</td>
</tr>
<tr>
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<td>__________</td>
<td>sèten</td>
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<td>__________</td>
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<td>an dezòd</td>
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<td>annòd</td>
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<tr>
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<td>ap ratresi</td>
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<td>pa plezan</td>
</tr>
<tr>
<td>pa baze sou enfòmasyon</td>
<td>__________</td>
<td>baze sou enfòmasyon</td>
</tr>
</tbody>
</table>

lib | __________ | mare |
pa enpòtan | __________ | enpòtan |
pa plezan  | __________ | plezan |

METE YON “X” JAN YO TE EKSPILKE NAN ENSTRIKSYON YO

CHWA MWEN YO

| ap ratresi | __________ | ap elaji |
| ap chèche  | __________ | ap evite |
| sèten      | __________ | timid    |
| enpòtan    | __________ | pa enpòtan |
| annòd      | __________ | an dezòd |
| avèk entansyon | __________ | san entansyon |
| pa plezan  | __________ | plezan   |
| mare       | __________ | lib      |
| pa gen valè| __________ | gen valè |
| ap suiv    | __________ | ap dirije |
| sipèfisyèl | __________ | pwofon   |
| baze sou   | __________ | pa baze sou enfòmasyon |
| enfòmasyon | __________ |          |
| timid      | __________ | sèten    |

(Tanpri TOUÑEN PAJ LA pou kontinye)

### METE YON “X” JAN YO TE EKSPLIKE NAN ENSTRIKSYON YO

**LIBÈTE POU M AJI AK VOLONTE M**

| timid | sèten | pa baze sou enfòmasyon | baze sou enfòmasyon | ap dirije | ap suiv | pwofon | sipèfisyèl | ap elaji | ap ratresi | pa enpòtan | enpòtan | gen valè | pa gen valè | an dezòd | annòd | ap evite | ap chèche | lib | mare | san entansyon | avèk entansyon | plezan | pa plezan | annòd | an dezòd |
|-------|-------|------------------------|---------------------|------------|---------|--------|------------|---------|-----------|-----------|---------|----------|------------|--------|------|---------|-----------|---|--------|-----------|-------|--------|

### METE YON “X” JAN YO TE EKSPLIKE NAN ENSTRIKSYON YO

**ANGAJMAN M NAN KREYE CHANJMAN**

<table>
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<tr>
<th>san entansyon</th>
<th>avèk entansyon</th>
<th>ap elaji</th>
<th>ap ratresi</th>
<th>pwofon</th>
<th>sipèfisyèl</th>
<th>an dezòd</th>
<th>annòd</th>
<th>lib</th>
<th>mare</th>
<th>gen valè</th>
<th>pa gen valè</th>
<th>pa baze sou enfòmasyon</th>
<th>baze sou enfòmasyon</th>
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<th>ap chèche</th>
<th>ap dirije</th>
<th>ap suiv</th>
<th>pa enpòtan</th>
<th>enpòtan</th>
<th>timid</th>
<th>sèten</th>
<th>plezan</th>
<th>pa plezan</th>
<th>sipèfisyèl</th>
</tr>
</thead>
</table>

**MÈSI**

INTRODUCTION TO BARRETT’S PKPCT
Version II

The PKPCT is designed to help you describe the meaning of day-to-day change in your life. Four indicators of experiencing change are:

AWARENESS
CHOICES
FREEDOM TO ACT INTENTIONALLY
INVOLVEMENT IN CREATING CHANGE

It takes about 10 minutes to complete the PKPCT.

INSTRUCTIONS FOR COMPLETING BARRETT’S PKPCT

For each indicator, there are 13 lines. There are words at both ends of each line. The meaning of the words are opposite to each other. There are 7 spaces between each pair of words which provide a range of possible responses. Place an “X” in the space along the line that best describes the meaning of the indicator (AWARNENESS, CHOICES, FREEDOM TO ACT INTENTIONALLY, OR INVOLVEMENT IN CREATING CHANGE) for you at this time.

For example:

Under the indicator CHOICES, if your CHOICES are quite closely described as “informed,” your answer might look like this:

informed ______ X ______ ______ ______ ______ uninformed

If your CHOICES are quite closely described as “uninformed,” your answer might look like this:

informed ______ ______ ______ ______ ______ X ______ uninformed

If your CHOICES are equally “informed” and “uninformed,” place an “X” in the middle space on the line. Your answer might look like this:

informed ______ ______ ______ ______ ______ ______ _____ uninformed

REMEMBER:

• There are no right or wrong answers.
• Record your first impression for each pair of words.
• You can place an “X” in any space along the line that best describes the meaning the indicator has for you at this time.
• Mark only one “X” for each pair of words.
• Mark an “X” for every pair of words.

