Understanding Psychological Well-being and the Home Environment: A
Qualitative Exploration

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Dedication

First I must thank God for guiding me through this journey. Life happened along the way, but you always were there every step. This thesis is dedicated to my husband who allowed graciously took over at home while I pursued my passion. None of this would be possible without your love and support and I am eternally grateful for such a wonderful partner in life. To my sons Allen, Micah and Nykholas (Nikko) who were inspiration for me continuing my education at this level. When days were hard your smiling faces and humor brightened my spirit. I love you!!! To my parents Joyce and James Brown, I did it! And it wouldn't have been possible without both of you having me and my family's back. Anything we needed we knew we could count on you, usually without asking. Your love, advice, and encouragement now and always means the world to me. I love and miss you! Lastly I would like to dedicate this thesis to my Aunt Cathy who unfortunately never knew how much of an inspiration she was to me. Since I was a child I admired the kindness, hospitality, success, leadership, and love she showed everyone she encountered, especially her family. Her dedication as an educator and willingness to help others was an extraordinary example for others to emulate. We miss and love you.

Abstract

This study seeks to understand how the physical home environment affects psychological well-being for stay-at-home mothers. By asking What does well-being in the home mean? Are there physical characteristics or features in the home environment that increase well-being? Are there physical characteristics or features in the home environment that decrease well-being? Face-to-face interviews, observation, and photo elicitation were used to collect data. The sample consisted of 14 stay-at-home mothers who had one or more children from birth to five years of age. Kreitzer's (2012) well-being model was used as a conceptual framework that informed questions and directed analysis. Findings showed that space, access to nature, personalization, and privacy/retreat were important for well-being in the mothers' homes, while clutter and lack of cleanliness detracted from well-being.

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Chapter 1. Introduction

The Issue

The field of interior design is in a unique position to make contributions to improving the human condition in the interiors where people live their lives. As a result, interior designers are charged with the responsibility of keeping people's health, safety, and well-being at the center of all decisions (American Society of Interior Designers (ASID), 2013). They are capable of designing the built environment in ways that can hinder or enhance people's quality of life.

Researchers in this field have begun to focus on well-being in the specialized area of healthcare design (Cama, 2009; Rashid and Zimring, 2008), and its effect on people's health. From Ulrich's (1984) seminal study on the positive effects of nature on recovering surgery patients to workplace environments (Kweon, Ulrich, Walker, and Tassinary, 2008) and schools (Klatte, Hellbruck, Seidel, and Leistner, 2010), well-being has been found to be influenced by people's positive and negative feelings towards life. These feelings can bring about happiness and wellness or stress and illness (Guerin and Martin, 2010). Although several types of commercial interior environments have been studied, little research has been done to investigate people's feelings about their physical home environments to understand how home environments relate to well-being.

Ulrich (1991) and Evans and McCoy (1998) call these feelings positive and negative distractions. Positive distractions can bring about a sense of well-being, and negative distractions bring about unwanted stress. In one of the few studies that investigates well-being and the home environment, Wells (2005) studied how low-

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income mothers' quality of life and well-being were affected by their positive and negative feelings toward their homes. Results found that in relation to the interior of their homes, many mothers who had positive feelings had more space in their homes, personalized their spaces, and had more privacy. This indicates there may be a relationship between well-being and the physical home environment, but little is known. There is a need to study well-being in the home to determine if the physical environment of the home affects people's positive and negative feelings and, therefore, their well-being.

Purpose

The purpose of this study is to explore what psychological well-being means when related to the home environment and identify factors that promote well-being in this environment for stay-at-home-mothers. Outcomes of this study will aid interior designers and architects to design homes that support people's well-being, will aid health practitioners to understand potential stressors in the physical home environment, and affect housing policy to impact planning and building practices of homes for those who reside in affordable housing.

This is an important issue because Americans spend 65 percent of their time in their homes and 90 percent of their time indoors (Environmental Health Center, 1998). In children's developmental years, most of their time is spent in their homes as it is the first substantial introduction to the built environment. Here, in these "first places," children's characters are developed, learning how to interact with others takes place, and the most critical phases of physical and mental development happen (Israel, 2003; Miller and

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Maxwell, 2003). Inadvertently, people's homes shape them, and people shape societies. It is important then, for the home to provide a physical setting that enhances social and psychological well-being so families can make quality contributions to society.

Well-being is defined as the state of being happy, healthy, or prosperous: welfare (Merriam-Webster, 2013). The concept of well-being is difficult to quantify (Becker et al., 2010; Kopec, 2012), but there are factors such as stress and satisfaction that are predictors of well-being (Deiner, 2009 Dilani, 2001; Guerin and Martin, 2010; Ulrich, 1991). Many researchers suggest that well-being is not just the absence of illness, but moving beyond a neutral position of health to flourishing (Becker et al., 2010; New Economics Foundation, 2010; Seligman, 2012).

Stay-at-home mothers are a particularly unique and important population and will be the focus of this study because they spend most of their time in their homes with their children. Further, they may have social or economic characteristics that require them to stay at home (Saad, 2012). For example, many mothers stay home because the expense of daycare is greater than their potential income if employed. Out of 45,000 women studied in a Gallup survey (Saad, 2012), 14 percent were stay-at-home mothers. In the United States, over the last 40 years, stay-at-home mothers continue to be less educated than working mothers, and the highest populations are of Hispanic origin (US Census Bureau 2009a; 2009b; 2009c). Many of these mothers did not choose to stay at home, but due to economic constraints, it was a necessary decision (Mendes, Saad, and McGeeney, 2012). Considering the cost of childcare and mothers' salaries, it was more cost effective to remain unemployed or not return to their previous jobs after having children. This group

spends the majority of their days and nights in their homes, which makes them a good population to investigate how the home environment affects them.

In addition, raising children adds a level of stress that impacts social support, feelings of isolation, and control in the home (Currie, 2009; Murphy and Cloutier-Fisher, 2002; Rubin and Wooten, 2007). Stress is a factor that has been determined to hinder well-being (Evans and McCoy, 1998; Ulrich, 1991). Mendes et al. (2012) found that stay-at-home mothers have a higher likelihood of being stressed and depressed than employed mothers and women with no children. Coping with ongoing stress can ultimately lead to illness and disease such as high blood pressure, heart disease, and depression (Buettner, 2010; Sternberg, 2009; Woo, Tang, Suen, Leung, and Wong, 2009). Infants and children are also affected, as there is a link between debilitating depression in mothers and their interactions with their children, creating higher occurrences of developmental delays in children (Manuel, Martinson, Bledsoe-Mansori, and Bellamy, 2012). Due to the influence the physical environment has on people's emotional health, well-being factors such as stress may be able to be reduced by design factors in the interior environment especially the home environment.

These well-being implications support the need to identify any physical environment factors in the home that can reduce stress, increase control, or improve quality of life in any way. The design of space may indirectly and directly impact individual well-being on a micro level and, therefore, public health on a macro level (Frumkin, 2005; Jackson, 2003).

Research Questions

Based on the purpose of this study, which is to explore what psychological well-being means when related to the home environment and identify factors that promote well-being in this environment for stay-at-home-mothers, the following research questions were developed.

Research Questions

1. What does well-being in the home mean to stay-at-home mothers?

2. Are there physical features in the home environment that increase a sense of well-being?

3. Are there physical features in the home environment that decrease a sense of well-being?

Philosophical Assumptions

The main assumption for this study is that nature will be a contributor to achieving well-being in the home. In addition, most mothers will not understand initially that nature does play a big role, and if so, the magnitude it plays. In my own experiences, I have longed to be at the beach near the water, sand, and sun when stressed, finding that I am at the most peace when in nature. My interest in this area came about using abductive reasoning, coming to the conclusion that people are innately drawn to nature by observing others and their reactions to it along with positive statements about their experiences in it. I've also noticed that when my children were infants, they were drawn to light. I wondered where this came from, as they were not old enough to have prior

knowledge or experiences. Research also has supported that humans are innately drawn to nature, which has been found in environmental psychology, landscape architecture (Hartig and Marcus Cooper, 2006), and now design literature (Cummings, 2012).

It was very difficult to move past the effect of nature on well-being when constructing this study because I am so interested in this topic. I wanted to initially ask directly about the influence of nature in this study, which became an obstacle to a qualitative study that allows participants to share *their* experiences and respond accordingly. In addition, the literature that directed my study and my questions include these conclusions:

1. The built environment has a great effect on human emotions and behaviors; therefore the home environment may hinder or support psychological well-being.
2. Stay-at-home mothers feel isolated in their homes and therefore have a need to find coping mechanisms to deal with this isolation.
3. Many stay-at-home mothers feel a loss of identity and need ways to relieve stress.
4. Clutter and lack of space hinders a feeling of well-being. If these elements were resolved, a better sense of well-being would be achieved.

Role of Researcher

I can never remember a time when I have not been aware of how I feel when walking into a space. Even as a young child, I remember the feeling of overwhelming heaviness in my school building. At that time I did not know what it was, but despite the wonderful teachers and my friends being there, I still always felt a sense of sadness while in that

space. After becoming an adult and thinking back on that experience, I realized the building virtually had no windows and the lack thereof did not permit natural light to come through.

I also have had the experience of being a stay-at-home mother with my sons. I found that time to be one of joy in being able to watch my children grow and develop as well as being able to not only teach them, but was also able to be taught by them. On the other hand, I experienced great loss of my own identity as I no longer had a formal place of work and began to be isolated within my home as I concentrated on my children. This became a source of stress. To cope, I sought out programs like Early Childhood Family Education and leaned on my mother for social support. I began to be aware of the role my home environment played on my psychological well-being, and that how it influenced me emotionally may influence how I interacted with my children. During this time, I lived in an apartment with opposing views; one of the river, which gave me peace; and one of an old coal stack, which brought me contempt. Contemplating the dichotomy of these scenes made me think of the relaxation or stress they each conjured in me. I began to ask questions about how other mothers feel who spend so much of their time in their homes.

Significance

There exists a gap in the interior design body of knowledge about well-being in residential environments. This study will seek to deepen the understanding of this relationship and identify physical factors that contribute to well-being in the home. Outcomes can be used by interior designers, health-care providers, mothers, architects,

social workers, and builders as a support for well-being and restoration of well-being in this population. Housing policy is also a major issue that seeks to be addressed through this study. Responses and experiences can directly be applied to housing policy in creating supportive homes for optimal well-being in multi-family residences and single-family homes.

Operational Definitions

Built Environment

The built environment refers to those aspects of the environment that interior designers, urban planners, architects, and urban geographers design and construct. The built environment includes, but is not limited to, the physical form of specific dwellings, interiors, developments, streets, and cities. The *Collins English Dictionary* (2013) defines the built environment as: "buildings and all other things that have been constructed by human beings" (n.p.).

Home Environment

The home environment is the domestic environment, which relates to the running of a home and all the familial activities that take place inside of it (Miller and Maxwell, 2003)

Well-being

Well-being is "a state of being in balance or alignment (body, mind and spirit); being content, connected to purpose, in harmony, happy, prosperous and safe," (CSPH, 2012, p. 707).

Stay-At-Home Mothers

Mothers who are out of the labor force for at least a year (50 or more weeks) with their own children in the household ages birth to five years (Kreider and Elliot, 2010).

<u>Motherhood</u>

Motherhood is explained by understanding the roles that mothers play (i.e., self, mother, partner, friend, employee) and the themes that come from being part of those experiences which include, but are not limited to, childcare, household care and maintenance, and family care.

Chapter 2. Literature Review

This chapter gives an overview of the literature connected to well-being and the built environment highlighting the role interior designers play in connecting the two. It is important to look at psychological and physiological responses to space, the concept of well-being, and the literature surrounding its relationship to the built environment. Lastly, as this study seeks to understand the home environment from the lens of stay-at-home mothers, a review of literature will be conducted on residential spaces, housing, and motherhood. Understanding the built environment and its impact on human behavior is important to understand, so the review will begin there.

The Built Environment and Human Behavior Connection

Many people believe that interior designers focus on picking colors and choosing furniture. To the contrary, the interior designer has knowledge in many areas (Guerin and Martin, 2010). One of their responsibilities is to ensure the occupant's health, safety, and welfare or well-being. To be able to fulfill this role, it is important for interior designers to understand the connection people have to built environments and the role their profession plays in improving the human condition or quality of life. This connection is mediated by psychological and physiological responses. The following section will discuss these areas more deeply and their importance in human-centered design focusing on neurological responses to the environment.

Brain Connection and Orientation. Having an understanding of human physiology

allows interior designers to better understand the people for whom they design and

therefore, the space they are designing. Knowing that the brain is the control center of the

body (Kopec, 2009; Nedley, 2001; Sternberg, 2009) and creating spaces based on this

evidence, interior designers can improve users' well-being and provide a good quality of

life (Kopec, 2012).

Researchers have found that there are places in the brain that are dedicated to

recognizing buildings or scenes, spatiality, and wayfinding (Edelstein et al., 2008; Kopec,

2012; Sternberg, 2009). A study by Edelstein et al. (2008) measured how people move

through space using visual cues. Researchers used observation and EEGs, among other

instruments, to measure brain activity of individuals who were placed in virtual reality

caves with renderings of architectural environments. One group was in an ambiguous

virtual environment with no visual cues, and another group was in an unambiguous

setting that had many visual cues such as texture, landmarks, interior finishes, color, and

architecture features. Participants in the ambiguous setting were observed as having

trouble orientating themselves to the space. After failing to find clear cues, they began

looking for indistinct ones, such as shadows or patterns. Supporting their hypothesis, the

researchers found there were stronger levels of brain activity in the participants that were

in the unambiguous spaces (Edelstein et al., 2008). Similarly, Sternberg (2009) found:

Patients who have had strokes in this [parphippocampal part of the brain] area often get

lost because they can no longer recognize buildings as landmarks, even though they can

identify other objects. In order to make up for their deficit, they navigate by using smaller

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features of the environment, such as doorknobs or benches. In brain-imaging studies of normal people, this small area displays an increase in nerve cell activity and blood flow when a person is shown a picture of a building, but remains unaltered when the person views a face or a car. (p. 30)

It seems that when individuals are better able to orient themselves, they are less stressed and have a stronger sense of well-being. Their sense of place can affect not only mood, but also health (Sternberg, 2009; Israel, 2003). This is important in home applications when interior designers are designing residential spaces. For example, aspects such as wayfinding cues prevent unambiguous spaces and may help to decrease stress for individuals.

Neurological Responses That Affect Well-being. Well-being is greatly affected by the presence of stress or lack thereof (Evans and McCoy, 1998; Ulrich, 1991). The limbic system in the brain regulates stress levels and controls fight or flight responses. As this area of the brain is triggered, it releases more serotonin, which is a hormone found in all people that helps to focus and prepare our bodies for shock, pain, and fatigue. Serotonin also regulates mood. Low levels of this chemical can increase the onset of depression. Along with serotonin, other neurochemicals can positively or negatively affect one's well-being (Kopec, 2012; Sternberg, 2009).

Ions and melatonin are other neurochemicals that balance the human system. Too many positively charged ions can cause depression, and too many negatively charged ions cause anxiety. When physical spaces do not have the proper air circulation, it can

cause an imbalance of ions (Kopec, 2012). Melatonin is chemically created automatically in people's bodies and affects their circadian rhythms. At certain times of the night, melatonin levels rise making one tired. When sleep is avoided or it is not dark enough, melatonin is not produced resulting in sleepiness and or even depression (Kopec, 2012). Knowledge of these specific chemicals is important for women, especially mothers. Chemical imbalances and sleep deprivation run very high in pregnant or recently pregnant women who have chances of developing post-partum depression as a result. A study by Brandon et al. (2002) states that infants in the ICU exposed to light on a diurnal cycle mimicking our circadian rhythms experienced physical and behavioral benefits including increased weight gain. The knowledge of what causes these biological imbalances can begin to aid interior designers in designing solutions that control or simulate natural light cycles could increase health and well-being.

The Concept of Well-being

An individual's well-being plays an important part in their quality of life. Well-being has been studied dating back to antiquity (Kiefer, 2008; Kirsten et al., 2009), where a holistic view of the person was considered in relation to health and well-being. As western society evolved, the person was looked at as a whole of parts, which emphasizes the need to focus on well-being (Payne, 2009; Kirsten et al., 2009). However, as stress and issues such as obesity are starting to come to the forefront (Kopec, 2009), the importance of well-being is fast becoming an area our society is starting to acknowledge as individuals look for a way to find balance.

Kiefer (2008) defines well-being as an individual's physical, mental, social, and environmental status. Each aspect interacts with the other, each having differing levels of importance and impact according to the individual. This definition is accepted by many researchers, and several have included spirituality as part of this definition (Becker et al., 2009; Chuengsatiansup, 2003; Daaleman, Cobb, and Frey, 2001; Kirsten et al., 2009; Kreitzer, 2012). According to Kirsten et al. (2009) "an eco-systemic perspective reflects a view of the environment as a total ecological context and not as a social [and biological] context only. It also includes a metaphysical context consisting of a whole range of symbolic environments such as philosophy, ideology, religion, and culture" (p. 4).

Why is well-being so important? Because if our collective societies have a good sense of well-being, our societies as a whole do well. As Clifton (2013) states "g domestic product follows g national well-being, leaders need to understand what well-being tells us, the impact it has on citizens, and most importantly, how to increase it" (n.p.). As one looks further into the literature, different frameworks outline the scientific study of well-being.

Positive Psychology. Seligman and Csikszentmihalyi (2000) is the founder of positive psychology and developed a theoretical framework derived from the premise of well-being. He posits that in recent history, health has been looked at from an illness perspective. This pathogenic framework is based on the assumption that if one is free from illness and disease, they are healthy. Positive psychology goes beyond the point of not being ill, to claiming that well-being should be the goal moving beyond the neutral

point of health. This is illustrated in Figure 1, where a continuum of well-being gives one the ability to score from -10 to +10. A -10 rates a person in the disease model (neurosis, anger, anxiety, depression); a +10 rates a person in the health model (well-being, satisfaction, joy, and excitement). Neutral lies at 0 signifying that absence of disease is neutral. Positive psychology is comprised of six virtues including wisdom and knowledge, courage, humanity, justice, temperance, and transcendence. Twenty-four character strengths make up each virtue (Seligman, Park, Peterson, 2005). Seligman et al.'s positive psychology was greatly influenced by Ryff's (1989) seminal study on the meaning of psychological well-being. Another precursor to the positive psychology framework is salutogenics.

