

UNDERSTANDING AND MEASURING CARING
BEHAVIORS IN UNIVERSITY STAFF

A Thesis Presented to the
Faculty of the College of Education
University of Houston

In Partial Fulfillment
of the Requirements for the Degree

Master of Education

by

Emily A. Messa

May 2012

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Abstract

This study sought to understand whether prolonged involvement in activities that potentially elicit generative behaviors had an impact on the overall generativity of university staff. To date, the research on an ethic of care at universities has been largely qualitative, and a review of the literature on the psychosocial construct of care in adults notes the need for study of adults before and after exposure to activities that may potentially elicit generative, or caring, behaviors. New instruments in psychology that measure caring concern and behaviors provided potential for the empirical study of care in university supervisory staff. Using two instruments from the psychological study of adulthood generativity, the Loyola Generativity Scale (McAdams & de St. Aubin, 1992) and the Generative Behavior Checklist (McAdams & de St. Aubin, 1992), this study sought to provide important contributions to the study of adulthood generativity and higher education theory about how communities of caring staff can be developed. The sample (n=15), randomly drawn from professional, supervisory staff at a large, urban research university, were divided into treatment and control groups. Treatment group participants were directed to participate in campus activities that benefitted students during the fall semester 2011. Control group participants were not provided directed activities. Additionally, individual interviews were conducted with the participants in the treatment and control group to understand underlying themes and potential future directions for research that blends the psychological construct of care and the development of a community of caring university staff. These individual interviews

became an important component of the study as the unexpectedly low number of participants limited the analyses that could be done with the survey data. Observed themes from the individual interviews were compared to the literature on adult generativity in order to provide additional insight for the importance of the creation of caring staff communities to institutions of higher education. In the study, the overall LGS mean score for the treatment group increased .57 points (on a scale from 0 to 60 points) between administrations and the overall mean score for the control group increased .13 points during the same timeframe. For the GBC, the overall treatment group mean increased .30 points (on a scale from 0-80 points) while the overall control group mean decreased .40 points between administrations of the pre- and post-tests. These findings were consistent with the individual interviews as those who participated in activities communicated their desire to continue to teach and mentor university students, became aware of student fears and stress by interacting with students, believed they were connected to the future, derived a sense of well-being through their participation, and deeply believed in the continued successful future of the university as a place where caring and transformation occur.

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Chapter1: Introduction

The mission of the public American research university has always been to change the world through educating its students and through faculty research and innovations (Harrington, 1963). Yet the dynamic nature through which campus cultures are created and sustained does have an effect on how universities are able to fulfill this mission (Kuh, 2001). Campus cultures evolve in many ways, including the university's history, traditions, setting, practices and values (Birnbaum, 1988; Kuh, 2001). The evolution of the culture becomes complicated because the faculty, staff, administration and trustees at a university have different backgrounds, interests and sometimes seem to speak in different languages (Birnbaum, 1988). This is further complicated at bigger research universities that have large enrollments, which can make these universities seem to be places that do not support any institutional culture at all (Kuh, 2001). However, institutions that place an importance on the value of community and care for students have higher student satisfaction and retention rates (Kuh, 2001). These universities have been successful at creating a shared vocabulary (Birnbaum, 1988) and are consistently reinforcing an ethic of care (Kuh, 2001). Students at these universities feel that if they are ever struggling with an academic or other situation, there are university employees committed to interacting with them in a way that supports their individual success (Kuh, 2001).

There are some noted examples of the virtue of care in action within the leadership of American public research universities. Herman B. Wells (1962), long-time Indiana University president and later chancellor, personally signed 62,621 diplomas of

each of the graduates of the university during his time as president. Even though Wells (1962) was an administrator, he would take the time to read each name and feel a deep connection with each graduate. University of Wisconsin President Fred Harvey Harrington (1963) wrote that all administrators have a role to continue their connection with the students and the classroom experience, even if there are 20,000 or more students at the university. More recently, Rutgers University President Richard L. McCormick is noted for the creation of Rutgers Day, a community celebration of the research and teaching at the various campuses of this university. At this celebration, McCormick opens his office so that the community can see firsthand what it is like to be a university president. At the University of Houston, President Renu Khator is noted for her visits to university classrooms during the first week of the new academic year and eating in the residential cafeterias throughout the year. While on her campus visits, Khator can be found having informal conversations with the students about their experiences at the university. There are numerous programs at many campuses throughout the country that offer care and support to students, including freshmen interest groups, faculty in residence programs and advising strategies for students who have not declared a major.