PLEASE BEGIN TO MARK YOUR X’S ON BARRETT’S PKPCT

(Please go to NEXT PAGE and continue)
BARRETT PKPCT, Version II

MARK AN “X” AS DESCRIBED IN THE INSTRUCTIONS

MY AWARENESS IS

- profound
- avoiding
- valuable
- unintentional
- timid
- leading
- chaotic
- expanding
- pleasant
- uninformed
- free
- unimportant
- unpleasant

- superficial
- seeking
- worthless
- intentional
- assertive
- following
- orderly
- shrinking
- unpleasant
- informed
- constrained
- important
- pleasant

MARK AN “X” AS DESCRIBED IN THE INSTRUCTIONS

MY CHOICES ARE

- shrinking
- seeking
- assertive
- important
- orderly
- intentional
- unpleasant
- constrained
- worthless
- following
- superficial
- informed
- timid

- expanding
- avoiding
- timid
- unimportant
- chaotic
- unintentional
- pleasant
- free
- valuable
- leading
- profound
- uninformed
- assertive

(Please go to NEXT PAGE and continue)
BARRATT PKPCT, Version II, PART 2

MARK AN “X” AS DESCRIBED IN THE INSTRUCTIONS

**MY FREEDOM TO ACT INTENTIONALLY**

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<tr>
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<tr>
<td>pleasant</td>
<td></td>
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</tr>
<tr>
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**MY INVOLVEMENT IN CREATING CHANGE**

<table>
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<tbody>
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<tr>
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<tr>
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<td>unpleasant</td>
</tr>
<tr>
<td>superficial</td>
<td>profound</td>
</tr>
</tbody>
</table>

THANK YOU

© 1984, 1987, 1988, 2007, 2013 by E.A.M. Barrett. All rights reserved. No duplication without written permission of author. Inquiries: Dr. E. A. M. Barrett, 415 East 85th Street, New York, NY 10028
Invitation to participate in a study

Purpose
• To measure your capacity to participate in change

The study involves
• Participation in an education and resource modality that includes education about childhood vaginitis and distribution of resources (panties, towels, soaps)
• Completion of questionnaires about you and your capacity to participate in change before and after participation in the health modality.
• About 3 hours of your time.

What does this mean for you?
• All your information will be kept confidential
• You will complete
  • A consent form
  • And the study questionnaires
• A snack will be served at the end of the study.
• Those who completed the study will receive a tote bag

Participation criteria
• 1) 18 years or older
• 2) a caregiver of a female child who is between 6 and 13 years old and attending the school
• 3) able to read and write Haitian Creole

Contact
Anne Marie Berthe Leveille-Tulce
aleveilletulce@gradcenter.cuny.edu,
917-669-2113
Appendix D2 Flyer Haitian Creole

Envitasyon pou patisipe nan yon etid

Bi
Evalye kapasite w pou w patișipe nan chanjman

Etid la mande

Ki sa sa vle di pou ou?

- Y ap kenbe tout enfomasyon w yo sekrè
- W ap ranpli
  - Yon fòm konsantman
  - Ak kesyonè etid la a

- Patisipasyon w nan yon modalite edikasyon ak resous ki gen ladan l
  - Edikasyon sou vajinit kay ti moun ak
  - distribisyon resous (kilòt koton, ti sevyèt ak savon)

- Ranpli kesyonè k ap mande kesyon sou ou ak sou pìtìt ou a, e sou kapasite w pou patișipe nan chanjman
- Ape prè 3 è nan tan w

Règ patisipasyon

- 1) Gen 18 an ou plis
- 2) Ou se yon moun ki reponsab ti fi ki nan laj 6 al 13 an e ki nan lekòl la a
- 3) ou ka li ak ekri kreyòl

Kontak:
Anne Marie Berthe Leveille-Tulce
aleveilletulce@gradcenter.cuny.edu,
917-669-2113
## Poster English