-10	0	+10
Disease Model	**Neutral**	**Health Model**
Focus on weakness		Focus on strengths
Overcoming deficiencies		Building competencies
Avoid pain		Seeking pleasure
Running from unhappiness		Pursuing Happiness
Neutral state (0) as ceiling		No ceiling
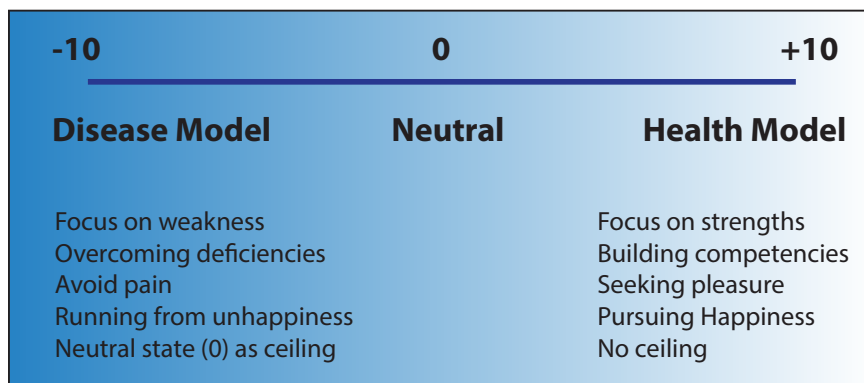
Figure 1. Positive Psychology Model (Greenville-Cleave, 2010)

Salutogenics. Salutogenics was introduced by Antonovsky (1979) in the late 1970s and emerged as a study of health development. Instead of looking at health from a negative viewpoint as pathogenics does, it looks at health from a positive one. Salutogenic's goal is not to just maintain low risk factors of health, but to promote optimal health. This salutogenic theory proposes that the goal of health research should be to identify, define, and describe pathways, factors, and causes of positive health to

supplement our knowledge about how to prevent, treat, and manage negative health (Antonovsky, 1979).

Antononvsky began to develop this theory during a study he was conducting on women who survived the holocaust. He found that some women had had negative experiences, yet they still were able to do astonishingly well in life (Lindstrom and Erickson, 2006). His focus turned to lifestyles that made up what he called the sense of coherence (SOC). A person's SOC is determined by how they react in times of stress operationalized by specific factors. Meaningfulness provides motivation to cope. Comprehensibility suggests challenges are understood. Manageability is a belief that resources to cope are available (Antonovsky, 1996). Strengthening the SOC will significantly contribute to well-being. In essence, Antonovsky places importance on individuals having experiences in their lives that allow them to handle whatever situation they are confronted with, which can strengthen their sense of coherence. Having a strong sense of coherence enables people to deal with stressors better. Antonovsky (1993) created two scales (SOC-29 and SOC-13) that measure one's SOC using the categories of global orientation to oneself and one's environment; stressors; health, illness, and well-being; and attitudes and behavior.

Antonovsky stated that SOC is but one way to frame salutogenics, and there should be other approaches to this theory. Becker et al. (2009) took this theory and expounded on it creating the Salutogenic Wellness Promotion Scale. He also believes that health lies on a continuum going from pathogenics at one end to salutogenics at the opposite, ultimately achieving optimal health and well-being. Becker's model (see Figure 2)

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measures both sides of the continuum looking at pathogenic outcomes as negative and salutogenic outcomes as positive. The dimensions in his model encompass: physical, social, emotional, spiritual, intellectual, vocational, and environmental health. A key component in this theory is optimization, working toward "the most favorable conditions and factors" (Becker et al., 2009).
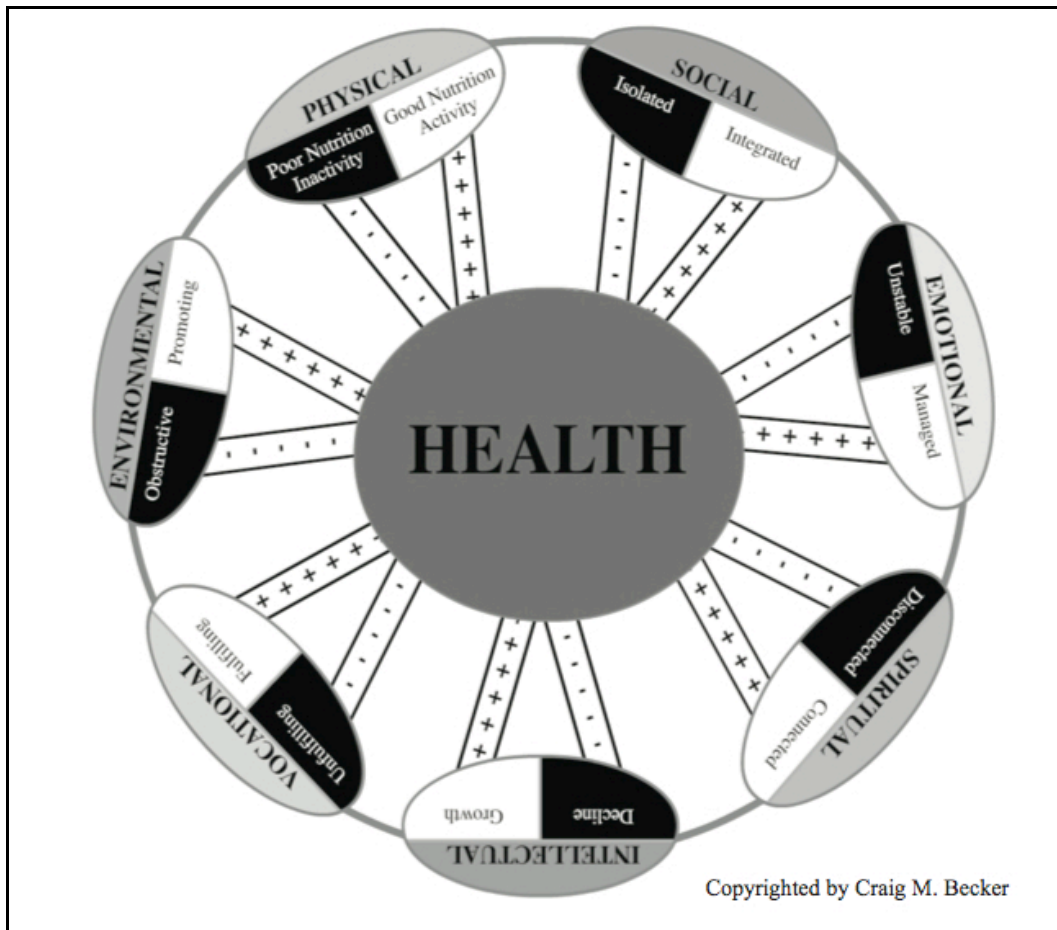
Figure 2. Holistic Ecological Assessment of Lifestyles for Total Health Model (Becker et al 2009)

Well-being and Whole Systems Healing. The University of Minnesota's Center for Spirituality and Healing (CSPH) defines well-being as "a state of being in balance or alignment (body, mind and spirit). It is also described as being content, connected to purpose, in harmony, happy, prosperous and safe," (Kreitzer 2012, p. 707). Using these definitions and supporting literature, Kreitzer (2012) of CSPH has developed a model of well-being (see Figure 3), which includes the dimensions of health (physical, emotional, mental, and spiritual), relationships (social connections, networks, and the quality of relationships), security (basic human needs, stable employment, sufficient finances, and personal safety), purpose (an aim and direction, a direct expression of spirituality that gives life and work meaning), community (resources and infrastructure and the extent to which people are engaged and empowered), and the environment (access to nature as well as clean air, water, and toxin free).

Figure 3. Whole Systems Healing Well-being Model (Kreitzer, 2012)

According to Kreitzer (2013), for an individual or organization to truly adopt a shift to well-being, there needs to be a strategy to do so. This strategy to stimulate change is whole systems healing that "is a way of addressing problems and cultivating the health and wellbeing of individuals, organizations, communities, and the environment by living and acting with awareness of the wholeness and the interconnectedness of all living systems" (p. 3). Whole systems healing is comprised of complexity science (all living systems are complex and are constantly adapting and evolving), social networks (structures made of individuals [or organizations] that are connected or inter-related), social change (a process where values, and attitudes become modified), and gentle action (the efforts and collective intelligence to focus many small, coordinated efforts on the best point of leverage with a given systems change).

None of these models include the physical or built environment as a contributor to well-being. This calls for more research in the area as it relates to the built environment. For example in healthcare design, Ulrich (1991) discusses the effects of interior design on wellness from a theoretical perspective. He states that supportive design can help to reduce stress and bring about well-being by creating spaces that give users a sense of control, access to social support, and access to positive distractions. Dilani (2000) also looks at [psychosocially] supportive design as a theory and framework from a salutogenics lens. He refers to Atonovsky's sense of coherence in that its basic function of psychosocially supportive design is to start a mental process that, by attracting a person's attention, may eliminate, or at least reduce, anxiety, bringing about positive psychological changes. Design from a salutogenetic perspective defines the causes of

stress and wellness factors that strengthen health processes. Psychosocially supportive design should challenge our mind to create pleasure, stimulation, creativity, satisfaction, enjoyment, and admiration (p. 16).

Interior designers have included the idea of improving the quality of life or well-being for their clients. However, they do not articulate this goal well (Guerin and Kwon, 2010), perhaps because they do not have the research findings in literature that support this idea. Therefore, well-being factors in the home must be identified to understand them, design for them, and potentially eliminate negative influences on them. Identifying these factors defined by individuals who frequently use this space may begin to provide information to design spaces that support pleasure, stimulation, creativity, satisfaction, enjoyment, and admiration as outlined in psychosocially supportive design. Guerin and Kwon (2010) discuss the need for well-being to be clearly defined in the interior design body of knowledge. They state "we might argue human well-being is the basis of the value interior designers provide to occupants in the spaces in which they live their lives" (p. 112).

Well-being and the Designed Environment

There are studies that acknowledge the built environment as playing a role in people's well-being. As the topic is health related, the majority of these studies come out of the healthcare design field as a way to create supportive design. An optimal healing environment (OHE) is defined as "One in which the social, psychologic, spiritual, physical, and behavioral components of healthcare are oriented toward support and

stimulation of healing and the achievement of wholeness" (Horowitz, 2008, p. 300). This definition comes from the nursing field in which complimentary techniques are used for patients to tap into their body's own ability to heal. Ananth (2008) explains that Dr. Jonas, President of the Samueli Institute, developed the concept of OHEs with the overall focus on people, process, and place targeting the healthcare field. As shown in Figure 4, the OHE model ranges from the inner environment to the outer environment with components that include healing intention, personal wholeness, healing relationships, healthy lifestyles, collaborative medicine, healing organizations, and healing spaces. Under each component, there is an outcome identified that consists of enhancing awareness, integration, caring, health habits, medical care, process and structure, and sensory input. The model then identifies techniques to achieve each component. Under "building healing spaces" these include nature, color, light, artwork, architecture, aroma, and music. But little has been done to identify the extent of nature, which colors, or type of artwork contribute in positive ways.

Figure 1. Optimal Healing Environment Model (Anath, 2008)

Dilani's (2000) salutogenic model suggests occupants' sense of coherence of the built environment can support their well-being. Using this theory in design practice will support occupants mentally and socially. Similar to Evans' (2003) environmental characteristics that affect mental health, Dilani (2001) identified several design qualities that could be used as wellness factors. These include:

- access to nature, access to pets, appropriate art

- quality lighting

- use of culture, appealing aesthetics, harmonious and cheerful color, spatial composition and articulation, provision of inviting spaces for social support, interaction and neighborhoods

- familiarity by creating landmarks and references to buildings

- sounds of music and nature.

Dilani calls for more empirical research to be done to test the theory and develop the well-being factors.

Golembiewski (2010) uses salutogenics to frame design for psychiatric care, and Wister (2005) applies this approach to long-term care facilities for the elderly. These researchers use salutogenics in healthcare design. This application is a natural one as both healthcare design and salutogenics come from a health background. Other researchers have used similar approaches in supportive design that promote well-being and reduce stress.

Ulrich (1991) suggests that alleviating stress is imperative to creating spaces that heal and bring about well-being. "By focusing on the concept of stress, a theory of supportive design can be developed that conceptualizes human impacts of design in ways that are related directly to scientifically credible indicators of interpretations of wellness" (p. 99). Ulrich states that to create supportive spaces, there must be several components in place. For example, a sense of control over the environment has been found to reduce stress levels in humans. In the built environment, this could translate to control over noise, access to restorative spaces, and temperature control. Social support is important as people who have strong social support systems tend to have higher levels of well-being and experience less stress. Space planning and furniture arrangements can mediate social interaction and support in a space. Hall's (1969) seminal work on proxemics that studied social interaction according to proximity demonstrates that based on specific distances or

"zones" people interact differently. Relating to work environments, Brand (2009) states "furniture can support and encourage social interaction if its arrangement removes any barriers between and among people, e.g., a circle of chairs would be preferable to lines of desks" (p. 2).

Positive distractions are attributed to elements in the built environment "that hold attention and interest without taxing or stressing the individual, and therefore may block or reduce worrisome thoughts" (p. 102). Ulrich discusses nature as being one of the most effective positive distractions in reducing stress. This statement is supported by his seminal research (1984) where he conducted a longitudinal study that took place over a span of nine years. Twenty-three participants were given views of nature outside their post-op recovery rooms while a control group of 23 patients were given views of a brick wall. Results showed that the 23 participants with views of nature had shorter stays after surgery, had more positive feedback on nurses' notes, and took less analgesic medicines than the 'brick wall' group. Nurses' notes from the patients without views of nature included negative comments such as "upset and crying" and "needs more encouragement" verses positive feedback with statements of "in good spirits" and "moving well" from those with views of nature.

Evans and McCoy (1998) incorporate many of the same concepts in their study of the role of health in architecture. They take the stance that, like Ulrich (1991), a key factor in promoting positive affect in people in relation to the built environment is to reduce stress. They believe that stimulation, coherence, affordances, control, and restorative aspects of the environment have an effect on reducing or promoting stress.

Under each category, they identified factors that influence each one (see Table 1). The

authors are careful to state that there needs to be more research testing these categories.

Stimulation	Coherence	Affordances	Control	Restorative
Complexity	Legibility	Ambiguity	Crowding	Minimal distraction
Mystery	Organization	Sudden perceptual changes	Boundaries	Stimulus
Novelty	Thematic Structure	Perceptual cue	Climatic and light Controls	Shelter
Noise	Predictability	Conflict	Spatial hierarchy	Fascination
Intensity	Landmark	Feedback	Territoriality	Solitude
Light	Signage		Symbolism	
Color	Pathway		Flexibility	
Crowding	Configuration		Responsiveness	
Visual Exposure	Distinctiveness		Privacy	
Proximity to Circulation Adjacencies	Floor plan Complexity		Depth	
	Circulation		Interconnectedness	
	Alignment		Functional distances	
	Exterior vistas		Focal point	
			Sociofugal furniture Arrangement	

Table 1. Interior Design Elements that may Influence Stress (Evans and McCoy, 1998)

In response to the need to study the effects of the interior environment and human well-being, (along with health and safety), Guerin and Martin (2010) authored the *Interior Design Profession's Body of Knowledge As Related to Health, Safety, and Welfare*. As related to interior design practice, they define well-being as "interior designers create interior environments that support people's physical, psychological, social, and spiritual well-being; and assist with or contribute to their financial or economic management, success, and responsibility" (p. 111). Guerin and Kwon (2010) state that well-being is illusive to measure because it is intrinsic, "however, we are making progress in measuring some outcomes of well-being such as employee productivity, workplace performance, and employee satisfaction. Other outcomes are more difficult to measure and relate to the designed environment such as comfort, identity, or stress," (p. 112). Guerin and Kwon have identified terms that are outcomes of well-being and are part of the profession's body of knowledge. They include adaptation, coherence, cultural identity, identify, personal space, stress, arousal, comfort, harmony, meaning, sense of security, territory, beauty/aesthetics, crowding, hierarchy, performance, stimulation, and wayfinding. For example wayfinding has been found as a factor used to orientate people within a building resulting in less stress (Fischer, Tarquinio, and Vischer, 2004; Sternberg, 2009); and personalization is a way to mark territory, which has a relationship to well-being (Wells, 2000). These outcomes have been studied in workplace environments, institutions, and healthcare, but they are also applicable to residential environments. "Residential space can be designed to facilitate family interaction, which is a critical component to healthy family functioning and

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children's psychological growth and emotional well-being" (Guerin and Kwon, 2010, p. 115).

Biophilic Design. Much of the literature that discuses well-being and the built environment identifies nature as a key factor. For that reason, this subject deserves its own discussion, as nature has been shown to decrease stress and promote restoration and well-being to those who are exposed to it. Wilson (1984) defines biophilia as the human's innate love of nature. He goes on to state that affinity towards nature is because the first homes were in nature, specifically the African savannah, which is why humans are most calm when experiencing or viewing similar scenes. Nature has been found in many environmental and design studies as a key factor in promoting healing (Heerwagen, 2009; Kaplan, 2001; Marcus Cooper, 2000; Ulrich, 1984; 1991). Many times these environments reference nature or biophilia and include "components of biomimicry, biodiversity, biochemistry, and fractals, and is defined as a love of the living world and seeks to explain our love of nature through our natural evolution" (Huelat, 2008, p. 1). Kellert (2008) discusses a shift to restorative environmental design that lowers impact on the environment and has a connection to nature. This indicates that sustainable and biophilic design work together as Kellert states "without positive benefits and associated attachment to buildings and places, people rarely exercise responsibility or stewardship to keep them in existence over the long run" (p. 5). Biophilic design is a conduit to creating connections to the built environment while bringing about psychological and physiological well-being and also increases people's sense of responsibility to the

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environment via their increased connection to it.