Understanding the Ethic of Care on a University Campus

If a campus culture of care is important and there are already smaller programs on university campuses that care for students, one may wonder how a culture of care can be propagated and nurtured for an entire university campus. One may wonder what would happen if a university collectively embarked on a path to become a more caring institution. This research study sought to understand more deeply the virtue of care in

university staff and how this knowledge can be utilized to facilitate greater institutional change on a campus. In order to examine the virtue of care within university staff, the results of a four-month research study conducted at a large, public research university, were analyzed. The question this research sought to answer is whether prolonged involvement in activities that potentially elicit generative behaviors impacts the overall generativity of university staff. To understand these questions, this study used generally accepted measures of caring or generativity including: the Loyala Generativity Scale (McAdams & de St. Aubin, 1992) and the Generative Behavior Checklist (McAdams & de St. Aubin, 1992). Generativity in university staff was also measured after participation in caring acts over an extended period of time. Responses from qualitative individual interviews were used by the researcher to have deeper conversations with university staff about their participation in this study and themes about generativity in both the treatment and control group were compared and contrasted. It was hypothesized that university staff who are directed to participate in generative acts over an extended period of time would have more measurable generative behaviors than university staff who were not specifically directed to participate in generative behaviors over the same time period.

When understanding care and its impact on the culture of an American research university, it is important to understand more about the general concept of care. Kuh (2001) explained that care on a university campus is defined as a staff member's belief that all students at that university can be successful, and this belief is exhibited in the way each university staff interacts with students. Digging deeper into the ethic of care on a university, one is directed to the psychosocial work of Erik Erikson, whose psychosocial stage development theory espouses that care is the virtue that should be developed in his

adulthood Stage 7: Generativity versus Stagnation (Miller, 2011). Erikson's psychosocial stage development theory was the result of his clinical work and observations of people, biographies of famous individuals where he applied his developmental theory, and self-evaluation applying his developmental stages to his own life (Miller, 2011). Stage 7 is the longest stage in Erikson's developmental theory and biologically occurs during middle adulthood. In this stage, the individual grows in self-esteem by caring for others (Massey, 1986). Care for others can be in the form of parenting or caring for the larger world, and shaping the identities of the next generation (Massey, 1986). Involvement in the wider environment of children, family and community becomes important to the individual in the growth of his esteem (Massey, 1986). The generative adult has a wider sphere of influence as his caring interactions with youth can create an environment that compensates for lack of development within the youth during past stages (Massey, 1986). The primary goal of this stage is care, both caring for others and caring for self. The key statement of this stage is, "I (we) am (are) what I (we) care for" (Massey, 1986, p.85).

Erikson's virtue of care within the psychosocial framework provided a good model for understanding care in university staff because peer-reviewed instruments for measuring virtue of care in adults have been developed based on Erikson's theory. These instruments provided empirical evidence for understanding caring commitment and caring behaviors in university staff. University staff can best be described as the adults on a university campus responsible for setting many non-academic policies for the university and running the services on a university campus. These individuals have the largest interaction with students and faculty outside the classroom. Staff on university campuses work in academic advising offices, human resources, accounting, student financial

offices, residential life and housing, parking offices, police departments, food service, college bookstores, campus activities, planning and construction, facilities, information technology and many other university departments. Staff interactions with students are unique because many of the staff on a university campus infrequently encounter students, except in special circumstances, such as a university-wide committee. The biological age of most university staff is in early to mid-adulthood based on Erikson's stages, which also made staff at a university a good population to test Erikson's theory because generativity or care in adults is typically associated with the later 30s and 40s (McAdams *et al*, 1998). Those individuals who do not express care by this timeframe are biologically out of synch (McAdams *et al*, 1998).