<table>
<thead>
<tr>
<th>What is Vaginitis?</th>
<th>Symptoms:</th>
<th>Complications</th>
</tr>
</thead>
<tbody>
<tr>
<td>• An inflammation (swelling) or infection of the vagina</td>
<td>• Itching</td>
<td>• In child bearing age (if untreated)</td>
</tr>
<tr>
<td></td>
<td>• Burning</td>
<td>• Premature birth</td>
</tr>
<tr>
<td></td>
<td>• Discharge</td>
<td>• Low birth weight</td>
</tr>
<tr>
<td></td>
<td>• Occasionally pelvic or abdominal pain</td>
<td>• Pelvic inflammatory disease</td>
</tr>
</tbody>
</table>

### Risk factors
- Poor Hygiene
  - Touching genital area with dirty hands
  - Poor wiping techniques
  - Damp underwear
  - Use of unclean water to bathe or shower
- Use of panties other than cotton panties
- Tight clothing
- Intestinal parasite
- Foreign body inside the vaginal canal
- Scented soaps, and perfumes
- Lack of hormone
- Sexual abuse

### Other causes:
- Germs

### Prevention
- Wash Hands before and after toileting
- Pour water on genital area when washing
- Use cotton panty
- Use clean towel
- Clean and wipe genital from front to back
- Use clean water
- Avoid tight clothing
- Keep area dry and clean
- Do not use irritating object
- Have your child treated for intestinal parasites

### What do I need to know?
Let’s share our knowledge
Anne Marie B. Leveille RN, MS, MPH, PhD C
Graduate center
<table>
<thead>
<tr>
<th><strong>ki sa vajinit ye?</strong></th>
<th><strong>Symptoms:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Enflamasyon nan nivo vajen (foufoun) li ka kontajye.</td>
<td>Symptoms:</td>
</tr>
<tr>
<td><strong>Kòz</strong></td>
<td></td>
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<tr>
<td>Mank iyyén ex.</td>
<td></td>
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<tr>
<td>• Manyen foufoun nou ak men sal</td>
<td></td>
</tr>
<tr>
<td>• Sévi ak dlo sal pou benyen epi fè twalèt</td>
<td></td>
</tr>
<tr>
<td>• Lè ou mal siye ou</td>
<td></td>
</tr>
<tr>
<td>• Sou-vètman mouye</td>
<td></td>
</tr>
<tr>
<td>• Sévi ak dlo sal pou benyen ak fè twalèt</td>
<td></td>
</tr>
<tr>
<td>• Sévi ak kilòt ki pa kilòt koton</td>
<td></td>
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<tr>
<td>• Rad sere (pantalon, Kolan)</td>
<td></td>
</tr>
<tr>
<td>• Parazit entestinal (Vè)</td>
<td></td>
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<tr>
<td>• Kò etranje anndan vajen</td>
<td></td>
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<tr>
<td>• Savon santi bon</td>
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<td>• Pafen</td>
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<td>• Mank əmən</td>
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<td>• Abi seksyèl</td>
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<tr>
<td>Lòt Kòz :</td>
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<tr>
<td>• Jèm</td>
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<tr>
<th><strong>Prevansyon</strong></th>
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</thead>
<tbody>
<tr>
<td>• Lave men tout tan anvan, epi apre twalèt deba</td>
</tr>
<tr>
<td>• Vide dlo sou ou pou fé twalèt devan ou</td>
</tr>
<tr>
<td>• Sévi ak kilòt koton</td>
</tr>
<tr>
<td>• Sévi ak sèvyèt pwòp</td>
</tr>
<tr>
<td>• Siye patigeital sot devan al déyè</td>
</tr>
<tr>
<td>• Sévi ak dlo pwòp</td>
</tr>
<tr>
<td>• Pa mete kolan pantalon sere</td>
</tr>
<tr>
<td>• Kenbe zòn vajinal pwòp epi sèk</td>
</tr>
<tr>
<td>• Pa sèvi ak pwodui iritan</td>
</tr>
<tr>
<td>• Trete maladi vè</td>
</tr>
</tbody>
</table>
Appendix F1 Request for permission to recruit English

CITY UNIVERSITY OF NEW YORK
Graduate Center
Department of Nursing
Institution/organization request to invite participants

Date:
Dear ……..

My name is Anne Marie Berthe Leveille-Tulce, I am a Doctor of Philosophy in Nursing (PhD) student at the Graduate Center, City University of New York, I am conducting a study to measure the Power as Knowing Participation in change of Haitian caregivers of female children age 6 to 13 year old before and after participation in an education and resource health modality. I would like to obtain permission to use your institution to distribute flyers, recruit participants and to use your facility to conduct the study.