Residential Environments. *"The home often appears in psychotherapy as a natural part of the client or patient's narrative" (Mest, 2008, p. 53).*

Biophilic design and well-being have been incorporated into many areas within interior design, but residential environments have not been studied in this way. Miller and Maxwell (2003) call for homes to be designed conducive to social interaction among family members. They state "the easier and more convenient it is for parents to complete household chores such as cooking, laundry, cleaning, and paying bills, the less stress they will feel and the more they will be open to interaction with other family members while accomplishing these tasks" (p. 51). Miller and Maxwell believe that certain criteria should be in place to provide a home that supports social interaction including:

- the home should accommodate specific activities families like to take part in;
- the home should be flexible to accommodate multiple activities in the same area;
- the design of the home should facilitate household tasks; and
- the home should be comfortable, attractive, and inviting to encourage time spent there.

The study testing this hypothesis consisted of 24 families who were asked to document their activities two times a week on a weekly log and then were interviewed. They were also given cards that contained design attributes they rated from 1 to 5 in order of importance. The cards consisted of 15 attributes of design including room size, access to the room, shape, location within the house, furniture/appliances accommodated by the

space, seating, function of the space, divisions within the space, adjacencies, visual access, circulation, flooring, dominant texture, lighting, and acoustic issues. After the cards were sorted, the participants were asked why they chose them and a floor plan was made from them. Results showed that "over 75% of the parents wanted the [living] space to be the largest room in the house, be able to accommodate two or more activities, have access to the outdoors, have more than one grouping of seating, have comfortable sociopetal seating, have wood finishes, and have ample natural light" (p. 59-60). They also preferred open spaces with some visual privacy and built-in storage.

Another study explored low-income women in urban areas and their feelings toward living in poor quality homes. In the study, Wells (2005) surveyed 30 women in their existing homes and then five months after they moved into new housing provided by Habitat for Humanity. Results found that in relation to the interior of their homes, many felt better about having more space, began personalizing their space, and had more privacy. Although it was not an intended variable, Wells found that their internal and external sense of coherence was stronger after moving into improved quality housing, and showed a 27% increase in their self-confidence.

Housing and its Effects on Occupants. The home's physical environment has been shown to affect users. Satisfaction is one of the key variables in the housing adjustment theory (Morris and Winter, 1975) that is derived from six housing characteristics and how they impact the household. This theory (see Figure 5) comes from a sociology view point and says that the ultimate goal is to achieve well-being in

regards to housing. The housing adjustment theory suggests that householders make decisions on their housing based on deficits (positive or negative) dictated by household and cultural norms (values). Satisfaction is derived from six housing characteristics (quality, space, structure, tenure, neighborhood, and expenditure) and how they impact the household. Intention and ultimately behavior is determined by deficits. Behaviors are options householders have once a deficit is identified. Behaviors include adjustment, householders make a physical change to their housing; adaptation, householders change their way of thinking about a deficit, i.e., decrease priority or change a value; social action; and pathology.
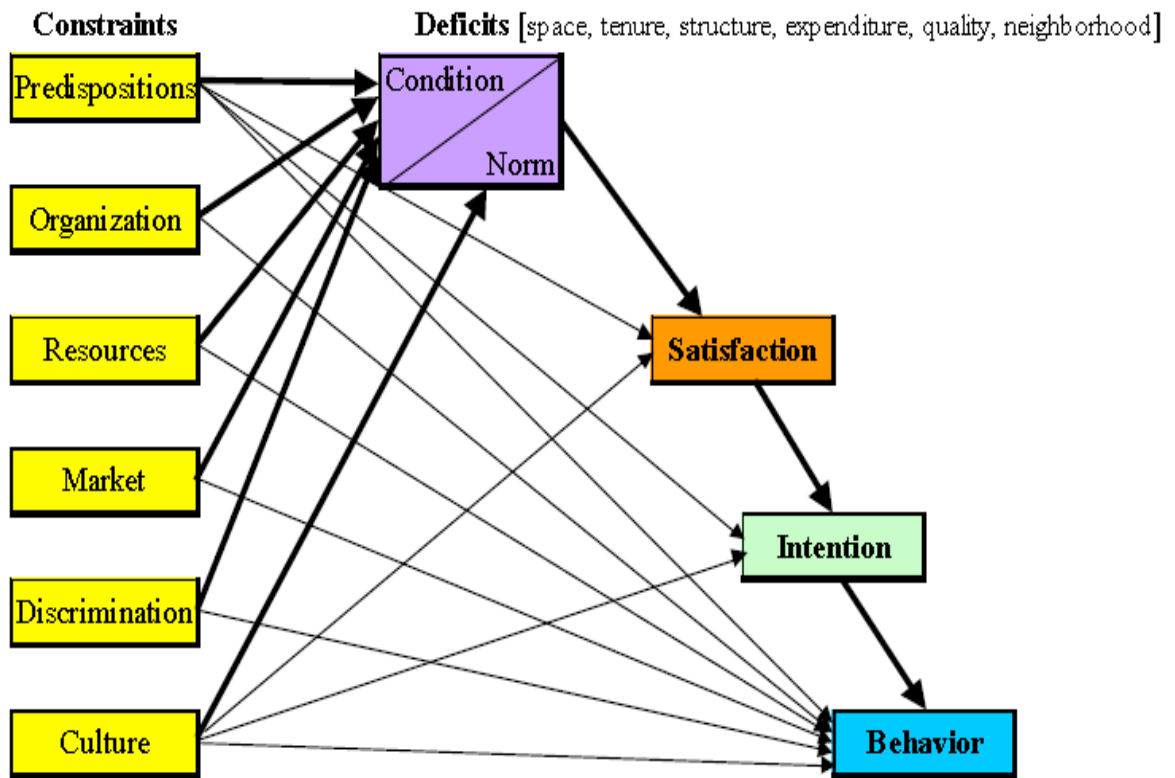
Figure 2. Housing Adjustment Model (Morris and Winter, 1975)

Satisfaction is important because it determines intention (what a household intends to do based on their living circumstances), which then determines behavior of the household. Bruin and Cook (1997) conducted a study of single, low-income, female-headed households (n=82) using the housing adjustment theory as a framework to test housing and neighborhood satisfaction. The participants all received public housing assistance and were mailed questionnaires through the public housing authority in rural Iowa. Results showed the key variables that influence housing satisfaction were having a predisposition that is operationalized as not planning for the future; inadequate housing and self-efficacy; and household organization constraints, which predict the ability for occupants to adapt to their housing situation. Participants who were not satisfied with their homes made the decision to either move or alter their homes until they were satisfied, which supports the housing adjustment theory.

Turning to studies conducted on housing quality, Evans et al. (2000) conducted a study on the effects of mental health on housing quality. The researchers measured cleanliness/clutter, indoor climate conditions, privacy, hazards, and structural and neighborhood quality as variables to test for "psychological distress in non-clinical populations." The population studied was a cross-section of rural women (n=207) and urban women (n=31) with at least one child in the home; they had low- to middle-incomes. The researchers used scheduled questionnaires, observation, and pre- and post-occupancy evaluations to collect data. Findings showed that in both populations, the built environment was a factor related to psychological distress. The urban subjects showed the women had higher levels of satisfaction after they moved into better quality housing.

These studies show that in many cases there is a relationship between income and quality levels thus impacting residential satisfaction.

Another study on housing satisfaction was conducted by Amole (2009). This research measured residential satisfaction levels in university student housing by testing the impact of objective variables (space configuration; number of persons; and presence of kitchenette, balcony, and reading room) and subjective variables (comfort, furnishings, space, privacy, and sanitary conditions). Using a self-report questionnaire administered to university students in Nigeria (n=1124), results showed that subjective variables were a better predictor of residential satisfaction than objective variables. Satisfaction was found to be most critical in the bedroom, which was operationalized by social and place qualities that includes studying, privacy, sleeping, entertaining friends, security of property, number of persons in the bedroom, living in the bedroom, and ventilation. Bedroom satisfaction was so significant that it predicted the overall satisfaction of the student housing. Amole does note that many of the functions that are included as factors of bedroom satisfaction usually take place in other rooms if this was a house setting. Harris (1996) studied the effects of privacy on place attachment in family student housing. Questionnaires were distributed to students (n=602) residing in family student housing at the University of Utah. Of those students, 167 successfully completed the survey. Participants answered questions based on family functioning and sense of control in the apartment, their level of attachment to the apartment, and their level of satisfaction. The results found that privacy plays a significant part in place attachment mediated by family functioning and sense of control in the home. Harris states: "When privacy

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regulation is easy, family functioning and a sense of control (i.e., functions of privacy) are enhanced. Family functioning and a sense of control may be viewed as needs that, if met in the home, will relate to greater levels of place attachment" (p. 297). Attachment questions included home experience items, rootedness items, and identity items. Identity items asked about decoration as personal expression and reminders of friends/family, apartment style, personal possessions, and work in the apartment. Implications for this study show that:

> …it could be beneficial for housing managers and designers to know personalization can play an important role in attachment…given that place attachment has been linked to both psychological well-being and physical health, policy and design that encourages place attachment may be beneficial to residents. (p. 297-298)

Motherhood

The Role of Mothers. All-about-motherhood.com (2012) has an exhaustive list of a mother's role including teacher, nurse, care taker, cook, entertainment officer, cleaner, exercise coach, counselor, career advisor, wardrobe lady, relationship advisor, health and safety officer, play leader, and motivational coach. In the United States, there is an idea of "intense mothering" (Arendell, 2000; Medina and Magnuson, 2009) that is emotionally absorbing, labor intensive, and self-sacrificing. Despite their many roles, mothers do not get much social support (Arendell, 2000).

This study focuses on mothers who stay at home, and work no more than 10 hours

per week inside or outside of the home, with the exception of students who may have assistantships or work study. Therefore, literature related to this population was reviewed.

The Face of Stay-at-Home Mothers in the United States. According to the U.S. Census Population Survey (2010a; 2010b), the largest category (23%) of married stay-at-home mothers were between the ages of 35-39 years, whereas (19%) of unmarried or divorced stay-at-home mothers were between the ages of 25-29 years. Of these women, 31% of unmarried or divorced stay-at-home-mothers have children who are under age 6, and 24% of married stay-at-home mothers have children in the same age range. According to the U. S. Census Bureau (2009c), 72% of households that rent are in the $10,000 and under income bracket. Conversely, the majority of households in the $100,000 and over income bracket own their homes.

Though there seems to be a distinct dichotomy in the 5th and 95th percentiles of stay-at-home mothers, it is difficult to find literature about this higher income group. Rather, much of the literature focuses on the lower income mothers who have fewer resources and seemingly face more constraints. This group's composition is typically single, female householders who are women of color with incomes considerably less than their male counterparts (Bruin and Cook, 1997; Klebanov et al, 1994; Evans et al, 2000). When income was controlled for, lack of control of circumstances and events, no or low social support networks, and the ability to get away (retreat) were seen as predictors for maternal depression or lack of coping mechanisms that enhance well-being (Glavin, Smith, Sorum, and Ellefsen, 2010; Rubin and Wooten, 2007).

Depression and Motherhood. Maternal depression, also known as perinatal depression, is a term used to describe a spectrum of depressive symptoms that include anxiety, baby blues, postpartum depression, and postpartum psychosis (New York State, 2013). Maternal depression is an illness that mothers have been suffering in silence for decades. Many mothers have been ashamed to come forth about their condition for various reasons (Zauderer, 2009). Recently, there has been more focus on the issue as headlines of mothers and alcohol addiction and extreme, harmful psychotic acts have been in the media (ABC, 2010; *People*, 2010). Depression in general can lead to a variety of emotional and physical problems. The World Health Organization (2001) states depression in women ages 15 to 44 is one of the most disabling diseases in the world. According to the National Alliance for Mental Illness (2010), 80% of all mothers have "baby blues."

The US Department of Human Services Administration for Children and Families (2010) conducted a longitudinal study (n=3001) on maternal and paternal health of parents with children enrolled in Head Start (a low-income, pre-k educational program). Findings revealed that 52% of mothers with children enrolled have a form of depressive symptom. Not related to this study, but on a national level, women are committing suicide due to maternal depression. According to Lindahl, Pearson, and Colpe (2005), 20% of mothers who are diagnosed with postpartum depression commit suicide. The seriousness of this illness is massive, but unfortunately these statistics are probably much higher as many cases of maternal depression are not reported (Beck, 2002; Orr and James, 1984; Weissman et al., 2004)

As previously mentioned, factors in the home's physical environment are related to people's quality of life, satisfaction, and feelings of stress. Therefore, women experiencing maternal depression may develop or suffer further symptoms due to their home environments. These symptoms may be exaggerated in stay-at-home mothers who spend much of their time at home, feeling isolated both physically and socially (Glavin, Smith, Sorum, and Ellefsen, 2010; Rubin and Wooten, 2007). As a result, studies on maternal health have called for more exploration on the impact of the home environment on the physical and mental health of mothers.

Motherhood and Stress: The Case for Well-being. Motherhood is a complex role. Though all mothers are different, there are some similarities across cultures and socioeconomics. Arendell (2000) states that "mothering is particularly significant because it is the main vehicle through which people first form their identities and learn their place in society" (p. 1192). In North America, when mothering or motherhood is mentioned, it conjures up thoughts of intense mothering that is child centered, highly emotional, and time consuming (Hays, 1996). In many cases, mothers feel great joy raising their children, but it can be stressful bringing about feelings of anxiety and depression. Many mothers lose sleep, have less time for themselves, and feel overwhelmed by the responsibilities they are expected to perform (Arendell, 2000). They cope by "emphasizing efficiency and organization, planning ahead, and cognitively restructuring their attitudes and assessments" (p.1199). All of these factors are contributors to a mother's stress. Therefore, it is important to look at ways stress can be reduced

specifically in the home where mothers spend significant amounts of their time and many of the stressors are exacerbated..

As many mothers feel physically and socially isolated in their homes (Glavin, Smith, Sorum, and Ellefsen, 2010; Rubin and Wooten, 2007) and are not able to make changes due to resource constraints, pathology or depression can become an issue. Klebanov et al. (1994) conducted a study on how neighborhoods and low-incomes affect mothers and their mental health. The study used sampling from an existing Infant Health and Development Program (IHDP) data set from eight medical centers around the United States. The IHDP data included detailed information on the home environment, family structure, economic conditions, maternal characteristics, and demographic information. Variables for this study were: neighborhood conditions, maternal parenting behavior, and maternal psychological characteristics. The General Health Questionnaire (GHQ) was used and included issues such as depression, somatization, and anxiety. Social support was measured by using six vignettes from Cohen and Lazarus (date). Descriptive statistics were used to analyze the data, which showed that more Latino and Black mothers live in low-income neighborhoods, have less education, and are typically in single-parent households. Findings showed that of the three ethnicities and races studied (White, Black, and Latino), White mothers were found to be more likely to be depressed than Blacks or Latinos. In addition, low-income households showed a stronger relationship to having worse physical environments in the home and less warmth between mother and child. Analysis also found that higher income, smaller household size, more education, and being a race other than Black were associated with a better physical

environment (p. 449). This study shows the home does play an important part in maternal health, therefore it may be an aspect to support healing and well-being.

To identify mothers with depression and therefore be able to treat them, screenings at pediatric visits are becoming more common. Orr and James (1984) conducted one such study in which they measured the effects of mother's children's age, maternal employment, maternal marital status, maternal race, reason for visit, maternal education, mother's living arrangements, and insurance (independent variables) on depression scores (dependent variable). The instrument used was the Center for Epidemiologic Studies Depression (CES-D) self-reporting scale along with a demographics questionnaire. Two hundred and forty six women at an inner-city pediatric clinic were selected by choosing mothers who came for appointments with their children during the mornings of one week and the afternoons of the next week. Eighty-six percent of the participants were Black and almost half of them were on government issued insurance. The mean age of the participants was 26, and they had an average of two children. Results showed that 35 percent of the participants' scores revealed depression. The overall results showed that Black single mothers have a greater risk of being depressed. Since these mothers are depressed, it is more likely that the illness will affect the well-being of their children. This particular study may not be generalizable to all mothers with depression as the sample was skewed since 86% of the participants in this study were Black and from a specific city.

Research has frequently shown that mothers with maternal depression are faced with lack of social support, loss of a sense of control, and lack of privacy or time to get

away (Habarth et al., 2012; Rueben and Wooten, 2007; Sayil et al., 2007). However, there are women who experience a sense of well-being as mothers, though there are few studies that explore this topic. Exploring what well-being means to mothers who have positive outlooks can help us understand what contributes to this state, and how their environment plays a role. Mothers with a good sense of well-being state that as coping methods they receive support from friends and family, reach out to support groups, and find time to get away (Rubin and Wooten, 2007). These practices allow mothers to regain a sense of control and opportunities to de-stress.

This literature review discussed what well-being is; how it relates to the home environment and human physical and psychological conditions; and the positive influences it can have on stay-at-home-mothers. By providing spaces that enhance a stay-at-home-mother's well-being, conditions such as prolonged stress, anxiety, and maternal depression may be deterred. The following chapter will explain this study's methodologies in exploring the lived experiences of stay-at-home mothers in an effort to identify well-being factors that support mothers in their home's physical environment.

Chapter 3: Methods

Introduction

The purpose of this study is to explore what psychological well-being means when related to the home environment and identify factors that promote well-being in this environment for stay-at-home-mothers. To explore this question, 14 stay-at-home mothers were interviewed to identify features in their home environment that contribute to or hinder their well-being. They were the population being investigated because they spend a great amount of time in their home environments, therefore, able to identify physical environment factors that are related to well-being. The research questions were:

1. What does well-being in the home mean to stay-at-home mothers?

2. Are there physical features in the home environment that increase a sense of well-being?

3. Are there physical features in the home environment that decrease a sense of well-being?

To investigate these questions, stay-at-home mothers were interviewed regarding positive and negative features in their homes that may serve as physical environment factors that contribute to well-being. Questions were also asked about how well-being is expressed in their home using Keritzer's (2012) well-being factors of relationships, environment, purpose, security, and health. Community as a factor was not asked because of the private home setting. Instead, control was substituted for community as the literature (Ulrich, 1991) stated having control in the built environment was a factor of well-being. Additionally, participants were asked to photograph areas in their home that

gave them positive and negative feelings that were used to support their responses. This chapter explains the process used to conduct this study and goes into detail about the selected approach and research design, sample characteristics, sample selection, data collection, analysis approach, trustworthiness, and limitations exclusive to this study.