This research undertaken here focused on the staff employed at a large, urban campus, and understanding staff perceptions of their own generative or caring acts before and after a treatment group was exposed to generative behavior over an extended period of time. This research offered a method that can be repeated by university administrators as university leaders seek to understand the generative behavior of their own staff and if caring acts on a university campus can be motivated. There has been documented research about generative behavior and how to measure human perception of one's own caring acts (McAdams, de St.Aubin & Logan, 1993). Research also exists illustrating the correlation between generativity and human perception of well-being (Huta & Zuroff, 2007). There was also a noted need for research on the results of adult participation in generative acts over an extended period of time (Huta & Zuroff, 2007). Since universities have a large population of adults in the stage associated with natural generative behaviors and because the role of the university can be equated with caring acts, a study of

university staff to better understand this phenomenon was believed to be beneficial to the body of knowledge about generativity. Analysis of staff participation in caring acts through this study provided university administrators information on how they can create a culture of care on their university campuses.

There were a few limitations to this particular research study. Since it was a study that only spanned an academic semester, a longer timeframe may be needed to see more long-term changes in the generativity of individuals. Being that this study was conducted at one particular university in an urban setting; results may not generalize to smaller colleges or universities that are in more rural areas. However, the aim of this study was to offer a framework for university administrators to understand how to motivate generativity on their own campuses. Since this study offered a framework that could be used by other universities, administrators should be able to replicate the study on their own campuses and determine the applicability to their own setting.

Chapter 2: Literature Review

Much has been written on the topic of the psychological construct of generativity, or caring in adults. There have also been a number of studies reviewing the importance of care and supportive environments at colleges and universities, in order for students to be successful. In this section, the literature review discussing a number of studies, both of the psychological construct of caring in adults and the importance of care on colleges and universities. Importantly, connecting bridges between the psychological studies and terminology and the studies within higher education will also be discussed. This section addresses gaps and opportunities in the current studies and research, which provided the framework for this study on generative behaviors in the adult staff that supports the students on American public research universities.

Erikson's Concept of Care in Adults

The psychological concept of care in adults, or generativity, is most closely connected in the psychological literature with Erikson's psychosocial stage theory. In Erikson's theory, care is the virtue adults aspire to in his Stage 7: Generativity versus Stagnation. Erikson defines care as the concern for the well-being of future generations and the future of the human species, even in the face of wars, atrocities and other events that could lead the human to have negative thoughts or not believe in the species (McAdams, 1998). Erikson believed that the generativity or caring in adults would enable them to rise above negativity and continue to perform generative acts even in the face of difficult times (McAdams, 1998). Generativity may be stronger at certain points in the human's life and culture and society do influence the way the adult expresses generativity

(McAdams, 1998). Erikson espoused that the caring exhibited by adults would require sacrifice of time and may be uncomfortable but that the feeling of well-being received by adults would outweigh the personal sacrifice (Huta & Zuroff, 2008). In Erikson's psychosocial theory, the social dimension and the environment for growth of the individual are important and he believed it was critical for humans in different psychosocial stages to interact in order that crises could be resolved and healthy psychological development could occur (de St. Aubin *et al*, 2004). Erikson believed lifelong learning and intergenerational education and interaction were important and should be encouraged for the healthy psychological development of humans (de St. Aubin *et al*, 2004).

Adulthood is stage 7 in Erikson's eight-stage psychosocial developmental theory (Miller, 2011). Erikson's theory is biologically based and requires the resolution of a crisis in order for the healthy development of the human to continue through each of the eight stages (Miller, 2011). The eight stages include: Stage 1: Trust versus Mistrust; Stage 2: Autonomy versus Shame; Stage 3: Initiative versus Guilt; Stage 4: Industry versus Inferiority; Stage 5: Identity versus Identity Diffusion; Stage 6: Intimacy versus Isolation; Stage 7: Generativity versus Stagnation; and Stage 8: Integrity versus Despair (Miller, 2011). Erikson's stages were much more optimistic than the psychoanalysis theories, where the psychological development of the human ended in adolescence and if crises were not resolved, the human would not continue developing and may be stuck or even regress (Miller, 2011). Erikson offered a more hopeful and optimistic theory, where the human could resolve previous crises in future life stages if the social and environmental conditions provided enough support to the human (Miller, 2011).