In order to take part in this study, participants must be
1) 18 years or older
2) a caregiver for a female child age 6 to 13 years old
3) able to read and write Haitian Creole

- All information that is provided by participants will be kept confidential.
- The study involves completing
  - a consent form,
  - a demographic form,
  - the Power as Knowing Participation in Change Tool Version II Haitian Creole translation
- Participation in an education and resource modality that includes education about childhood vaginitis, its risk factors, prevention measures and distribution of resources such as cotton panties, small towels, and soaps.
- Participants will complete the tool before and after participation in the health modality. The whole research activity will last about 3 hours.
- Snacks will be provided

Thank you for your assistance and cooperation

Anne Marie Berthe Leveille-Tulce

Phone: 917-669-2113
Email: aleveillettulce@gradcenter.cuny.edu
Appendix F2 Request for permission to recruit Haitian Creole

CITY UNIVERSITY OF NEW YORK / INVÉSITE VIL NOUYÔK
Graduate Center/Sant Gradyasyon
Department of Nursing

Apèl nan Enstittisyön/Ôganizasyon pou envite patisipan

Dat: 12/4/2015
Sr Rose marie Placide
Ecole Frère polycarpe
Onè pou ou

Non mwen se Anne Marie Berthe Leveille-Tulce, mwen se yon etidyan pou Doktora (PhD) nan syans Enfmyè Sant des Gradye Invēsite Vil Nou Yôk (Graduate Center City University of New York). Mwen ap fè yon rechêch pou meziye Pouvwa se Patisipasyon ak Konèsans nan Chanjman (Power as Knowing Participation in Change) nan mian paran Ayisyen ki gen ti fi 6 al 13 an, avan ak apre patisipasyon yo nan yon modalite edikasyon ak resous sou sante. Mwen ta remmen jwenn pènìsyon pou mwen itilize enstittisyon w lan pou distribibe trak, rekrite patisipan, epi itilize espas local la pou mennen rechêch la.

Pou moun patisipe nan rechêch sa a, li dwè
1. Gen 18 an e plis
2. Se yon moun ki repersab ti fi ki nan laj 6 al 13 an
3. Moun lan ka li ak ekri kreyòl
   • Tout enfomasyon patisipan an bay ap rete sekrè

Rechêch la mande
   • Pou patisipan an raapli:
     o yon fòm konsantman
     o yon fòm enfomasyon demografi
     o zouti Pouvwa Se Patisipasyon ak Konèsans nan Chanjman, Vèsyon Il kreyòl Ayisyen.
   • Patisipasyon nan yon modalite edikasyon ak resous ki gen ladan 1, edikasyon sou Vaginit lakay timoun, enfomasyon sou risk yo, mwayen prevansyon, ak distribisyon resous tankou kilòt koton, ti sèvvyèt, ak savon.
   • Patisipan an yo ap raapli: fòm zouti a avan epi apre patiipasyon yo nan modalite mediKal la.
   Tout aktivite rechêch la ap dire apéprè 3 èd tan.

N ap ba yon i joute

Mèsi pou èd ak kolaborasyon ou
Anne Marie Berthe Leveille-Tulce

Telefòn: 917-669-2113
CITY UNIVERSITY OF NEW YORK / INIVÉSITE VIL NOUYÕK
Graduate Center/Sant Gradyasyon
Department of Nursing

Apèl nan Enstitisyon/Oganizasyon pou envite patisipan

Dat: 12/4/2015
Sr Sr Andre Dubuisson
La Ste Famille

Onè pou ou

Non mwen se Anne Marie Berthe Leveille-Tulce, mwen se yon etidyan pou Doktora (PhD) nan syans Enfimyè Sant des Gradye Inivèsite Vil Nou Yòk (Graduate Center City University of New York). Mwen ap fe yon rechêch pou mezire Pouvwa se Patisipasyon ak Konesans nan Chanjman (Power as Knowing Participation in Change) nan mitan paran Ayisyen ki gen ti fi 6 al 13 an, avan ak aprè patisipasyon yo nan yon modalite edikasyon ak resous sou sante. Mwen ta rennen jwenn pèmisyon pou mwen itilize enstitisyon w lan pou distribiye trak, rekrite patisipan, epi itilize espas local la pou mennen rechêch la.