Research Approach

This qualitative study seeks to understand what well-being means to people based on an investigation of the home's interior environment. Therefore, it was important to seek responses from individuals who spend a large portion of time in their homes. Using a phenomenological approach, the sample studied were 14 stay-at-home mothers with children from the ages of birth to 5 years. A snow-ball sampling method was used after soliciting participants from elementary school parents, a stay-at-home mothers social organization, university family student housing, and acquaintances of professors in the interior design department at the University of Minnesota.

Multiple methods of data collection were used, which enhanced validity in the study. Mothers were interviewed in their homes, and observations of the condition of the home, participant's interaction with family in the home mediated by space, and how comfortable participant's felt in their homes were documented by the researcher. Responses to interview questions were recorded on a digital recorder. After being read a definition and statement about well-being, a series of questions were asked. Following these responses, photo elicitation was used to document the subjects' favorite and least favorite places in their homes, after which they were asked about the salience of these

spaces.

Rationale for Research Approach. As this study, the lived experiences of mothers in their homes gave insight to what positively and negatively affects their well-being in these spaces. A qualitative phenomenological study is best suited for this type of research. According to Creswell (2007), "A phenomenological study describes the meaning for several individuals of their lived experiences of a concept or a phenomenon" (p. 57).

Qualitative Research Design. A qualitative research design allows researchers to collect rich data by conducting studies in natural settings, use multiple data collection methods, and does not isolate variables as all aspects of the phenomena affect the other (Bloomberg and Volpe, 2008; Creswell, 2007). Unlike quantitative research that seeks to resolve a hypothesis and quantify variables using deductive reasoning, qualitative research seeks to understand human experiences in their lived environments holistically (Lichtman, 2006). It is important to note that researchers are the instruments in qualitative studies. Their analysis and interpretation of the data are central tools in measuring their findings. Lichtman (2006) states, "all information is filtered through the researcher's eyes and ears and is influenced by his or her experience, knowledge, skill, and background" (p. 16). There are many ways to conduct qualitative research. The type of questions researchers ask and how they frame their questions will determine which research approach should be used. In phenomenological studies, researchers set out to

explore and explain a lived experience or event by shared individuals.

Phenomenology. The goal of phenomenological research is to interpret the essence of the phenomena being studied, which includes a summary of what was being experienced and how it was being experienced (Creswell, 2007). This research design is often used in sociology, psychology, health sciences, and education studies (Creswell, 2007).

There are two types of phenomenology that are widely used, hermeneutical phenomenology (vanManen, 1990), and transcendental or psychological phenomenology (Moustakas, 1994). The major differences are that hermeneutical phenomenology has a greater emphasis on the researcher's lived experience as background for the study and has no specific procedures to follow. Transcendental phenomenology acknowledges, but brackets, the researcher's lived experiences to transcend them and conduct the study from a fresh perspective and includes specific guidelines to follow (Creswell, 2007). This study of stay-at-home mothers' lived experiences in their homes will follow Moustakas' (1994) model of transcendental phenomenology. In doing, so the following procedural steps will be utilized as outlined by Creswell (2007):

- The researcher determines if the research problem is best examined using a phenomenological approach.
- A phenomenon of interest to study is identified.
- The researcher recognizes and specifies the broad philosophical assumptions of phenomenology.
- Data are collected from individuals who have experienced the

phenomenon.

- The participants are asked two broad question types using the following as a framework: What have you experienced in terms of the phenomenon? What contexts or situations have typically influenced or affected your experiences of the phenomenon?

- Phenomenological data analysis steps are used (outlined below). (p. 60-61)

Population and Sample

A purposive sample of 14 stay-at-home mothers (n=14) with children birth to 5 years were interviewed in their homes. Demographics of the participants varied in some areas and were similar in others (see Table 2.) Participants varied among income range, the majority were renters (64%), married (93%), and predominately Caucasian (86%).

Participant (by pseudomym)	Age	Ethnicity	Marital Status	# of People in Household	# of Children 5 Years and Younger	# of Bedrooms	Tenure	Annual Household Income
WHSP1	22-34	White	Married	5	2	3	Rent	35001-50000
WHSP2	22-34	Latina	Never Married	3	1	2	Rent	35001-50000
WHSP3	22-34	White	Married	4	2	3	Rent	10001-25000
WHSP4	22-34	Caucasion	Married	5	3	3	Rent	25001-35000
WHSP5	22-34	Caucasion	Married	3	1	3	Rent	Less than 10000
WHSP6	35-44	White	Married	7	2	4	Own	More than 75000
WHSP7	35-44	White	Married	5	2	3	Own	More than 75000
WHSP8	22-34	White	Married	6	2	3	Rent	10001-25000
WHSP9	35-44	Caucasion	Married	5	2	5	Own	More than 75000
WHSP10	22-34	White	Married	4	2	2	Rent	35001-50000
WHSP11	35-44	White	Married	4	1	2	Own	More than 75000
WHSP12	35-44	Caucasion	Married	5	3	3	Own	50001-75000
WHSP13	22-34	Hispanic	Married	3	1	1	Rent	10001-25000
WHSP14	22-34	Caucasion	Married	3	1	1	Rent	25001-35000
	22-34=9 (64%)	Caucasion =12 (86%)	Married=13 (93%)				Rent=9 (64%)	Less than 10k=1 (7%)
	35-44=5 (36%)	Latina=2 (14%)	Never Been Married=1 (7%)				Own=5 (36%)	10000-25000=3 (21%)
								25001-35000=2 (14%)
								35001-50000=3 (21%)
								50001-75000=1 (7%)
N=14								More than 75000=4 (28%)

Table 2. Participant Demographics

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Generally, these mothers are not employed outside of the home except for mothers who were students and held graduate student assistantships or do moderate work in the home. They were determined as eligible stay-at-home mothers for the purposes of this study. As this study does not explore the effects of children with disabilities or developmental delays, mothers with children who have been diagnosed with either of these conditions were excluded from the study as it adds another dimension of stress and more complex issues that were not focused on here.

The sample was solicited from two university family housing cooperatives on the University of Minnesota Twin Cities campus, from faculty members, and other student friends who knew stay-at-home mothers. Also stay-at-home mothers at a local elementary school and members from local chapters of a nationwide stay-at-home mothers organization were asked to participate. All mothers involved were asked to provide additional leads of other subjects, i.e., the snowball method, which increases the chances of finding sub-populations that would otherwise be difficult to find.

Procedure

Recruitment. Initially, the researcher sought participants using a sampling framework that focused on accessibility to the desired population. A sponsored letter (see Appendix C) on UMN letterhead was sent to managers at the two UMN family student housing cooperatives asking for permission to conduct research within their communities. The letter explained the research study and why it is important for subjects to participate.

Additionally, announcements were published in UMN housing cooperatives' newsletters and on their websites; flyers were also posted on the physical community grounds. To increase the number of interviews the researcher opened the study to participants outside of university housing to all stay-at-home mothers living in the Minneapolis/St. Paul metro area. Emails requesting assistance to pass along an electronic flyer and information about the study were sent out to two Twin Cities Mocha Mom chapters, a national organization that supports African-American stay-at-home mothers; Saint Anthony Park Elementary School parent association and mothers from a kindergarten and second grade class; individual verbal invitations were made by the researcher to members of a fitness class at Como Student Community Cooperative. The researcher utilized social median by posting the study flyer on her Facebook page. The researcher asked all mothers to share the flyer with other mothers who qualified and may be interested in participating in the study. Faculty members in the interior design program at the University of Minnesota also asked their contacts for help with participation and posted flyers in a local beauty shop and church. In addition, previously interviewed stay-at-home mothers were asked to help by resending flyers to potential participants from their personal contacts.

Potential subjects, i.e., stay-at home mothers, were asked to participate and to call or email the primary researcher if they were interested in participating in the study. The researcher initially discussed the project with the potential subjects by phone or email and their eligibility was determined. If the subject was eligible and agreed to participate, an appointment for an interview was set up. Additional subjects were obtained via snowball sampling, based on the assumption that participants felt more at ease with someone they

have a connection to.

Snowball sampling. Snowball sampling is a chain referral method that is effective for hidden populations and/or groups that are composed of skeptical individuals due to the nature of their affiliation (Goodman, 2011). Chain referrals were brought into prominence by Coleman (1958) who noted in his research that participant's relationships were overlooked and unless by accident, participants in studies were never friends. These relationships provided access to sample populations that otherwise would be difficult to gain entry. Once researchers have identified a selection frame, they can then ask participants to identify other individuals they know who meet the same criteria and would have an interest in participating in the study. According to Atkinson and Flint (2001), these informants or research assistants act as gatekeepers to the hidden population that the researcher may not otherwise have access to.

As this study seeks to interview stay-at-home mothers with small children, it might have been difficult to locate participants because of the subpopulation of all mothers with specialized criteria of children within a specific age range. Using snowball sampling from a purposive sampling frame allowed a greater chance of identifying this population and reduced the amount of time in doing so.

To increase the response rate, an incentive was included. Subjects were told that upon completion of the interview, their name would be entered into a drawing to win a $100 gift certificate to a local retailer. Additionally, they were told all subjects would receive research-based tips on decreasing stress and creating well-being in the home. Finally, all subjects received a summary of the study's findings and outcomes. The

researcher also explained why the subject's opinions were important to this research in the initial contact.

Data Collection. A pilot study was conducted with 2 stay-at-home mothers (n=2). The studies were conducted inside of the participant's homes where a face-to-face interview was conducted with photo elicitation. The researcher took note of what questions were hard to answer or needed more explanation and asked for any feedback from the participants. This pilot helped to organize and make adjustments to questions based on the responses. Questions were edited and used in the full study.

For the full study, data were collected from 14 mothers (n=14), which is when the researcher determined that saturation was reached, as no new information was added to understanding the phenomena (Creswell, 2007). In collecting data, multiple methods were used to add rigor to this study. Triangulation of data collection included face-to-face interviews, photo elicitation, and observation. The interviews and photo elicitation were conducted at the same time but are different forms of data collection methods. Observation of the home environment by the researcher occurred during the interview as well as photo elicitation. The entire interview was recorded on an audio digital recorder as well as the researcher's iPad, which was used as a back-up device to ensure the interviews were recorded if one of the devices failed. All data were kept confidential by using code numbers to identify the participants. Once the interview was completed, the researcher immediately debriefed her observations of the physical environment, thoughts, and comments about the interview by journaling them off site. These notes were revisited

throughout data collection to help shape new questions or probes.

In depth, face-to-face interviews in the participant's home took place after a consent form was signed. Participants were given an operational definition of what well-being means (see Appendix D) for this study. Following Creswell's (2007) transcendental phenomenology protocol, two types of questions were asked, What have you experienced in terms of well-being? and What contexts or situations have typically influenced or affected your well-being? (See Appendix D for schedule of questions.) Well-being experiences included questions about:

- overall well-being,

- positive features and characteristics in their home, and

- negative features and characteristics in their home.

Context or situation affecting well-being included questions about:

- specific well-being factors,

- a repeated overall well-being question, and

- probing questions regarding their feelings when they are experiencing the phenomena they described.

In addition, demographic questions were asked.

During the initial face-to-face interviews, photo elicitation was used for subjects to identify their favorite and least favorite places in their homes. They used the researcher's camera to maintain consistency in the images. After each photo was taken, the researcher asked the participants to explain why the content of their photographs is their favorite and least favorite places in their homes and how they feel when they experience each space.

Data Analysis and Synthesis

All data collected were kept confidential by coding each subject with a number; no identifying information was used on the research materials. These identifiers utilized the naming system of WHSP1, WHSP2, WHSP3, etc. In addition to the naming system, data were coded and categorized, and themes were identified by the researcher. Below is an overview of how the data were analyzed in this study.

Analytic Approach. Analysis was conducted using Creswell's (2007, p.159) phenomenological analysis and representation approach. During this phase, notes were taken documenting the researcher's comments, thoughts, and questions that arose:

- Describe personal experiences with the phenomenon under study. The researcher begins with a full description of his or her own experience of the phenomenon, which provides context for the study and credibility of the researcher.

- Develop a list of significant statements. The researcher then finds statements (in the interviews or other data sources) about how individuals are experiencing the topic, lists the significant statements (horizonalization of the data) and treats each statement as having equal worth, and works to develop a list of non-repetitive, non-overlapping statements.

- Take the significant statements and then group them into larger units of information, called "meaning units" or themes.

- Write a description of "what" the participants in the study experienced with what happened –and include verbatim examples.

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- Next write a description of "how" the experience happened. This is called "structural description," and the inquirer reflects on the setting and context in which the phenomenon was experienced.

- Finally, write a composite description of the phenomenon incorporating both the textural and structural descriptions. This passage is the "essence" of the experience and represents the culminating aspect of a phenomenological study.

Issues of Trustworthiness

Trustworthiness of the data collection and research design is a way that gives rigor to qualitative research. Much like quantitative research that uses validity and reliability as factors for rigorous studies, qualitative designs often use the terms credibility and dependability to illustrate rigor. Credibility makes sure that research findings can be transferred to real world applications; dependability "establishes the reliability of the data analysis process," (Creswell, 2007, p. 220). There are multiple ways to increase trustworthiness and rigor, which include methods such as bracketing, deviant cases, triangulation, inter-rater reliability, rich descriptions, and detailed notes (Creswell, 2007; Lichtman, 2006). The following demonstrates how trustworthiness was achieved in this study.

Credibility/Validity. In the beginning of this study, philosophical assumptions and the role of the researcher were identified in the written description of the study, not only as a way to establish trustworthiness, but credibility. This practice is called bracketing,

which allows the researcher to state her point of view and biases, then set them aside for the duration of the study (Bloomberg and Volpe, 2008; Creswell, 2007; Lichtman, 2006). By doing so, the researcher is being transparent and understands that her beliefs have an impact on the study, but by acknowledging them, is able to be less biased moving forward.

Identifying deviant cases in the findings also increases the credibility of the data. Discussing cases that deviate from typical findings illustrates a realistic picture where the phenomena will not always be homogeneous (Bloomberg and Volpe, 2008). It shows that the researcher will not only present findings that are positive, but will report all findings regardless of the outcome.

Triangulation is another method use in this study. By employing multiple methods to collect data, they substantiate one another, creating a more accurate picture of the phenomena (Creswell, 2007; Lichtman, 2006). A peer can then review this method to add further credibility.

Peer reviews allow the researcher to have someone who can verify the research and offer suggestions for improvements or a different point of view. According to Bloomberg and Volpe (2008) "reviewing and discussing findings with professional colleagues was a further way of ensuring that the reality of the participants was adequately reflected in the findings," (p.86).

Dependability/Reliability. Taking notes and documenting or journaling the process throughout the study allows for greater dependability. A method unique to qualitative studies is journaling or memo writing, depending on the research design.

Journaling allows the researcher to document her feelings, observations, findings, questions, and rationale for choices throughout the research process, which happens during data collection and analysis phases. This "'thick description' is desirable to see underlying meanings and understandings," (Lichtman, 2006, p.18).

Ethical Considerations

This study poses no serious risks to the participants. However, in any research where human subjects are involved, it is important to take into consideration feelings that may arise as questions are asked and be considerate of the time participants have given for the research to be carried out.

Limitations of the Study

As some of the participants were solicited from university housing cooperatives, many of the homes have similar floor plans and architectural features, which may limit unique spaces. However, subjects may use the same types of spaces in unique ways. University families are a specialized population. As many will be graduate students, it will not be possible to generalize findings to all affordable and low-income housing occupants because in most cases their incomes will grow exponentially and families will move out of this type of housing eventually, making the findings more suited to generalize to student family housing. In addition, as many people from this sample group are from university housing, it infers that participants will be from different parts of the U.S. or world, which will include different ethnicities and cultures. Also, this setting may

frame different kinds of relationships as social support may most likely come from friends and other students rather than families as participants from outside of the university may have.

Participants who live in other types of housing (i.e., market rate apartments or single-family homes) will have a range of features and characteristics in their homes. Their income levels will vary greatly allowing some to have features and/or characteristics in their homes that better support well-being or the means to change their environments.

Conclusion

This chapter discussed the phenomenological research design of the study, how participants were accessed and chosen, data collection and analysis methods, and limitations. Following the procedures of this type of qualitative design will demonstrate transparency and steps to maintain credibility and dependability that may be replicated in future studies. The following chapter will present the data analysis and findings of well-being factors for the home.

Chapter 4. Findings

In this chapter, participants' responses to questions asked about well-being in the home are discussed. The responses are organized by each question with its corresponding themes. To arrive at themes, all data from the face-to-face interviews were coded and categorized (Creswell, 2007). During this stage of analysis, the researcher noted possible quotes and deviant cases in the raw data.

Initially, the researcher created a table to assist with theme development that kept track of the participants' responses as related to concepts in the well-being framework. Tracking data this way documents how often respondents mentioned a concept related to well-being in the home and identify similarities among participants. Midway through this process, the researcher decided to stop tracking as many more concepts were coming out of the data that were not included in the conceptual framework used.

After coding and categorizing, responses from each question from all interviews were analyzed to find common themes listed in descending order of frequency. A narrative was written to explain the reasoning behind each question asked and how it relates to the study. In addition, participant quotes were added when it provided a richer explanation to the lived experiences of the participants. Once those themes were summarized, the research continued to the next question until all questions were analyzed for common themes.

After themes were compiled, deviant cases previously noted in the interviews were reviewed. These are discussed at the end of this chapter and organized by consistent

themes found earlier in the chapter.

Q1. What does well- being mean to you?