With the development of his psychosocial stage theory, Erikson was the first theorist to focus on adulthood and consider that important human development occurred after adolescence (Hoare, 2002). Erikson used Freud's theory as a springboard, but expanded psychoanalytical theory and provided a more optimistic look into the developing human (Miller, 2011). He believed that in adulthood, the human would reap the benefits of investments in their own development that occurred in past stages (Hoare, 2002). Since this is the longest stage in the human's life, the adult will evolve and grow based on experiences from the past and current stages to write and re-write his personal story of how he fits into society and history (McAdams, 1998). Erikson's adulthood stage begins biologically in mid-to-late 30s and ends in later adulthood (McAdams, 1998). In this stage, the human expresses themselves in the stage through parenting, mentoring, guiding or another role as a caretaker of others and the self (McAdams, 1998). Much of this desire to care for others is a result of the human's desire to live on through others, the need to feel needed and a desire to nurture others (McAdams, 1998). The nurturing and caring for others leads the human to develop the virtue of care (McAdams, 1998).

Empirical Measures of Erikson's Concept of Care in Adults

Research by McAdams, de St. Aubin and others created empirical measures with which to test Erikson's theory in adults (McAdams & de St. Aubin, 1992). Much of the research confirms many of Erikson's key theoretical concepts. Drawing on their research about adulthood and generativity, McAdams and de St. Aubin (1992) expanded on the work of Erikson and developed a model for generativity that includes seven characteristics of generative behavior. All seven of these characteristics are linked to the

human adult providing for the next generation (McAdams, de St. Aubin & Logan, 1993). These characteristics include: “inner desire,” “cultural demand,” “concern,” “belief,” “commitment,” “action,” and “narration” (McAdams, de St. Aubin & Logan, 1993, pp. 7-8). Inner desire is the individual’s need to give back to humanity or to live on through teaching the next generation and is combined with society’s expectation that the individual will give back to society by being productive and by being a mentor or otherwise giving back to society (McAdams, 1998). Concern represents the individual’s concern for humanity, the species and future generations and the belief that even in the face of the depravity of man, that there is overall goodness in the world (McAdams, 1998). The previous characteristics lead the individual to a commitment which may produce generative actions (McAdams, de St. Aubin & Logan, 1993). These generative actions contribute to the individual’s personal narrative or his subjective account of his contributions to society, the next generation and history (McAdams, 1998).

Research by McAdams, de St. Aubin and Regina Logan (2003) used empirical tests for four generative variables in Erikson’s work including generative concern, generative commitment, generative action and narration of an individual’s personal generative story (McAdams, de St. Aubin & Logan, 1993). In their research, McAdams, de St. Aubin and Logan (1993) administered a battery of instruments to test generativity in 210 adults in the Evanston, Illinois area (McAdams, de St. Aubin & Logan, 1993). The instruments used included the Loyola Generativity Scale (LGS) (McAdams and de St. Aubin, 1992) to measure generative concern; personal strivings (Emmons, 1986), or statements of the individual’s daily goals; the Generative Behavioral Checklist (GBC; McAdams and de St. Aubin, 1992) to measure generative or caring behaviors; and the

individual's key autobiographical reflections about critical moments in his or her life (McAdams *et al*, 1993). The results of this study were mixed when comparing to predictions based on Erikson's theory of caring, or generativity, as the younger adults' scores in generative concern were almost equal to the scores of middle-aged adults in the first administration of the LGS (McAdams, de St. Aubin & Logan, 1993). No interventions were introduced by the researchers for this particular study. Six months later in a retest, the middle-aged adult scores on the LGS increased significantly and were also considerably higher than both the younger and older adults, which the researchers attribute to the administration of the retest, which was by phone and felt that participants may have wanted to present a more positive image of themselves when speaking to the interviewers (McAdams, de St. Aubin & Logan, 1993).