Pou moun patisipe nan rechêch sa a, li dwe
1. Gen 18 an e plis
2. Se yon moun ki reponsab ti fi ki nan laj 6 al 13 an
3. Moun lan ka li ak ekri kreyòl
   • Tout enfòmasyon patisipan an bay ap rete sekrè

Rechêch la mande
• Pou patisipan an ranpli :
  o yon fòm konsantman
  o yon fòm enfòmasyon demografik
  o zouti Pouvwa Se Patisipasyon ak Konesans nan Chanjman, Vèsyon II kreyòl Ayisyen.
• Patisipasyon nan yon modalite edikasyon ak resous ki gen ladan l, edikasyon sou Vaginit lakay timoun, enfòmasyon sou risk yo, mwayen prevansyon, ak distribiyez resous tankou kilòt koton, ti sèvyèt, ak savon.
• Patisipan an yo ap ranpli fòm zouti a avan epi aprè patisipasyon yo nan modalite mediKai la.
   Tout aktivite rechêch la ap dire apeprè 3 èd tan.

N ap ba yon ti goute

Mesi pou ed ak kolaborasyon ou

Anne Marie Berthe Leveille-Tulce

Telefòn: 917-669-2113
CITY UNIVERSITY OF NEW YORK / INIVÉSITE VIL NOUYÔK
Graduate Center/Sant Gradyasyon
Department of Nursing

Apèl nan Enstitisyen/Oganizasyon pou envite patisipan

Dat: 12/4/2015

Mr Jeanty Jn Venor
Communautaire de Derrière Fort

Onè pou ou

Non mwen se Anne Marie Berthe Leveille-Tulce, mwen se yon etidyen pou Doktora (PhD) nan syans Enfinyè Sant des Gradye Inivèsite Vil Nou Yo (Graduate Center City University of New York).
Mwen ap fè yon recherch pou meziye Pouvwa se Patisipasyon ak Konesans nan Chanjman (Power as Knowing Participation in Change) nan mitan paran Ayisyen ki gen ti fi 6 al 13 an, avan ak apre patisipasyon yo nan yon modalite edikasyon ak resous sou sante. Mwen ta renmen jwenn pëmisyon pou mwen ilize enstitisyon w lan pou distribiye trak, rekrite patisipan, epi ilize espas local la pou mennen recherch la.

Pou moun patisipe nan recherch sa a, li dwe,

1. Gen 18 an e plis
2. Se yon moun ki reponsab ti fi ki nan laj 6 al 13 an
3. Moun lan ka li ak ekri kreyòl
   • Tout enfòmasyon patisipan an bay ap rete sekrè

Rechòch la mande

• Pou patisipan an ranpli :
  o yon fòm konsantman
  o yon fòm enfòmasyon demografik
  o zouti Pouvwa Se Patisipasyon ak Konesans nan Chanjman, Vèsyon II kreyòl Ayisyen.
• Patisipasyon nan yon modalite edikasyon ak resous ki gen ladan li, edikasyon sou Vaginlit lakay timoun, enfòmasyon sou risk yo, mwayen prevansyon, ak distribisyon resous tankou kilòt koton, ti sèvyèt, ak savon.
• Patisipan an yo ap ranpli fòm zouti a avan epi apre patisipasyon yo nan modalite mediKal la. Tout aktivite recherch la ap dire apareprè 3 èd tan.

N ap ba yon ti goute

Mèsi pou ed ak kolaborasyon ou

Anne Marie Berthe Leveille-Tulce

Telefon: 917-669-2113
CITY UNIVERSITY OF NEW YORK / INVÉSITE VIL NOUYÔK
Graduate Center/Sant Gradysyon
Department of Nursing

Apèl nan Enstitisyen/Òganizasyon pou envite patisipan

Dat: 12/4/2015

Sr Germaine Americain
Ecole Congreganiste Marie Immaculee

Onè ou

Non mwen se Anne Marie Berthe Leveille-Tulce, mwen se yon etidyen pou Doktora (PhD) nan syans Enfimyè Sant des Gradye Invèsite Vil Nou Yòk (Graduate Center City University of New York). Mwen ap fè yon rechèch pou mezire Pouvwwa se Patisipasyon ak Konesans nan Chanjman (Power as Knowing Participation in Change) nan mitan paran Ayisyen ki gen ti fi 6 al 13 an, avan ak apre patisipasyon yo nan yon modalite edikasyon ak resous sou sante. Mwen ta renmen jwenn pèmisyon pou mwen itilize enstitisyen w lan pou distribiye trak, rekrite patisipan, epi itilize espas local la pou mennen rechèch la.