"Well-being means to me when I feel things that really add to my life that make me feel like I'm in a good place, things that make me feel kind of put together, organized, um, when I feel good about myself and things around me."-WHSP7

Before the interview started, participants were read a general overview of the meaning of the concept of well-being. This was done to help participants better understand the concept as it can be a vague one to grasp. Then the first question was asked to establish a baseline of what overall well-being means to the participants personally. Responses were grouped into the following themes.

Happiness/Satisfaction

Happiness and satisfaction were conceptualized in the same way. Being happy was being satisfied with one's overall life and their surroundings.

Calmness/Peace

Calmness and peace were conceptualized in the same way. They relate to having an overall sense of calm or peace in one's life.

Health

Health relates to being healthy in mental, physical, spiritual, and social capacities.

Organization

Organization was conceptualized as having items in order in one's life and in their

physical surroundings.

Stress

Stress was conceptualized as the absence of. Many participants stated that not having

stress added to their sense of well-being.

Balance

Balance was seen as areas in one's life being equal or well-rounded.

Q2. How does your home make you feel?

"Depends on the day. It depends on the day! I would say some days I am thrilled with

the way it's laid out and the way I have things organized, and other days you trip over

the shoes and just start thinking about 50 things you would change and do differently.

So it honestly depends on the day."-WHSP9

Similar to the proceeding one, this question was asked to gauge how participants

felt overall about their homes. The responses gave a high-level idea of how they viewed

this environment.

Positive feelings

Positive feelings were associated with participants liking their homes or saying it is one

of their favorite places to be. These feelings were sometimes associated with having

enough space for their family to function according to their needs, while others stated that it was due to the cleanliness and lack of clutter. One of the main terms associated with positive feelings was happiness.

Negative Feelings

Negative feelings were associated with lack of cleanliness, lack of open space, and size. One participant stated that she felt as though she was suffocating in her home because her family is outgrowing their space.

Stress

Many participants associated feeling stress in their homes. They felt that it was overwhelming due to clutter and not being able to personalize their space like they want usually due to apartment regulations.

Calmness

Calmness was a factor that was associated positively or negatively usually depending on clutter and cleanliness in the home.

Depends

Many participants stated that the way they felt about their homes varied and often stated, it depends. Lack of organization, clutter, and lack of space were main deterrents from their home being a positive experience. When these factors were not an issue, they had

positive feelings such as happiness.

Comfort

Comfort was closely related to calmness. Participants felt their homes were comfortable when there was enough space, lack of clutter, and it was clean.

Nature

Nature facilitates positive and negative feelings about one's home. The absence of nature tended to make participants not like their homes as much, especially when there was a lack of sunlight, air, and poor access to nature. Having views of nature and an abundance of sunlight facilitated positive feelings about home.

Q3. Are there features or characteristics in your home that give you positive feelings?

"I haven't really thought about that before. But it does make a difference if your home feels comfortable. So, um, I guess if you have a nice place to sit and there are clean areas for you to play with your kids and have activities. Cause if its chaos, then you feel chaos inside and there's no place to have your structured or impromptu fun time."

-WHSP8

Well-being is related to positive feelings. Since the research focuses is on the home and well-being, it was important to explore if there were features or characteristics of the home that facilitate positive feelings.

Light

Most participants responded that having a lot of light gives them positive feelings in their homes. Many referenced light coming in from the window (sunlight), while others referenced having a lot of light in general.

Windows

Windows were discussed in several ways. Some participants responded by saying that having a lot of windows in the space gave them positive feelings, others said having large windows gave them positive feelings. The amount of light coming through the windows and being able to see a view of outdoors or to watch their children outside were mentioned as reasons why windows created positive feelings.

Clutter

Clutter was seen positively when there was absence of clutter in a space. When spaces had clutter, participant's felt out of control and unorganized, therefore creating stress.

Color

Color influenced participant's positive feelings about their home by making the space

feel brighter, lighter, cheerful, and calming. Most participants mentioned color as positive when they were referring to light colors or those that were considered their favorite.

Cleanliness

Cleanliness of space was discussed as making participants feel better in their homes. They associated happiness and better function with cleanliness when talking about their homes. In addition, many participants made references to messiness and dirt, from which a poor mood and negative feelings toward their homes developed.

Space

Space was seen as a major factor for positive feelings when there was enough of it to facilitate the family's needs. This includes space for storage, open space for play and an uncluttered perception, and space that facilitates family togetherness.

Nature

Nature was found to be positive by having access to nature inside and outside participants' homes. Many referenced sunlight, having views of nature from their windows, and access to the outdoors. In addition, the presence of nature inside the home, whether it was from live plants or images of nature, was discussed.

Rooms

Many participants stated that specific rooms in their homes facilitated positive feelings.

Bedroom: The bedroom was mentioned often for providing togetherness and special time with their children and mates. In addition, it provided a retreat for kids and parents.

Kitchen: The kitchen was often cited as providing positive feelings because it was a place that promoted togetherness among family members in activities such as cooking and eating together. In additions the kitchen table was stated specifically as a physical feature that provided togetherness.

Living room: The living room was a place that promoted positive feelings because it was a place in the home that facilitated togetherness with family. It was one of the largest and open spaces in the home.

Q4. Can you to take a photo of your favorite place in your home?

"There are elements of design that I like in each of these spaces. But also they're just simplified and not too cluttered, or don't represent for me like projects that I need to do. You know, the spaces that I look at and I think ehh, I have to do this, this, and this," –WHSP4

Figure 6. Favorite place-WHSP4

Seeing how the participants viewed their homes added a deeper layer of understanding about the features and characteristics they felt the best about. Often photographs can reveal elements that cannot be verbalized or are hard to verbalize. It was important to let participants take the photos so the images would be seen through their point of view.

Of the favorite spaces selected, there were common themes overall. These included a space that provided relaxation, a space they personalized, and a space that facilitated togetherness with family or friends. The main spaces chosen were bedrooms, the living room, and kitchen. These rooms provided special memories or feelings for participants.

Bedroom

This space was chosen because it typically provided a space for togetherness either in the children's bedroom or the parent's. Many participants talked about a special time when they put their children to bed and read to them, creating a setting for emotional and

physical closeness. When participants talked about their own bedrooms as their favorite place, they discussed how they personalized their space with special pieces of furniture and/or color. They noted that this space provided them privacy and relaxation in addition to providing a space for alone time with their mates.

Living room

The living room was discussed often as a place that facilitated togetherness with family and friends. It was a space that had the most room to allow for play and entertaining because of its openness. Another reason this room was chosen is because for some they were personalized with items such as color, and they tended to be more organized by reducing clutter and adding storage options.

Kitchen

The kitchen was a place that many selected as their favorite place because it provided a place for togetherness. Many participants talked about how they enjoyed cooking with their children in the space or having them near while cooking. They also discussed how they enjoyed spending time together at the table while eating. Many mentioned this space as a gathering place in the home.

Q5. Are there features or characteristics in your home that give you negative feelings?

 "We only have one bathroom. So for six of us in this home…I have four kids, we just

need one more, even if it's a half bath…You know I've got little people who are not

trained to hold their bladders extremely long…The bathroom is the cause of most

stress, where the people are waiting and everybody's little body feels tension…"

– WHSP8

Just as positive feelings are related to well-being, the same is true for negative

feelings. These data can inform the research by identifying features and characteristics to

avoid from when enhancing well-being in the home. Therefore, it was important to

explore features or characteristics of the home that facilitate negative feelings as well.

Space

Not having enough space was an indicator for negative feelings in participants' homes.

Negative feelings developed when there was not enough space that allowed family

togetherness or space to freely move about and store items. The kitchen and bathroom

were two spaces mentioned that more space was needed.

Light

Not having enough light was a factor that created negative feelings in the home. Many

participants mentioned that there were not enough electrical overhead lights in their

homes and were dissatisfied having to provide lamps for their general lighting. In other

instances, participants stated that if they did not have enough sunlight, they would have

negative feelings in their home.

Rooms

Bathroom: The bathroom was a source of negative feelings for many participants due to the small size and lack of storage and/or countertop space. Participants felt that they were not able to effectively help their children in this space or do such things as grooming for themselves because there was no room to put their personal items such as curling irons, makeup, etc. Some identified this as being a source of stress because of safety concerns. Children grabbing hot appliances such as curling irons were a danger, and insufficient space increased the chances of an accident. In addition, having only one bathroom was seen as a negative. Participants identified overcrowding and lack of access by multiple family members needing to use one essential space.

Kitchen: The kitchen was another space that fostered negative feelings when it was not functional. Many participants wanted to have enough space in their kitchens to interact with their family, specifically children to do such activities as cooking and eating with them. Lack of countertop space was also an issue as there was not enough room to spread things out while preparing meals. If there was an absence of a kitchen table or one that was not sufficient in size to seat all family members, it was also seen as negative because it detracted from family togetherness.

Ventilation

Ventilation was a problem when there was a lack of it. Many participants mentioned that there was no cross ventilation due to the construction of their apartment complex, which

did not have windows on both sides of their units preventing proper airflow through the space. This made the space uncomfortable. Some stated they had an issue with poor health due to lack of circulation in places such as the bathroom where there was an absence of vents and windows for proper ventilation.

Appearance

The appearance of the home had a negative effect if it was in poor condition or had poorly designed architectural features. Participants noted items such as popcorn textured ceilings, furniture in poor condition, scratches on doors, windows that were difficult to clean, and built-in air conditioning boxes as items in their homes that gave them negative feelings. These comments came from those living in rental properties where they had little control over changing such items. Surprisingly, many stated that finances were a hindrance to purchase new items such as furniture, but felt that it was worth the sacrifice living with it in such condition because their living arrangements were temporary.

Cleanliness

Lack of cleanliness was a major factor in negative feelings in the home. Participants felt that when their homes were not clean, it made them feel a range of emotions from depression, frustration, unhappy, out of control, and tired.

Clutter

Clutter was another major factor that influenced negative feelings in the home. Many

participants felt that clutter made them feel unhappy in their homes as well as frustrated. Participants often stated that clutter reminded them of things they needed to do and added stress to their lives preventing them from relaxing and feeling a sense of peace. Lack of storage and space influenced clutter in many participants' homes. Some also suggested poor layouts of their homes negatively influenced clutter.

Storage/Organization

Lack of storage in the home was a source of negative feelings. Participants stated that not having places to put their belongings added to clutter in their homes and were a source of stress. Many tried to circumvent this problem by using baskets, after-market shelving, and portable storage units, but felt that having space specifically created for storage, whether it was built-ins or large closet space, would be helpful in solving this problem. Organizing items by having proper storage would reduce levels of stress for participants because their homes would appear cleaner and have less clutter creating less reminders of things they have to do in their home.

Q6. Can you to take a picture of the place you like the least in your home?

"And what's sort of depressing about this little space are the things that you can't change..." -WHSP4

"Just wanting things to be new, and just wishing for more space...so it's just a symbol for like more space, more organization and more updated things." – WHSP5
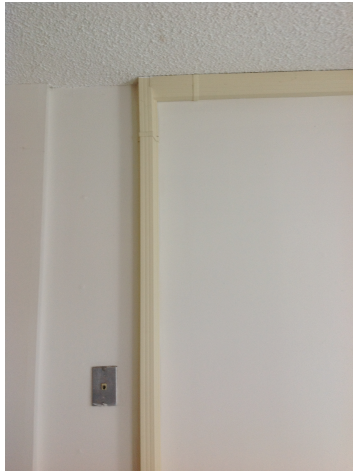
Figure 7. Least Favorite Features. Popcorn
Ceilling and Water Pipe Encasement-WHSP4

Figure 8. Least Favorite Place
-WHSP5

Just as favorite places add a deeper layer of understanding about the features and

characteristics in a home, so do least favorite places. These photographs can inform the

research by identifying features and characteristics that otherwise may not be verbalized.

In doing so, the images give an understanding of the spaces, features, or characteristics

that may detract from well-being in the home.

Questions 7-12 were asked in regards to the well-being model created by the University

of Minnesota's Center for Spirituality and Healing. The model was used as a framework

for this study. In asking if the different characteristics affected one's well-being in the

home, the study was able to gauge if these characteristics defined well-being in a home

environment, and if so, how.

Q7. Are there features or characteristics in your home that support health?

"When I have my life organized and things are organized, then I am less stressed,

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which is mental health and I think physical as well, I think right? And that also

translates into more relaxed for my kids and my husband." –WHSP10

Kitchen

Many participants stated that the kitchen was a space in their home that supported health. They citied having a table where they could feed their family healthy foods, preparing healthy foods in this space, and even having a visible fruit bowl helped their families make healthy choices. Others stated that having healthy choices at their children's level was important for health so they could reach such items themselves whether it be on shelves or in the refrigerator.

Light

Light was seen as being a feature that supported mental health. Many participants responded by saying that light, especially sunlight, made them feel better and sometimes kept them from feeling depressed.

Windows

Windows were a health feature as they allowed the presence of nature into the home. Participants stated that views of nature from their windows, sunlight, and fresh air were important for mental and physical health.

Stairs

The presence of stairs in a home provided physical activity for participants and their

families, which contributes to health.

Cleanliness

Many participants stated that cleanliness affected their health in their homes. This was associated with lack of germs and also feeling better in their homes when it was clean.

Space

Space in the home was important to participants to do physical exercise and activities. Having enough open space allowed their children to play and for them to work out. Many stated however, that because of the noise that exercise and similar activities caused, they refrained from doing it as much or at all when they lived in rental properties with shared walls or floors.

Organization

Participants stated that they feel happier when items are organized in their homes creating positive mental health for them and their families.

Q8. Are there features or characteristics in your home that support relationships?
"Our bedroom would be a source of relationship just to have some privacy both for my husband and I individually, but I feel like that helps my kids understand their boundaries in our relationship." –WHSP3

Rooms

Bedrooms: Was a place in the home that promoted relationships. When participants discussed their children's bedrooms, they often noted togetherness and connection with their children when tucking them in and/or reading to them. When participants discussed their own bedrooms, they mentioned that they had privacy there and were able to spend alone time with their mates. This helped them to relax while they were in the space.

Living room: Living rooms were often mentioned as a place that provided togetherness. This was the case as families usually congregated in this area and had the space to do so. This room also allowed participants a place to entertain friends.

Kitchen: The kitchen provided a place that families could connect and be together, this promoted relationships because they were spending quality time with their children as they prepared or helped them prepare food and also as a place where they congregated to eat together and communicate with one another.

Playrooms: Playrooms were seen as a space that supported relationships because it gave the family another sizable open space to interact with each other.

Accessories

Accessories such as books and photos mediated relationships in the home. Books were something shared and used to communicate with children. Photos were discussed as they

were reminders of memories of special times or people.

Furniture

Furniture items such as the kitchen table, living room seating, and beds facilitated relationships in the home. These pieces of furniture allowed people to congregate and spend time together in their homes.

Space

Having enough space to entertain in the home enhanced relationships. In addition, open and large spaces helped with relationships. Some participants stated that having open layouts with clear sightlines supported relationships because they were able to be a part of the activity from a separate space.

Q9. Are there features or characteristics of your home that support control?

"And the cleaner and more organized things are, I also feel like I have more control over my environment and more of a realistic possibility of controlling it the way I would like to." –WHSP4

Clutter

Participants stated that having control over clutter helped them feel more relaxed and less stressed. Having proper storage to organize their belongings facilitated them having control over clutter. Otherwise, many stated they would feel out of control or stressed due to clutter in their homes.

Cleanliness

Cleanliness was something that participants felt they needed to have control over in their homes. Many stated that if their homes were not clean, it would create a source of stress. This included the ability to clean surfaces.

Temperature

Many participants stated that they were happy with the control over temperature. Some stated that they had programmable thermostats, which helped with control because they could determine the settings. Others stated that their homes heated and cooled well. In addition, participants noted that windows helped them have control over temperature by being able to open them for cooler air. Many stated that if they did not have this control, it would make their homes uncomfortable.

Lighting

Lighting is an area that many participants said they did not have control. This was especially true in rental complexes where there was a lack of hard-wired, overhead lighting in their units. Participants felt that they did not have control over lighting for this reason, and it was seen as a source of frustration.

Personalization

Participants felt overall that they had control over the personalization of their homes, which was important to them. This included painting walls, displaying images, adding

storage, and other applied decoration. They stated that being able to personalize made their homes feel comfortable.

Money

Interestingly, money came up as something that participants feel they had control over. Having a designated space in the house to deal with money issues such as an area to sort bills, desk space, and other organizational items facilitates this control. Money was also important so they could purchase items for the home, such as furniture, that would make it aesthetically pleasing and bring more satisfaction to participants in their homes.

Rooms

Bedroom: The bedroom was seen as place that facilitated control over privacy. Many participants felt this was needed to be able to "get away" and have a retreat for themselves and their children.

Mudroom: The mudroom supported control as a place that helped organize clutter and transitions coming in and out of the home. Many participants who had mudrooms, or space in their entry that functioned as a mudroom, believed that when organized in a functional manner for the family, it created less chaos entering and exiting the home. When this space was not present or not organized well, it was a source of stress that participants felt was out of control.

Q10. Are there features or characteristics in your home that support security or safety?

"I like having all the windows so I can see who's coming and going. We do have a security system also. And the open floor plan too. I guess I feel like I can hear what the kids are doing no matter, you know. If I can't see them I can still hear them." –

WHSP6

Windows

Windows were overall mentioned as providing safety in the home. It must be mentioned that new windows were recently installed at one of the rental properties where many participants lived. In other cases, windows provided visibility to see the outdoor surrounding area, which helped to make participants feel safe.

Security system

Many participants who had security systems stated that these made them feel safe.

Door Access

Participants living in rental properties stated that having to go through multiple doors to access their units provided a sense of security and safety. Even if they were not controlled entrances, the process gave a sense of security.

Ground Level

Some participants stated that they felt safer that their bedrooms or units were not on the

ground level

Personalization

Being able to personalize the home gave participants a sense of security because their personal items surrounded them.

Visibility

Having visibility in the home mediated by an open layout was useful in creating a sense of security and safety. Participants stated that they were better able to care for their children by being able to see them in their homes.

Q11. Are there features or characteristics of your home that support a sense of purpose?