Pou moun patisipan nan rechèch sa a, li dwe
1. Gen 18 an e plis
2. Se yon moun ki reponsab ti fi ki nan laj 6 al 13 an
3. Moun la ki li ak ekri kreyòl
   - Tout enfòmasyon patisipan an bay ap rete sektrè

Rechèch la mande
   - Pou patisipan an ranpli :
     o yon fòm konsantman
     o yon fòm enfòmasyon demografik
     o zouti Pouvwwa Se Patisipasyen ak Konesans nan Chanjman, Vèsyon Li kreyòl Ayisyen.
   - Patisipasyon nan yon modalite edikasyon ak resous ki gen ladan l, edikasyon sou Vagiinit lakay timoun, enfòmasyon sou risk yo, mwayen prevansyon, ak distribisyon resous tankou kilòt koton, ti sèvyèt, ak savon.
   - Patisipan an yo ap ranpli fòm zouti a avan epi apre patisipasyon yo nan modalite mediKal la. Tout aktivite rechèch la ap dire apeprè 3 èd tan.

N ap ba yon ti goute

Mèsi pou èd ak kolaborasyon ou

Anne Marie Berthe Leveille-Tulce

Telefòn: 917-669-2113
CITY UNIVERSITY OF NEW YORK / INVÉSITE VIL NOUYÔK
Graduate Center/Sant Gradasyon
Department of Nursing

Apél nan Enstitisyon/Òganizasyon pou envite patisipan

Dat: 12/4/2015
Sr Violette Sévère
Ecole Les Mains Ouvertes

Onè pou ou
Non mwen se Anne Marie Berthe Leveille-Tulce, mwen se yon etidyen pou Doktora (PhD) nan syans Emfinyès Sant des Gradye Invésite Vil Nou Yôk (Graduate Center City University of New York). Mwen ap fè yon rechêch pou meziye Pourwa se Patisipasyon ak Konesans nan Chanjman (Power as Knowing Participation in Change) nan mitan paran Ayisyen ki gen ti fi 6 al 13 an, avan ak apre patisipasyon yo nan yon modalite edikasyon ak resous sou saunte. Mwen ta renmen jwenn pèmisyon pou mwen itilize enstitisyon w lan pou distribiye trak, rekrite patisipan, epi itilize espas local la pou mwenen rechêch la.

Pou moun patisipe nan rechêch sa a, li dwe
1. Gen 18 an e plis
2. Se yon moun ki reponsab ti fi ki nan laj 6 al 13 an
3. Moun lan ka li ak ekri kreyòl
   • Tout enfòmasyon patisipan an bay ap rete sekrè

Rechêch la mande
- Pou patisipan an ranpli :
  o yon fòm konsaantman
  o yon fòm enfòmasyon demografik
  o zouti Pourwa Se Patisipasyon ak Konesans nan Chanjman, Vèsyon II kreyòl Ayisyen.
- Patisipasyon nan yon modalite edikasyon ak resous ki gen ladan l, edikasyon sou Vaginit lakay timoun, enfòmasyon sou risk yo, mwayen prevansyon, ak distribiysyon resous tankou kiltòt koton, ti sévèt, ak savon.
- Patisipan an yo ap ranpli fòm zouti a avan epi apre patisipasyon yo nan modalite mediKal la. Tout aktivite rechêch la ap dire aperyè 3 éd tan.

N ap ba yon ti goute
Mèsi pou nd ak kolaborasyon ou

Anne Marie Berthe Leveille-Tulce

Telefòn: 917-669-2113
Appendix G
Request for permission to recruit English

Permission letter

English Version

Date: 10/01/16

Name of school: Claire Revertere

Name of School Director: S. Violette Bevere

To the IRB Committee at Lehman College,

This is to confirm that I grant Anne Marie Berthe Leveille-Tulce, a Doctor of Philosophy in Nursing (PhD) student at the Graduate Center, City University of New York, permission to

• distribute flyers
• recruit participants in my school and
• use a room in my institution to conduct the study.

I was informed that she will be conducting a study to appraise caregivers of female children of 6 to 12 years old Power as Knowing Participation in Change before and after participation in an education and resource modality and that snacks will be provided at the end of the session.

Sincerely yours,

Name: S. Violette Bevere

Signature
Permission letter

English Version

Date: 10/12/15

Name of school: Communauté de Dernière Fort

Name of School Director: Jean Venor Deaity

To the IRB Committee at Lehman College,

This is to confirm that I grant Anne Marie Berthe Leveille-Tulce, a Doctor of Philosophy in Nursing (PhD) student at the Graduate Center, City University of New York, permission to

- distribute flyers
- recruit participants in my school and
- use a room in my institution to conduct the study

I was informed that she will be conducting a study to appraise caregivers of female children of 6 to 13 years old Power as Knowing Participation in Change before and after participation in an education and resource modality and that snacks will be provided at the end of the session.

Sincerely yours,

Name: Jean Venor Deaity

Signature: [Stamp]
Permission letter
English Version

Date: 12-13-15

Name of school: Congregations Nationale Marie Terrenoire

Name of School Director: Sr. Sermannie

To the IRB Committee at Lehman College,

This is to confirm that I grant Anne Marie Berthe Leveille-Tulce, a Doctor of Philosophy in Nursing (PhD) student at the Graduate Center, City University of New York, permission to
  • distribute flyers
  • recruit participants in my school and
  • use a room in my institution to conduct the study

I was informed that she will be conducting a study to appraise caregivers of female children of 6 to 13 years old Power as Knowing Participation in Change before and after participation in an education and resource modality and that snacks will be provided at the end of the session.

Sincerely yours,

Name: Anne Marie

Signature: Sr. Sermannie
Permission letter
English Version

Date: 11/12/15

Name of school: Frère Polycopé

Name of School Director: Sœur Marie Pleade

To the IRB Committee at Lehman College,

This is to confirm that I grant Anne Marie Berthe Leveille-Tulce, a Doctor of Philosophy in Nursing (PhD) student at the Graduate Center, City University of New York, permission to
• distribute flyers
• recruit participants in my school and
• use a room in my institution to conduct the study.

I was informed that she will be conducting a study to appraise caregivers of female children of 6 to 13 years old Power as Knowing Participation in Change before and after participation in an education and resource modality and that snacks will be provided at the end of the session.

Sincerely yours,

Name: Sœur Marie Pleade

Signature:
Permission letter

English Version

Date:

Name of school: Sainte Famille

Name of School Director: Sœur Rose Madeleine Pobedion

To the IRB Committee at Lehman College,

This is to confirm that I grant Anne Marie Berthe Leveille-Tulce, a Doctor of Philosophy in Nursing (PhD) student at the Graduate Center, City University of New York, permission to

- distribute flyers
- recruit participants in my school and
- use a room in my institution to conduct the study

I was informed that she will be conducting a study to appraise caregivers of female children of 6 to 13 years old Power as Knowing Participation in Change before and after participation in an education and resource modality and that snacks will be provided at the end of the session.

Sincerely yours,

Name: Sainte Famille

Signature: Sainte Famille
Lèt pemişyon
Vesyon Kreyòl Ayisyen

Dat: 12/01/16
Non Lekol la:  M. Marie Berthe Laveille-Tulce
Non Directe Lekol la: B. Violette Sévaré

Pou Komisè IRB nan Lehman College,

Nan sa a se pou sètifye, mwen ba Anne Marie Berthe Laveille-Tulce, yon etidyan pou dokòra (PhD) nan syans enfirye nan Sunt des Gradyc (Graduate Center), Invêsic Lavil Nou Yòk (City University of New York). pemişyon pou li:
- distribiye depliyon nan lèkol mwen an
- rekrite patisipan nan lèkol mwen an epί
- ilizie yon sal nan enstitisyon m lan pou li fè rechech la

Mwen te aprann li tap vin fè yon rechech pou evalyè kapavite pou patisipe nan chanjman paran responsab timoun o al 13 an, avan epi apre patisipasyon yo nan yon edukasyon ak zeved modalite. Epi y ap bay yon ti goute nan fen aktivite a.