"That's basically what we are, the pictures…that's us. We got married at that temple over there…And that little picture there, pray when life gets too hard to stand, kneel…Yeah the Savior Jesus. This is basically what we are." -WHSP13

Storage

Many participants interviewed were either in college or their mates were. It was important to achieve the goal of graduation so that they may start a better life for themselves and their families. Storage for educational endeavors supported a sense of purpose in the home. Storage kept items like school books and other related materials

organized and in one place, which facilitated the advancement in education.

Furniture

Furniture was cited as features in the home that supported purpose whether it was a desk for education or maintaining bills or seating. Family gathered in and around furnishings together to read such items as scripture, and made education, healthy finances, and faith, all important purposes in their lives.

Entertaining

Though entertaining is not a feature that supports purpose, participants cited that a purpose in some of their homes was to entertain. There were rooms, as well as furniture, that facilitated this such as the dining room, kitchen, having a bar, furniture to sit on, and overall space in their homes to accommodate their guests.

Kitchen

Many participants cited that it was their purpose to keep their family healthy. The kitchen was the main place to do this because it was a space in which they created healthy meals and used appliances to support that. Some of the appliances mentioned were a dishwasher, which made it easier to keep the room clean and dishes sanitized. Also a blender was mentioned because it was left out on the countertop and used daily for fruit and vegetable smoothies, which promote healthy eating habits.

Personalization

Personalization of the home was often mentioned indirectly as supporting purpose. Many participants stated that they had photos of family, images of religious figures or symbols, and inspirational quotes (including scriptures) visible in their homes. Many stated that this is the essence of who they are, and it was very important to have an artifact displayed in their homes as a reminder and motivation. Others stated that personalizing their homes through home improvements supported purpose because it allowed them to create a space that was functional and aesthetically pleasing for their families. Making them happier, more relaxed, and less stressed in their homes.

Q12. Are there features or characteristics in your home that support the natural environment?

"Oh yeah, the windows. One hundred percent the windows and the deck. Yeah, cause you're right there. And the deck is so elevated that you're just kind of up in it. You know, like you can sit out there and you see the trees and stuff and the view."-WHSP12

Windows

Windows mediated nature in the home. It allowed fresh air to come in, brought in sunlight, and controlled views of nature. Many participants talked about having or wanting many windows in their homes for these reasons. One participant stated that having views of nature from her window was healing and would not want to be in the home if it were not present.

Sunlight

Having an abundance of sunlight was very important in supporting the natural environment in homes. It made people feel happier, relaxed, calm, cheerful, and the space brighter. Most participants stated that if they did not have sunlight in their homes they would have negative feelings in their home.

Fruit

Surprisingly, fruit bowls were often mentioned as a feature that supported the natural environment. Participants who talked about this stated they enjoyed the color of the natural fruit and what it represented. They enjoyed looking at the fruit in the fruit bowl and the bowl itself as they were aesthetically pleasing to the participants.

Color

Color was mentioned as supporting the natural environment because it reminded participants of things you would find in nature. Colors often mentioned were yellow, symbolizing the sun, and green, symbolizing plant life.

Images

Images of nature were found in participants' homes and were discussed when asked how nature was supported in their homes. Images such as sunsets, birds, aquatic animals, and water were all mentioned and present in the home.

Plants/Flowers

Many participants stated that having green plants and/or flowers supported the natural environment in the home. They talked about having life in the home. Participants stated that plants and flowers made them happy and promoted a sense of peace.

Gardens

Many participants talked about having a garden where they planted vegetables and flowers. This was an activity that brought joy to them and their children. They stated that it promoted happiness, togetherness, and a sense of peace.

Outside (being in nature, deck, fresh air, and exercise)

Participants talked about being outside in general and needing to have access to the outdoors to be in nature. They also stated that this was one place they preferred to exercise, and it was healthy for their children. Many talked about being in the fresh air, and one participant talked about her deck as providing a space that allowed her to be in nature.

Pets

Pets were also discussed as supporting nature in the home. Participants talked about their dogs along with other animals that brought them and their family happiness.

Q13. What top three features in your next home do you want to have that will give you positive feelings?

"Ah, so probably hardwood floors. I don't know if I mentioned it, but carpet…I clean this often and the couches. It always looks dirty when I come home. Laundry, And large windows that let in a lot of light." –WHSP10

This question was asked to help the researcher explore and understand what features or characteristics participants would like to have ideally in their future homes. This gave an idea of elements they must have or would like to have that would foster well-being in their homes. This question was also asked because there may be features or characteristics that the participants didn't currently have in their homes, and therefore were not covered by the other questions. Out of all the participants, the following features were the top three most discussed.

Space

Having more space was most the most important feature to have in participants' future homes. This was mostly discussed in having space designated for children, family space, and space to entertain. In general, space that supports togetherness and detracts from feeling crowded was important. Participants said they would feel less stressed and more comfortable in a home with enough space.

Windows

Windows were commonly mentioned because they allow sunlight to enter the home,

bring fresh air indoors, and offer participants and their family's views of nature. Many participants stated they needed many windows or big windows in their home. They said having windows makes them feel connected to the environment, making them feel happy and calm in their homes.

Kitchen

When the kitchen was a response to this question, it was in reference to being bigger. Many wanted a kitchen that allowed them to have more people in the kitchen. This was in reference to cooking with and for children and allowing them to be in the same space. It also referenced being able to have enough room to eat together comfortably, whether it was with the participant's immediate family or to entertain. Many participants identified the kitchen as they spoke about positive childhood memories and wanted to provide those same memories and traditions for their families. In addition to togetherness in the kitchen, wanting more countertop space was often mentioned.

Others

Other features many participants discussed were access to outdoors (including a back yard or bigger back yard), having a mudroom or bigger entry space, laundry facilities, and personal space such as an office or master suite

Q14. What does well-being mean to you?

"Feeling balance in all those areas…You're not going to always feel balance in every aspect, but when you feel like a little balance in each of those areas that we talked about, I mean that is what well-being is to me now." –WHSP7

This question was not originally in the schedule of questions, but was added because during earlier interviews, many participants seemed to change their idea of what well-being meant to them. By asking this question, the study was able to capture this conceptual change and compare it to the original question. Upon answering this question for the second time, many participants maintained similar responses to their original one, but expanded their definition of well-being to include their physical environment. Many stated that they had not considered this before, but now they do after answering the interview questions. The following are terms that were associated with well-being the second time: balance, clarity, direction, spending time with family, flow, health, energy, comfort, confidence, control, lack of stress, growth, peace, taking care of self and family, organization, layout, and relaxing. Happiness was discussed in terms of being happy within your self, but expanded to being happy with family and the place you live. Many now said well-being in their environment meant a sense of calm, that it was functional, created happiness, comfort, peace, and balance. Many stated that it was more important to them and had a better sense of awareness of it.

Q15. Is there anything else that you would like to add to the interview?

"…I think this is really good because I've never really, I just have never thought

through those characteristics in my home…"-WHSP7

This question is a catch-all question that makes sure participants were able to

verbalize areas that they may have felt were important, but were not discussed. It also

gave them an opportunity to add to any of their previous responses, or give suggestions to

the researcher about the study. Responses to this question varied. Many participants

stated that they did not have anything to add, but found the study interesting and never

considered their home to have an effect on them in these ways until now. Some stated

they would now consider these questions when functioning in their homes.

Observation

The homes looked as thought they were in good living condition as there were no

characteristics in the home that posed safety concerns, disrepair, or crowding. Overall the

participant's appeared comfortable in their homes and moving through the physical space

with ease. It did not seem as though the space impeded participant's in doing tasks with

the exception of clutter in many entry ways and mudrooms. This was also reflected in

responses and findings.

Deviant Cases

Deviant cases highlight responses that were different from most or all other

responses given in the study. The following is a summary of the deviant cases found

categorized by themes.

Space

Many participants discussed wanting more space in their homes as a way to make them feel happier and more comfortable in their homes. However, WHSP8 talks about how having less space in the kitchen helps her to keep track of the amount of food her family consumes, and it helps to ensure that old food is being disposed of. In this case having less space allows her to rotate her food easier both in the refrigerator and in the cabinets. It also helps her be more aware of her food budget as the space allows her to track it better.

One participant stated that the amount of space is not what is key, but the way the space is planned. WHSP9 states, *"It is interesting how you get to a point where you realize it's more important to have good space versus more space. More space doesn't do any good if it's poorly laid out and hard to reach."* Another participant mentioned that she would like to have spaces in her home where nothing was stored, making the space seem less cluttered, WHSP7 states:

> *…Space that there isn't anything in, like um in my old room every inch of like floor space was taken, and the closet was chock full of stuff…And you really had to just wedge your way in. And now you can walk through the room and there's big open spaces and it just feels like open. That's what I would like my kitchen to be like, too…to have more just open counter space and not full of like stuff and kitchen equipment.*

Most participants talked about having open space or wanting more space in their living room. However, when asked what would be her top three features if she moved, WHSP14 responded she would rather sacrifice her living room to have a dining room that she can eat together with her family, stating: ***"Definitely the dining area. That's gonna be probably much larger. I will sacrifice living [room] to the dining room…"***

Security

Many participants stated that access to doors, locks, and security systems were some of the features in their home that made them feel secure. WHSP1 stated however that knowing other people around and knowing her neighbors makes her feel secure in her home. WHSP2 stated that she would rather be in more direct contact with nature than to have controlled access to her home. She was referring to be able to open her doors directly to outdoor space. WHSP4 stated that her children's made up beds provide a sense of security. It symbolizes to her a place where her kids can comfortably sleep and have a place of refuge. She associates this with them having an inviting place, knowing they can go to bed every night and forget any stress they may have. WHSP8 stated that having a home to go where you feel safe and a retreat from the world enhances security in her home.

Behavior

Many participants talked about how their behavior was affected by their environment but WHSP4 talked about how she believes having a sense of calm in her home affects how

her kids act in the home as well.

Control

Many participants discussed control in the terms of temperature, light, cleanliness, etc. In this case control was associated with control over the television with WHSP5. She states that having control over what is watched on the television in the home helps to control her family's mood.

Cleanliness

As most participants described cleanliness as soiled surfaces, WHSP8 described cleanliness as a concept that is external as well as internal. She stated, ***"if your outside is clean, then it helps to keep your inside clean."***

Nature

Others talked about how nature made them feel happier, calm, and at peace. WHSP12 identified nature as also being healing.

Conclusion

This chapter explained the lived experiences of what well-being means to stay-at-home mothers. Themes were outlined that offer a better understanding of what is deemed as positive towards well-being in the home and what may be viewed as negative. The discussion and implications in the following chapter will interpret and summarize these findings as well as discuss limitations to the study.

Chapter 5. Discussion

The purpose of this study is to explore what psychological well-being means when related to the home environment and identify factors that promote well-being in this environment for stay-at-home-mothers. Exploring these mother's lived experiences in their homes and understanding what physical features and characteristics influence well-being, assisted the researcher in understanding the research question of what well-being in the home means to stay-at- home mothers?

To analyze the findings shown in Chapter 4, the following steps were taken using Creswell's (2007, p.159) phenomenological analysis and representation approach. As there is no definitive way to analyze qualitative research (Bloomberg and Volpe, 2008), specific steps using Creswell's (2007) recommendations as guidelines were outlined in Chapter 4. In this chapter, a composite description of the phenomenon incorporating textural description (experiences) and structural descriptions (what influenced the experiences) are incorporated, giving the reader the culminating essence of the study (Creswell, 2007). To further establish credibility, interpretations are related to existing relevant literature using participant quotes (Bloomberg and Volpe, 2008).

The chapter is organized by an interpretation and synthesis of findings going into detail by answering the study's research questions: 1. What does well-being mean to stay-at-home mothers; 2. Are there physical features in the home environment that increase a sense of well-being; 3. Are there physical features in the home environment that decrease a sense of well-being. Next findings that were surprising to the researcher will be discussed, an analysis of the well-being framework used, recommendations, limitations,

findings, and finally the conclusion.

Interpretation and Synthesis of Findings

In interpreting the findings, I used questions that were important to answer outlined by Bloomberg and Volpe (2008). These questions are: What do these findings mean? What does this tell me about the phenomenon? What is really going on? Answering these questions in this iterative process aids in a deeper understanding of the data. The following sections will use these questions as a foundation for the study's research questions: What does well-being mean to stay-at-home mothers? Are there physical features in the home that increase a sense of well-being? Are there physical features in the home environment that decrease a sense of well-being?

What Does Well-being Meant to Stay-at-Home Mothers?

By reviewing the participants' responses and transcripts multiple times, reviewing my notes, and referring to the findings, the data reveal the underlying essence of what stay-at-home mothers need to achieve well-being in their homes. It appears that mothers in this study want to be happy in their homes, together as a family, and promote good health. This was supported in the findings time and time again. Mediating these overall desires were the ever emerging themes of having enough space, having access to nature, personalization, privacy/retreat, reducing clutter, and cleanliness. The factors within theses themes increased and decreased a sense of well-being which will be discussed in this chapter.

Are There Physical Features in the Home Environment that Increase a Sense of Well-being?

Space

Space was a reoccurring theme that continued to come up in most responses. It supports happiness, togetherness, reduction of stress, and health. It is operationalized from the findings as size, layout, number of rooms, and type of rooms. Having enough space in the home to prevent overcrowded is key. The number of bedrooms according to family size is a good indicator of this, found in housing literature (Evans, 2003). Another important space for the family is the kitchen. Having enough space to care for the family and to interact together, specifically with cooking and eating was essential.

When participants were asked what were the top three features or characteristics they would have in their next home, space was the most important feature, derived by the number of responses in reference to it. Referring to the type of space and size in response to this question WHSP6 stated: ***"Actually I like the bigger entry and exit, like a big enough space where it's not crowded…some kind of mudroom, you know some kind of space where you're not just walking into the house."*** In response to another question asking if there are features or characteristics in your home that give you positive feelings, WHSP7 stated: ***"And our basement, I think. We just have a nice space down there, and it's nice for all of us to be in there together to play and run around. It's a nice size."***

Space as an important feature or characteristic is supported by Evans (2003), who states "The provision of a range of social interaction spaces from small intimate spaces for solitude, through small group spaces, to larger, more public interaction opportunities

is associated with greater perceived control and comfort in residential settings" (p. 544).

Having an expanse of space and private spaces is also supported by the prospect-refuge theory that posits humans originated from the savannah and were originally hunters and gatherers. As such they had a need to be able to survey the land as hunters and also seek refuge in hidden places as a safety mechanism (Kellert, 2008). One can say that the open floor plan supports this as it allows people in their homes to be able to see and hear what is happening in the home from different rooms, but also being able to seek refuge in other closed spaces. This was supported in the data by a quote from WHSP6 who responded after being asked, How does your home make you feel and why? ***"Um the openness…I don't like feeling closed in. And the fact that you can you know, hold conversations when you're in different parts of the house is just, you know, the basic open concept."*** After asking how do you feel when you are in this type of space? She responded, ***"Relaxed, happy…"***

Access to nature

Nature was another theme that often was mentioned. Nature supported happiness, health, and togetherness. Nature was operationalized by sunlight, views of nature, images of nature, being in nature (backyards, gardens, direct access to), and fresh air. Many mothers spoke about the need to have a lot of windows in their homes, which was a mediator for nature. Windows allowed natural light to enter the home, provided fresh air and circulation, regulated temperature, and framed important views of nature. When asked how does your home make you feel? WHSP1 responded: ***"Pretty good, I like being at***

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home. It's probably my favorite place to be." When probed why, she stated, *"'Cause it's sunny and bright and comfortable…I like that we have big windows…"* Another mother felt trapped in her home when she could not be in nature. When asked How does your home make you feel? WHSP2 stated, *"trapped…because of the winter, but its not the home itself, it's because of the weather."* Later when asked if her home supports health, she responded, *"Yes, what I can see through the windows it's a tree or sparrows. I like what I see I don't see a building."* In this exchange, she explained that having views of nature promoted good health and the ability to interact more with nature (which for her was better during warmer weather) was important.

Biophilic design is a term coined by Kellert (2008) who suggests that nature is a key factor in promoting well-being and therefore is important to design in such ways that promote nature. The term biophilia originated with Wilson (1984) who posits that as humans originating from African savannahs, our affinity towards nature is in our DNA. This love of nature is something that we still carry with us. This love of nature also included living creatures as they are considered nature. There have been many studies supporting biophilic design specifically in the healthcare field (Hartig and Marcus Cooper, 2006; Kreitzer, 2012; Rashid and Zimiring, 2008; Ulrich, 1991; Ulrich, 1984). Because nature is seen as a positive distraction (Dilani, 2001; Ulrich, 1991) many people feel a sense of restoration from it. WHSP12 expressed her pull to nature as something she needed in referring to the trees in her front yard and unobstructed views of tall green grass from her rear windows. She states:

> *Also, out front the trees have just grown up so you look out the windows out front*

and it's just trees. And that is healing to me. When I'm stressed out I go to that window, and I just stare out back and, you know, take a few deep breaths and enjoy that. That's really nice as opposed to looking out on other houses, looking out on a parking lot or whatever it might be. My windows are great.

Most everything else in her home she found some frustration in, but having the views and being able to directly access nature through her patio doors somehow made the other negative features bearable. She states:

If I didn't have a good view and windows…oh, it's depressing. I use it as my release, my escape; my you know kind of therapy moment. Things get tense and I just…I like what I'm looking at…And then the field, the field does wonderful things. That grass gets so tall, when the wind blows it looks like a lake, you know, it looks like waves on a lake. So there's all of these calming features…It depends on kind of a view you like. I like that. I love the sky and the green, the grass, the trees and all of that. So, that's awesome to me. And if I didn't have that I would be not happy.

Research on nature explains why nature is restorative. Attention restoration theory (ART) (Kaplan and Berman, 2010) posits that taking in information seen as exciting with no mental effort (involuntary attention) versus directed effort (voluntary attention) supports restoration in humans. Based on our affinity towards nature, natural views are the most effective in restoration and reduction of stress. This is even the case when one is passively and momentarily exposed to such imagery. In a study, Kaplan (2001) administered questionnaires to 564 households via mail. The premise was that certain

types of views, specifically natural ones, provided micro-restorative settings for occupants in their homes. By passively taking these views in allows the user to unconsciously take mental breaks throughout the day relieving stress levels. Results showed that poor satisfaction was derived from views of busy streets and highways, while positive satisfaction was derived from nature views.