Ak tout respe

Nom: D. Violetta Sévaré

Siyat: [Signature]
Lèt pèmisyon
Vesyon Kreyòl Ayisyen

Dat: 10/12/16

Non Lekòl la: Communaute de Dernière Part

Non Direktè Lekòl la: Jean Venor Jeanly

Pou Komite IRB nan Lehman College,

Nòt sa a se pou sòtifye, mwen ba Anne Marie Berthe Leveille-Tulce, yon etidyan pou doktora (PhD) nan syans enfimyè nan Sant des Gradye (Graduate Center), Inivèsite Lavil Nou Yòk (City University of New York), pèmisyon pou li

- distribiye depliyan nan lekòl mwen an
- rekrite patisipan nan lekòl mwen an epi
- itilize yon sal nan enstitesyon m lan pou li fè rechèch la

Mwen te aprann li t ap vin fè yon rechèch pou evalye kapasite pou patisipe nan chanjman paran/Responsab timoun 6 al 13 an, avan epi apre patisipasyon yo nan yon edikasyon ak resous modalite. Epi y ap bay yon ti goute nan fen aktivite a.

Ak tout respè

Non: Jean Venor Jeanly

Siyati:
Lèt pèmisyon
Vèsyon Kreyòl Ayisyen

Dat:

Non Lekòl la: Sainte Famille

Non Direktè Lekòl la: Rose Hauche Pubتكون

Pou Komite IRB nan Lehman College,

Nòt sa a se pou sètifye, mwen ba Anne Marie Berthe Beveille-Tulce, yon etidyen pou dokto (PhD) nan syans enfînye nan Sant des Gradye (Graduate Center), Invèsite Lavil Nou Yòk (City University of New York), pèmisyon pou li

- distribiye depliyan nan lekòl mwen an
- rekrīte patisipan nan lekòl mwen an epi
- itilize yon sal nan anstitiesyon m lòt pou li fè rechôch la

Mwen te aprann li t ap vin fè yon rechôch pou evalye kapasite pou patispe nan chanjman param/responsabl timoun 6 al 13 an, avan epi apre patisipasyon yo nan yen edikasyon ak resous modalite. Epi y ap bay yon ti goute nan fen aktivite a.

Ak tout respè

Nom: [Signature]

Siyat: [Signature]
Lèt pèmisyon

Vèsyon Kreyòl Ayisyen

Dat: 11/12/15

Non Lekòl la: École Frère Polycarpe

Non Direktè Lekòl la: Jean Rose Marie Plaude

Pou Komite IRB nan Lehman College,

Nòt sa a se pou sètifye, mwen ba Anne Marie Berthé Leveille-Tulce, yon etidyan pou doktora (PhD) nan syans enminyè nan Sant des Gradye (Graduate Center), Invèsite Lavil Nou Yòk (City University of New York), pèmisyon pou li

- distribiye depilyan nan lekòl mwen an
- rekrite patisipan nan lekòl mwen an epi
- itilize yon sal nan enstitisyon m lan pou li fè rechèch la

Mwen te aprann li t ap vin fè yon rechèch pou evalye kapasite pou patisipe nan chanjman paran/responsab timoun 6 al 13 an, avan epi apre patisipasyon yo nan yon edikasyon ak resous modalite. Epi y ap bay yon ti goute nan fen aktivite a.

Ak tout respè

Non: Jean Rose Marie Plaude

Siyati: Plaude
Lèt pèmisyen
Vèsyon Kreyòl Ayisyen

Dat:

Non Lekòl la: Konsagrasyon Nacional Nwè Tonantikè

Non Direkòl Lekòl la: Se Hòmèn Joue

Pou Komité IRB nan Lehman College,

Nôt sa a se pou sètifye, mwen ba Anne Marie Berthe Leveille-Tulce, yon etidyen pou doktora (PhD) nan syans erfimyè nan Sant des Grajye (Graduate Center), Invêsitite Lavil Nou Yôk (City University of New York), pèmisyon pou li:
- distribiye depliyon nan lekòl mwen an
- rekrize patisipan nan lekòl mwen an epi
- itilize yon sal nan enstiisiyon m lan pou li fe rechè a

Mwen te aprann li t ap vin fe yon rechè a pou evalje kapasite pou patispe nan chanjman paran/responsab timoun 6 al 13 an, avan epi apre patisipasyon yo nan yon edikasyon ak resous modalite. Epi y ap bay yon ti goute nan fen aktivite a.

Ak tout respè

Non: Pòmisimèn

Siyan: Be Sènèmèn
References


doi:10.1177/089431849801100105


http://www.merckmanuals.com/pro


College of Nursing at the College of Dentistry New York University, New York, NY.