Needless to say nature is important in supporting well-being for mothers who work tirelessly in the home providing for others. Creating spaces that support nature such as large operable windows, access to gardens or backyards, spaces for greenery in the home, and wall space for images reflecting nature can aid restorative environments that promote togetherness, happiness, and positive health.

Personalization

Personalization was found to support happiness and health in the home. Participants operationalized personalization in the home as color, personal style, photos, nature, and accessories. Personalizing one's home expresses the inhabitant's identity and supports a deeper connection to it (Hadjiyanni and Helle, 2009). In the case of many of these mothers, having personal belongings that may have had deeper meaning to them alone was noticed. In probing a mother about her favorite place, she mentioned that the photo she took included her bookcase. WHSP1 stated, ***"I like the bookcase a lot. It has all my fun books on it, and a picture of my plants. And all the books I like to read, like not my school books, my fun books I read for fun, and my cookbooks and things."*** Another mother talked about her bedroom as her favorite place in the home. After being asked

how did she feel in the space and why was it her favorite, WHSP3 stated: ***"I think it's because this fits. You know like the bed's not awkward and the color I feel like it's just a soft and relaxing color in the room and I like the vinyl (decorations) on the wall that really helps."*** According to Kopec (2012) "personalization reflects self-identity…reflecting their idealistic or idealized self-images,"(p.178).

Place identity is a term used to describe what one does to make a space or place their own. People develop connections to spaces they are typically satisfied with. These places allow the users to have control, supports creativity, privacy, and peace (Altman and Low, 1992). Due to management constraints, some participants did not feel this sense of connection because they understood their apartments were temporary and there were restrictions on personalizing the space.

Creating spaces that allow for personalization such as shelving to display meaningful items, using paint, wallpaper, and other finishes that residents connect to aid in well-being. As interior designers, it is important to explore what their client's are deeply connected to. This can create a visceral meaning and transform a house to a home.

Privacy/Retreat

It is important to plan for places that individuals can retreat or have privacy in their homes. This was a salient feature for mothers, as many described their bedrooms as a place that gives them privacy and/or a retreat. When asked are there features in your home that support relationships WHSP1 responded:

Um, we both really love our rooms. We love being able to like know that the

babies have their own rooms. The fact that there are three bedrooms is key,

because before they were always in our room, and we never had like alone time.

So, that third bedroom is really like a life-saver.

When another mother was asked if there were features or characteristics that supported

positive feelings in her home WHSP3 responded:

It just feels real good because at the end of the day I can put my kids in separate

bedrooms…if one needs a break from the other they can go up and have a sense

of their own space in their little domain and I also have my own domain. When

we were trying to have the baby in our room and stuff like that it just felt like

everything like I had a little corner and everything was overridden, and I don't

mind sharing but in general you just need a little bit of space, and so I do really

love that.

Having a place of privacy and retreat is supported by Evans and McCoy (1998).

They say that restorative elements such as privacy can help individuals cope with stress.

"Privacy nooks and stimulus shelters may offset some of the stressful impacts of high

level of stimulation" (p. 92). In recent years, hospitals began providing all patients with

private rooms in support of such research finings (Lawson, 2010).

The participant's terms such as "love that" and "life-saver" when associated with

privacy are strong ones. It appears that their affinity for these spaces goes beyond just

liking them, but that it is salient for these mothers. Kopec (2012) states, "Designs that

enhance the ability to relax can encompass the entire home or be concentrated in an area

or room…" (p. 181). It is then important to provide such spaces in the home to support

well-being in this environment.

Positive Feelings

Many positive feelings came up when talking about positive characteristics or features in the home as it pertained to well-being. The terms associated with those positive feelings consisted of calm(ness), peace, happiness, joy, comfort, relaxation, felling good, flow, love, warmth, and balance.

Are There Physical Features In the Home Environment That Decrease a Sense of Well-being?

The findings in this study supported that reducing stress led to happiness, promoting good mental and physical health. This was operationalized by reoccurring themes of decreasing clutter, and cleanliness. Many participants spoke about clutter in their homes regardless of income or tenure.

Clutter

Mothers who had higher annual incomes and owned their homes tended to have more storage options, but it still remained a major issue when clutter was present. Many associated organization and storage with clutter and wanted more storage options to organize and prevent clutter. Reducing clutter made WHSP4 feel better in her home; she stated, ***"Yeah, we recently redesigned the layout of our living room, and I feel like oh, we got rid of some of the clutter. And that has helped me enjoy the atmosphere in my***

home a lot more.” After asking how did not having the clutter make her feel, she stated:

> ***Oh my gosh. I mean probably every day for two weeks I would just come
> downstairs and think my home actually feels like a home now for the first
> time…I mean before I would just, it made me feel stressed because all I could do
> was look around and see what needed to be done…I love getting rid of things,
> less to clean, less to manage, you know.***

Providing ample storage in homes can better organize spaces, reducing the amount
of clutter in the home, thus reducing levels of stress and promoting happiness. However,
when creating such storage options, it is important to understand that clutter is usually
created due to the object's ambiguity, therefore an individual does not know how to
classify and store it (Swan, Taylor and Harper, 2008). When clutter is present,
sometimes it is kept in sight as a reminder to reconcile it even if it is a source of
frustration; at other times clutter is kept out of sight because it was intended to be
forgotten about, at least for the time being (Swan, Taylor, and Harper, 2008). When
discussing her clutter on a kitchen desk, WHSP9 stated:

> ***And it's a catchall or dumping ground…Because I'm in the kitchen so much
> with my family, when I'm just trying to get little things done on the side like pay
> bills or to-do lists or whatever, they just fall and sit right there, and it's so
> disorganized and cluttered. And I feel like whenever I pick up all that and move it
> into the office I forget about it, and then it doesn't get done. But if I leave it in
> here it causes me stress because I can see it and it gets in the way and it's
> disorganized.***

This can inform designers on ways to plan storage/organizational options in the home. For example, built-in open shelving for viewing and closed cabinets or drawers for hiding should both be considered in space planning for the home.

Cleanliness

Cleanliness was separate from clutter but often associated with clutter. Cleanliness also was discussed on its own in relation to something appearing dirty or messy. Many participants spoke of positive feelings associated with cleanliness. One participant spoke about how having her home clean makes her feel *"so good."* WHSP13 said:

> *My home, when it's organized and clean, I feel so good to be honest. So when it's messy and there's dishes, dirty dishes in the kitchen and stuff all over the place, I literally don't feel good. I don't get mad, but I get kinda frustrated I guess you can say. Yeah, I just don't feel good at all. It doesn't feel right for me.*

The same participant stated that cleanliness promotes health for her. *"When we recently moved here…everything looked very clean, and the kitchen stove was impeccable…and the counters were clean. Yeah, I love the clean stuff. Yeah, so I think that will support health."*

A different participant talked about the texture of her "popcorn" ceiling WHSP3 stated:

"…it seems like it just grabs a log of grimy stuff …but it often just is kind of dingy to me ant that's something I have no control over it…how clean or dirty that is." Her contention is that not only is the ceiling dirty to her, but she has no control over its cleanliness due to the texture and location.

This example was used because as interior designers. it is important to consider cleanibility and maintenance of surfaces. By not being able to do either created a sense of frustration. Cleanliness and clutter are characteristics of quality in the housing literature. In a research study described in Chapter 3, Evans, Saltzman, and Cooperman (2008) studied 277 school-age children in rural New York in a housing quality analysis). Quality was measured by using a scale that consisted of child resources, cleanliness/clutter, indoor climatic conditions, privacy, hazards, and structural quality. It was found that cleanliness is related to learned helplessness and impacts psychological distress. This psychological distress may be considered an ambient stressor. Ambient stressors are "chronic, nonurgent, physically perceptible, and limited to a particular environment. Chronic environmental stressors slowly wear away at our ability to cope" (Kopec, 2012, p.44).

Interior designers can support cleanliness in the home by specifying materials and finishes that are easily cleaned. To support the prevention of messiness, paying attention to how individuals function in their homes will aid in space properly planned for the size and layouts that would be most beneficial.

Surprising Findings

After analyzing the data. Some areas were noted as unexpected, and surprisingly not as prevalent. This section discusses those findings.

Financial

Participant's financial status came up frequently and it was not expected. Many participants talked about how they would like to do more in their homes, but lack of finances prevented this. This hindered how they personalized and found solutions for their home, which indirectly affected them having positive feelings toward it. A couple of participants compared what they had to their friends' homes, who may have had nicer homes and furniture because they could afford to do so. There was even mention of embarrassment due to their dissatisfaction. This leads to the next topic of "making do" or coping.

Coping

Some participants suggested or said they are making due with what they had knowing that their living situations are temporary or until they have extra money to make a change. There was an overall feel and thought of sacrifice now for a better life and home later. This may have affected how participants responded to what they wanted in their future homes as what they have now are the bare minimums in comfort specifically in the case of those living in family student housing. This is supported by Morris and Winter's (1975) theory which says in adapting to a deficit, householders may change their way of thinking to avoid pathology.

Noise

Surprisingly noise was not mentioned as much as expected. Literature (Evans and

McCoy, 1998; Ulrich, 1991) states that it is a key factor in well-being and the built

environment. It was however mentioned a few times when talking about children and

exercise. Mothers who rented their homes felt their children did not have the freedom to

run around and make noise as children do. They also believed that this caused poor

physical health because they were not free to conduct large motor activities unless they

were outdoors. Exercise for mothers in this living environment was hindered as well. One

mother stated that she does no exercise in her home even though she would like to

because she was afraid of disturbing her neighbors.

Appearance/Aesthetics

Appearance and aesthetics was another area that surprisingly was not mentioned more

often unless it was connected to the appearance of the home being cluttered. This again

may be mediated by finances and living in family student housing.

Well-being Conceptual Framework

The framework used in this study was Krietzer's (2012) well-being model. Kreitzer

defines well-being as "a state of being in balance or alignment (body, mind and spirit). It

is also described as being content, connected to purpose, in harmony, happy, prosperous

and safe," (Kreitzer, 2012, p. 707). Using these definitions and supporting literature,

Kreitzer's (2012) model of well-being includes the dimensions of health (physical,

emotional, mental, and spiritual), relationships (social connections, networks, and the quality of relationships), security (basic human needs, stable employment, sufficient finances, and personal safety), purpose (an aim and direction, a direct expression of spirituality that gives life and work meaning), community (resources and infrastructure and the extent to which people are engaged and empowered), and the environment (access to nature as well as clean air, water, and toxin free). In this study, community was substituted with control as the study took place in a private residential setting and relationships would compensate for the social component.

Control has been found as important to well-being as it has been found to impact one's positive or negative feelings (Bruin and Cook, 1997; Dilani 2001, Hortop, Wrosch, and Gagne, 2013; Ulrich; 1991). For this study, characteristics of control were adopted from Ulrich (1991) where he stated that control over noise, privacy, temperature, and lighting were important for well-being in built environments.

When analyzing the data, some of the dimensions in each category were discussed while others were not. Under the category of health, purpose, and relationships all the dimensions were mentioned. In the category of environment, access to nature and clean air were mentioned, clean water and toxin free were not, however recycling was mentioned more than one as well as energy efficiency. Under the category of security/safety, sufficient finances and personal safety were mentioned, but basic needs and stable employment were not. Many participants mentioned security in reference to being secure in who they or their families were in there homes or feeling secure emotionally and physically in there homes. Under the category of control, noise, privacy,

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temperature, and lighting were all mentioned, but one of the greatest areas of control that participants discussed was control over clutter and cleanliness. Other areas that were mentioned but not in the existing model were appearance/aesthetics, architectural features, storage, windows, personalization, light, and space.

Therefore, if creating a model for well-being in the home I would alter Kreitzer's (2012) model by maintaining the systems approach, represented by the well-being factors within the larger circle. Within this system all the factors work together but can also stand on their own. The human occupant is at the center with seven factors of well-being surrounding it. These factors are the natural environment: nature views, gardens, green space, yard, sun, water, toxic free, and animals; built environment: open space, size, architectural features, windows, storage, light, appearance/aesthetics, personalization, layout, and privacy/retreat; security/safety: basic needs, sufficient finances, locks, retreat, security system, and floors above ground level; purpose: layout, accessories, personalization, space; relationships: social connections, quality of, networks, gathering space, and privacy; control: temperature, lighting, privacy, noise, clutter, cleanliness; and health: physical, emotional, mental, and spiritual (see Figure 9)
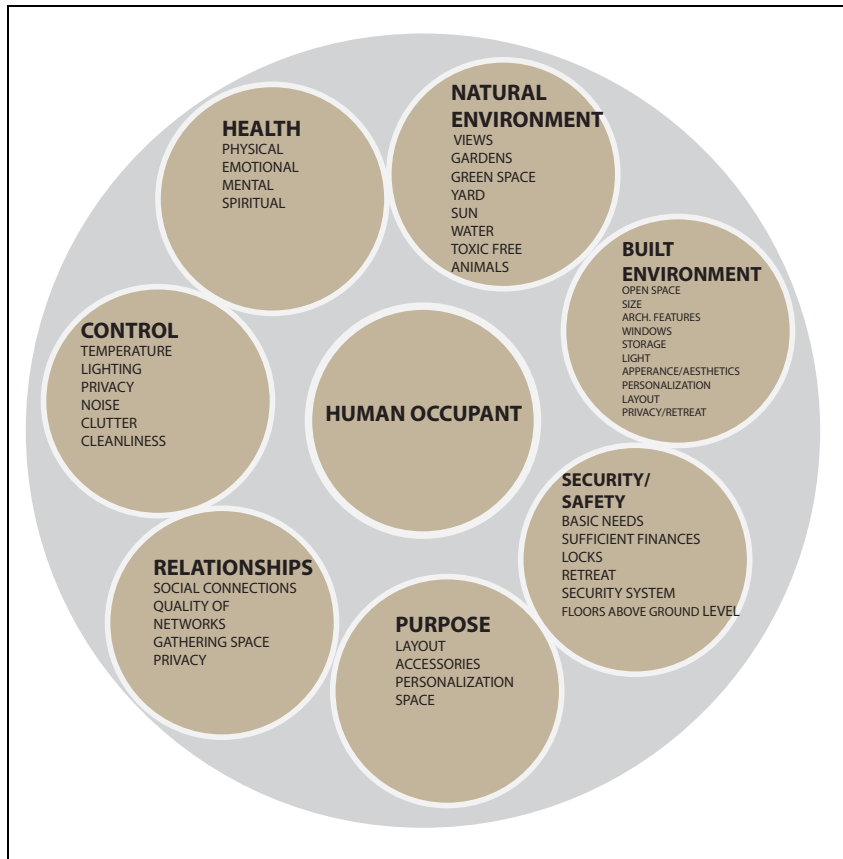
Figure. 9 Proposed Residential Design Well-being Model

Recommendations

Based on the findings in this study, recommendations for well-being in the home are as follows. Many are already used by interior designer's which supports their work practices:

Space

- Incorporate enough space in the home to not feel overcrowded. The number of bedrooms according to family size is a good way to track the amount of space one may need.

- Having enough space to care for the family and to interact together in the kitchen specifically with cooking and eating is essential.

- An open floor plan allows people in their homes to be able to see and hear what is happening from different rooms, but also make sure there is some space in the communal areas that can be closed off for those who seek refuge and privacy.

- Plan the layout so it optimizes the way occupants function in the space. One such space included in the layout would be a mudroom that helps that may help to eleviate stress during transitions of entering and exiting the home.

Reducing stress

- Built-in and/or applied open shelving and closed cabinets or drawers should both be considered in space planning for the home to control clutter.

- Specify materials and finishes that are easily cleaned.

- To support the prevention of clutter, paying attention to how individuals function in their homes will aid in space properly planned for the size and layouts that would be most beneficial.

- Create spaces in the home that allow for privacy and retreat for both children and parents.

Nature

- Create spaces that support nature such as large operable windows that can frame views and allow direct contact with nature such as sunlight.

- Orientate rooms you may spend the most time in towards the south to benefit from sunlight.

- Provide accessibility to gardens or backyards, and spaces for greenery in the home.

- Incorporate wall space for images reflecting nature.

Personalization

- Create spaces that allow for personalization such as shelving to display meaningful items.

- Use paint/color, wallpaper, and other finishes that residents prefer.

- As interior designers it is important to explore what client's are deeply connected to. This can create deeper meaning and change a house to a home.

Implications

Implications for this study are vast and interdisciplinary in nature. After reviewing the data, professionals in design, housing policy, health professionals, and mothers can benefit from findings.

Design Professionals. The field of interior design is in a unique position to make contributions to improving the human condition in the interiors where people live their lives. As a result, interior designers are charged with the responsibility of keeping people's health, safety, and well-being at the center of all decisions (ASID, 2013). They are capable of designing the built environment in ways that can hinder or enhance

people's quality of life. The findings of this study can aid interior designers and others in design professions to support a better quality of life mediated by their home environment. This study also adds to the body of knowledge by exploring a topic that has been called for more research. It aids in filling the gap of the intersections between well-being and residential design literature, an area that needs more exploration with studies like these.

Public Health. The topic of this study is an important issue because as the American Lung Association states, Americans spend 65 percent of their time in their homes and 90 percent of their time indoors (as cited in Aerias, n.d.). In children's developmental years, most of their time is spent in their homes, as it is the first substantial introduction to the built environment. Here, in these "first places," children's characters are developed, learning how to interact with others takes place, and the most critical phases of physical and mental development happen (Israel, 2003; Miller and Maxwell, 2003). Inadvertently, people's homes shape them, and people shape societies. It is important then, for the home to provide a physical setting that enhances social and psychological well-being so families can make quality contributions to society. In addition, raising children adds a level of stress that impacts social support, feelings of isolation, and control in the home (Currie, 2009; Murphy and Cloutier-Fisher, 2002; Rubin and Wooten, 2007). Stress is a factor that has been determined to hinder well-being (Evans and McCoy, 1998; Ulrich, 1991). Mendes et al. (2012) found that stay-at-home mothers have a higher likelihood of being stressed and depressed than employed mothers and women with no children. Coping with ongoing stress can ultimately lead to

illness and disease such as high blood pressure, heart disease, and depression (Buettner, 2010; Sternberg, 2010; Woo, Tang, Suen, Leung, and Wong, 2009). Infants and children are also affected, as there is a link between debilitating depression in mothers and their interactions with their children, creating higher occurrences of developmental delays in children (Manuel, Martinson, Bledsoe-Mansori, and Bellamy, 2012). Due to the influence the physical environment has on people's emotional and physical health, well-being factors such as stress may be able to be reduced by design factors in the interior environment especially the home environment.

These well-being implications support the need to identify any physical environment factors in the home that can reduce stress, increase control, or improve quality of life. The design of space may indirectly and directly impact individual well-being, making this topic a public health issue (Frumkin, 2005; Jackson, 2003). The findings in this study add to the body of knowledge in new research that is exploring the salient impacts of public health and built environments, in this case specifically the home (Chan and Woo, 2010; Kurko and Holden, 2012; Srinvasan, O'Fallon, and Dearry, 2003)

Health Prevention. Findings from this study can aid healthcare professionals in supporting wholistic health as it incorporates the built environment, an area often overlooked, but has great effects on physical and mental health. Exploring the home environment can offer more clues to health disparities and can also aid in health prevention. As seen in this study, the subjects identified positive and negative emotions that affect stress levels. This is especially important when chronic stress created by

ambient stressors is involved. Such stress can create physical and mental pathologies.

Housing policy. Many of the subjects in this study (50%) live in affordable student housing, with 43% making between $25,000-$35,000 per year. Of those making $25,000 - $35,000 per year all have households of five with the exception of one who has a household of three. The reason why these statistics are important is because it offers an idea of what is salient for mothers who live in affordable housing. Though the study cannot be generalized due to the low number of subjects, the rich findings offer tangible recommendations that should be considered in affordable housing as viable solutions for implementing characteristics and features in the home that enhance well-being. In many cases, affordable housing is of lower standards than market rate ones (Yust, Bruin, and Bellefuil, 2010), offering occupants little to no features in their home that can enhance well-being. Due to lack of resources, this population in many cases can benefit more as finances and lack of other resources may detrimentally effect health. To the contrary, those with higher incomes reap the benefits of features that enhance well-being and a better quality of life.

Mothers. As stay-at-home mothers are in their homes often, these studies have great implications. Recommendations from this study's findings can possibly be a way to reduce stress levels in their lives as a supportive measure. Optimal healing environments and supportive design promote social support, control, and restoration. All areas that have been found as coping methods for maternal well-being, and areas that need improving upon for those with maternal depression (Ruben and Wooten, 2007). Again these findings

show a connection between psychological health and the environment.

Limitations

This was a qualitative study that sought to explore what well-being means to stay-at-home mothers in the home. It is the nature of qualitative studies that the number of subjects tend to be few while the depth of knowledge is richer. As this is the case the findings may not be generalizable across all homes due to the low number of participants (N=14). In addition 50% of the subjects lived in family student housing, which is unique. Living in family housing is temporary until they graduate from college. Many living in the student housing complex are graduate students working on either a masters or PhD degree. This means that the families have very real opportunities to be gainfully employed in the near future. This is not usually the realization of families typically living in affordable housing that may have less hope for their futures, which may impact how they view their homes. Lastly the ethnicities of the participants were very similar as 80% of the sample was Caucasian. Not having a varied representation in ethnicities also prohibits the generalization of findings.

Conclusion

The purpose of this study is to explore what psychological well-being means when related to the home environment and identify factors that promote well-being in this environment for stay-at-home-mothers. The research questions for this exploration were:

1.   What does well-being in the home mean to stay-at-home mothers?

2.   Are there physical features in the home environment that increase a sense of well-

being?

3.   Are there physical features in the home environment that decrease a sense of well-

being?

It is important to look at the assumptions stated in the beginning of the study to see

if they were met or unmet. The main assumption for this study is that nature would be a

contributor to achieving well-being in the home. In addition, most mothers will not

understand initially that nature does play a big role, and if so, the magnitude it plays. This

assumption held true as one of the main features or characteristics in the home were

associated with nature. The assumption that the participants would not understand this

was however unmet. The majority of participants did know what was meant by nature

and how it affected them mentally and physically.

The next assumption was that the built environment has a great effect on human

emotions and behaviors; therefore the home environment may hinder or support

psychological well-being. This assumption was met as all of the participants during the

course of the interviews spoke about how their homes affected their emotions and

behaviors both positively and negatively.

The assumption that stay-at-home mothers felt isolated in their homes and therefore

had a need to find coping mechanisms to deal with isolation was unmet. If this was the

case mothers did not express this sentiment. Many talked about wanting privacy and a

retreat from time to time being inferring that they in fact sought isolation.

The next assumption that many stay-at-home mothers felt a loss of identity and

needed ways to relieve stress was unmet as well. It was not observed or stated that there

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was a loss of identity, however many mothers did talk about ways to relieve stress, but not for these reasons.

The final assumption that clutter and lack of space hinders a feeling of well-being and if these elements were resolved, a better sense of well-being would be achieved was met. The majority of participants talked about the negative effects that clutter had on their well-being and stated that if it were alleviated they would have positive feelings towards their homes.

The findings in this study offered a better understanding of the lived experiences of stay-at-home mothers in their homes and what supports well-being for them. It appears that the essence of these experiences was the ability for their homes to support togetherness, physical and mental health, and happiness. It is recommended that further research is conducted in the dimensions of well-being this study uncovered, specifically in the area of space, clutter, and nature as they were the most identified as supporting or hindering well-being.

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Appendix A. Telephone Script

Identifying Psychological Well-being Factors In the Home
Study Number 1301E26204

Script for Initial Call and Qualifying….
When I call household in response to subject leaving her name after getting basic information about the study at xxxxx.).
Hello this is Angie Scott, a graduate student at the University of Minnesota and I'm doing a study that you might be interested in. My study is about identifying well-being factors in the home. If you are interested, I'll tell you more. Yes, OK, May I have your name? Hi
_____thank you for thinking about participating.
Or
(**If subject leaves me a message on the phone in response to request for participants at xxxxx**)
 Hello this is Angie Scott. I am returning your message in regards to your inquiry about the research study I am conducting related to well-being in the home. Is this a good time to talk? To participate in the study you must be a stay-at-home mother with the exception of being a student with or without an assistantship. You must also have children living with you between the ages of zero to five years old. Your children can not have any known disabilities or developmental delays.
Do you meet these criteria?
(**If caller meets the criteria**) Great, would you like me to tell you more about the study?
(**If caller does not meet the criteria**: Ok, thank you for inquiring about this study. If you know anyone who meets the criteria and you think they might like to participate, please pass on my information. Have a great day.)
(**Voice mail message:** Hello you have reached Angie Scott, University of Minnesota researcher for the well-being factors in home study. If you are interested in participating in the study, please leave your name, phone number, and the best time I can reach you, and I will return your call within 24 hours. Thank you for your inquiry and I look forward to talking with you.)

Script to explain study:

I am seeking your input to better understand the broad term of well-being as it relates to the physical environment of your home. We hope to provide tools that will reduce stress and support a better quality of life for you and your family. Your help will also aid designers and architects in designing homes that support people's well-being, will aid health practitioners to understand potential stressors in the home, and even affect housing policy to impact planning and building practices of homes for those who reside in affordable and low-income housing.

If you agree to be in this study, I will ask you to do two things. First, in an in-home interview, I will ask you questions about how you feel about your home. The second task will be for you to use my camera to photograph places in your home that you like and dislike and explain why you feel that way.

I will keep all the information you provide to me confidential and you will have the right to stop the interview process at anytime. In appreciation of your time and help, I will enter all participants in a drawing to win a $100 gift card to a local retailer. I will also provide all participants with tips that have been used in homes like yours to reduce stress and support well-being. I will also provide all participants a summary of the findings in this study.

Does this sound like something you would be interested in?

If yes: Ok. Let's schedule a time now. Once the interview is set up, I will meet you at your home at the scheduled time. The interview should take between 45 minutes to an hour. At this time I will have a consent form for you to sign before we begin if you still choose to participate. I will send you a confirmation email or phone call depending on your preference. Do you have any questions about anything we've discussed? Ok. Thank you for your interest and time, and I will be in contact soon. Have a great day.

If no: Ok. Thank you for your time. If you know anyone who meets the criteria and you think would like to participate, please feel free to pass on my information. Have a great day.

Appendix B. Consent Form

Identifying Psychological Well-being Factors In the Home
Study Number 1301E26204

You are invited to participate in a research study about well-being in the home. You were selected as a participant because your opinion about the meaning of well-being is important to this study. We are seeking your input to better understand the broad term of psychological well-being as it relates to the physical environment of houses. We hope to provide strategies that will reduce stress and support a better quality of life for you and your family. Your help will also aid designers and architects in designing homes that support people's well-being, will aid health practitioners to understand potential stressors in the home, and even affect housing policy to impact planning and building practices of homes for those who reside in affordable and low-income housing.

Background Information

The purpose of this study is to explore what psychological well-being means in the home and identifying factors that might decrease stress and promote well-being for families. Stay-at-home mothers spend a great amount of time in their homes and they have potentially high levels of stress as they care for their children. Therefore, we know that they will have important input on ways well-being and stress reduction can be supported by the home's physical environment. Outcomes of this study will aid designers and architects in designing homes that support people's well-being, will aid health practitioners to understand potential stressors in the home, and even affect housing policy to impact planning and building practices of homes for those who reside in affordable and low-income housing.

Procedures

If you agree to be in this study, we will ask you to complete two different tasks. First, will be to participate in an in-home interview in which I will ask you questions about how you feel about your home in addition to standard demographic questions. At that time, I will also have a camera and ask you to take photos of your home concentrating on parts you like and dislike and explain why you feel that way.

By signing this form, you will be giving consent to participate in the interview and to take photos in your home which can be used without identification in media, presentations, and publications about this research project.

Risks and Benefits of Participating in the Study
The study poses minimal risks. However some questions may seem personal as the study talks about your feelings in certain situations and settings. Benefits to you might be the tips I will provide you that have been used in homes like yours to reduce stress and support well-being, as well as outcomes from this study that I will provide you which may aid in stress reduction and add to a better sense of well-being and quality of life in your home.

Compensation
If you agree to participate in this study, your name will be entered in a drawing for a chance to win a $100 gift card to a local retailer. All participants will also be given research-based tips on how to decrease stress in their homes and create a better sense of well-being.

Confidentiality
Interview answers and observation notes will be kept confidential. No individual will be named on interviews, photos, or observation notes. Final reports and presentations will not include any information that would identify a participant. Research records will be kept in a secure, safe location, and only the researcher and the researcher's advisor will have access to those materials.

Voluntary Nature of the Study
All participation in this study is voluntary. The decision of whether or not to participate in the study will not affect your relationship with your home, facility (including staff and administration), or the University of Minnesota. If you decide to participate in the study, you are welcome to refuse to answer any question or withdraw your participation at any time without affecting the aforementioned relationships.

Contacts and Questions
Any questions or comments you may have about the project, interviews, observations, photographs, reports, or presentations may be directed to Angelita Scott at brow0409@umn.edu, (612) 524-9296 or her advisor, Dr. Denise Guerin at dguerin@umn.edu, (612) 626-1257. Any questions you may have now or later are welcome.

If you have any questions or concerns regarding the study that you would like to discuss with someone other than Angelita Scott, you are encouraged to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware Street SE, Minneapolis, MN 55455, or (612) 625-1650.

Participant signature_____Date_____

Investigator signature_____Date_____

Appendix C. Sponsored Letter

March 19, 2013

Como Student Community Cooperative
1024 27th Ave SE,
Minneapolis, MN 55414

Dear Ms. Lantz Driver:

I am writing to ask your help in an important research study. I briefly spoke with you last year about seeking out participants at CSCC for my research on the role our physical environments play on well-being in stay-at-home mothers. I am ready to begin my research and am writing to formally request permission to solicit participants. I am a masters student in Interior Design in the College of Design, University of MN and reside here at CSCC. The purpose of my study is to explore ways to reduce stress and support well-being through the physical environment in the home. I will be seeking out stay-at-home mothers (including students) with children ages five and under to participate in this study as they spend much of their time in the home and have the potential added stress of taking care of their children during the day. If your permission is granted, I am asking if you will you will allow me to post the enclosed flyer around the CSCC community and it be posted in the electronic newsletter, website, and Facebook page. Below you will find pertinent information about the study, confidentiality, and contact information.

Background Information
Using an inter-disciplinary approach, this study will explore the intersections of the home environment and psychological well-being. The proposed research will ask the questions: What does well-being mean to you? What are the physical environment factors that contribute to people's well-being in their homes? Interviews with stay-at-home mothers with children ages five and under will be used to shed light on the relationships between the home physical environment and factors that impact well-being to reduce stress and bring about a better quality of life for them and their families in this space. Over two phases, the researcher will utilize a

combination of methodologies from observation, in-home interviews, and photo elicitation to better understand how well-being is related to the home physical environment. Qualitative analysis will be used to elaborate on the effects of the housing environment on the mothers. The findings can be used to inform the design of spaces that enhance well-being as a preventative health measure; empower mothers and healthcare providers with design recommendations that promote well-being and contribute to housing policy development in the planning of affordable and low-income housing. The attached consent form will give you more detailed information about the study including procedures, risks and benefits, compensation, and confidentiality.

Contacts and Questions
Any questions or comments you may have about the project, interviews, observations, photographs, reports, or presentations may be directed to Angelita Scott at brow0409@umn.edu, (612) 524-9296 or her advisor, Dr. Denise Guerin at dguerin@umn.edu, (612) 626-1257.
If questions or concerns arise from this study that participants would like to discuss with someone other than Angelita Scott, they are encouraged to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware Street SE, Minneapolis, MN 55455, or (612) 625-1650.
Thank you in advance for your time and effort. Please do not hesitate to call with any questions that may arise.

Sincerely,
Angelita Scott

University of Minnesota
College of Design
MS Candidate –Interior Design

Appendix. D Script and Schedule of Questions

Script for Interview

Well-being is hard for many people to explain, but it typically refers to your quality of life or the positive feelings you get about your life above and beyond being content. Usually this happens when your basic needs are being met and you have a sense of control over your life leading to your highest level of satisfaction. Unfortunately there are things that cause stress in our lives and can cause us to have negative feelings or dissatisfaction. Both the positive and negative feelings can indicate factors of well-being. We can relate this same way of thinking to our homes. Are there are characteristics and/or features in our homes that give us positive feelings and negative feelings that directly affect our highest level of satisfaction. With this in mind, I would like to understand what well-being means to you in your home by answering the following questions:

Q1. What does well-being mean to you?

Q2. How does your home make you feel?

Q3. Are there features or characteristics in your home that give you positive feelings?
　　Probe: How do you feel when you are experiencing _____?
　　　　Probe: If you didn't have enough of _____ how would that make you feel?

Now I would like you to take a picture for me of your *favorite place* in your home.
Q4. How do you feel when you are in this place?
　　　　Probe: Why do you feel this way?

Ok. Now let's talk about things that are negative to you in your home.

Q5. Are there features or characteristics in your home that give you negative feelings?
   Probe: How do you feel when you are experiencing_____?
       Probe: If you had enough of _____how would that make you feel?

Now I would like you to take a picture for me of your *least favorite place* in your home.
Q6. How do you feel when you are in this place?
       Probe: Why do you feel this way in this place?

Now let's talk about specific areas of well-being in your home. This is a visual definition of what well-being consists of *(showing well-being model).* **Though all these elements are present the scope of the questions I will be asking you will focus on those that can relate to your home.**

Q7. Are there features or characteristics in your home that support health?
       Probe:

Q8. Are there features or characteristics in your home that support relationships?
       Probe:

Q9. Are there features or characteristics in your home that support control?
       Probe:

Q10. Are there features or characteristics in your home that support security or safety?
       Probe:

Q11. Are there features or characteristics in your home that support a sense of purpose?
       Probe:

Q12. Are there features or characteristics in your home that support the natural environment?
       Probe:

The next question I am going to ask pertains to your future home
Q13. If you moved what top three features in your next home do you wish to have that will give you positive feelings?
       Probe: How do you think that will make you feel when experiencing _____?

Overall Questions

Q14. What does well-being mean to you?
Q15. Is there anything you would like to add?

We are wrapping up. I just have a few more questions before we are finished. If you can fill out these demographic questions while I finish jotting down a few notes and take a few more pictures if you don't mind, I would greatly appreciate it (*give demographic questions to participant).*

Lastly, do you know any other mother's who meet the criteria of this study and may be interested in participating? I am asking because it is more difficult to locate mothers who meet the requirements for the study and people tend to feel more comfortable if someone they know has introduced them. So, if you know someone would you mind sharing her contact information or passing mine on?
I would like to leave you with these tips that have been found to reduce stress and support well-being. After my interviews are completed I will enter your name in a drawing to win a $100 gift certificate to a local retailer. I will notify the winner by email or phone. In addition I will supply you with a summary of this study's findings once it has been completed. If you don't have any questions, I want to thank you for your time in helping me with this research. If any questions come up feel free to contact me.

Well-being Factors In the Home Demographic Questionnaire

1. What is your age?
   a. 15-21
   b. 22-34
   c. 35-44
   d. 45-54
   e. 55-64
   f. 65 and Over

2. What is your race/ethnicity?

3. What is your marital status?
   a. Married
   b. Widowed
   c. Divorced
   d. Separated
   e. Never married

4. How many people are in your household?

5. How many children are in your household age five and under?

6. How many bedrooms are in your home?

7. Do you rent or own your home?

8. What is your annual household income?
   a. Less than $10,000
   b. $10,001 to $25,000
   c. $25,001 to $35,000
   d. $35,001 to $50,000

e. $50,001 to $75,000
f. More than $75,000