A study by Huta and Zuroff used the Generative Behavior Checklist (McAdams & de St. Aubin, 1992) to evaluate generative behaviors and compared these behaviors to an individual's well-being (Huta & Zuroff, 2007). Huta and Zuroff's study included 121 undergraduate students from McGill University ranging in ages from 18-32 (Huta & Zuroff, 2007). The researchers administered the following five instruments to all participants in one session: Generative Behavior Checklist (McAdams & de St. Aubin, 1992); Satisfaction with Life Scale (Diener *et al*, 1985); the Rosenberg Self-esteem Scale (Rosenberg, 1965); Positive Affect Subscale of Positive and Negative Affect Schedule (Watson *et al*, 1988); and Mediator Scales, developed by the researchers for this study (Huta & Zuroff, 2007). In this study, the researchers found links only between generative behaviors and subject's satisfaction of symbolic immortality (Huta & Zuroff, 2007). They noted the need for experimental research with individuals who are asked to participate in

potentially generative activities over an extended period of time and impact this could have to individual feelings of well-being (Huta & Zuroff, 2007).

The literature on the psychosocial construct of generativity in adults has grown from the time that Erikson first wrote about his psychosocial stage theory, which evolved from Freud's work on psychoanalysis. Many theorists have expanded on the qualitative concepts developed by Erikson in a clinical setting. Importantly, there are now empirical instruments, such as the LGS, which measures generative concern (McAdams & de St. Aubin, 1992) and the GBC, which provide a way for individuals to self-reflect on their own potentially generative commitments and behaviors (McAdams & de St. Aubin, 1992). Both of these instruments are connected to Erikson's theories and provide measurement tools for social scientists, who seek to understand more about adulthood generativity.

As these empirical tools are relatively new to the field of study of adulthood generativity, limited studies have been done to date on the use of these instruments to measure subjects before and after subjects have been directed to participate in potentially generative activities over an extended period of time. The literature notes the need for research to understand the impact of exposures to potentially generative activities on adulthood generativity (Huta & Zuroff, 2007). The literature also notes the need for future studies that use both the qualitative and quantitative approaches to understand both the empirical measures of generativity and the themes that emerge from the study of adulthood generativity (McAdams & de St. Aubin, 1992).

The Concept of Care on the College and University Campus

The bridge connecting Erikson's virtue of caring to American public research universities and the adult staff who interact with the students at these universities are found in several key studies within higher education. Two theorists, George Kuh and Ernest Boyer have been the biggest contributors to the study of the concept of care and its importance to higher education. In this section, the body of work of these two individuals on the concept of care and a supportive university climate will be reviewed. Additionally, a university project that applied Boyer's theory of community will be discussed.

The work of George Kuh (1991, 2004) provides the largest number of examples of an ethic of care at work on a college or university campus. In this discussion, two studies provide the body of literature on the importance of an ethic of care by university staff to student success at colleges and universities. An approximately year-long study conducted by George Kuh and a group of higher education administrators reviewed the out-of-classroom experiences at fourteen universities and published the results in *Involving Colleges* (Kuh *et al*, 1991). The universities chosen for this study were selected by a 48-member expert panel and universities were nominated and selected by the panel using an unscientific sampling process (Kuh *et al*, 1991). However, the panel selected universities with a wide range of characteristics including small colleges, residential colleges and universities, urban universities, single-sex colleges and historically black universities (Kuh *et al*, 1991). This study focused on the environments that contributed to student success in and out of the classroom (Kuh *et al*, 1991).

Through the series of qualitative interviews at these colleges and universities, the researchers learned that the colleges and universities surveyed for the study were clear about their high expectations for the students, but that within these expectations the students felt cared for and supported (Kuh *et al*, 1991). Kuh's definition of an ethic of care in this research is that care is the support students feel from the institutional agents at the university (Kuh *et al*, 1991). The ethic of care exhibited by staff at these universities was of many forms: whether it was taking care of mechanical issues in the residence hall in a timely fashion, asking students consistently how they are doing, or a note to a student in appreciation for a job well done (Kuh *et al*, 1991). These exhibitions of care created an environment where students felt cared for and most importantly constructed an environment where students could succeed (Kuh *et al*, 1991). Additionally, these colleges and universities had structured safety nets to help students succeed (Kuh *et al*, 1991). These safety nets were not invisible so students did not have difficulty navigating the university nor were they so visible that students felt coddled by the institutions (Kuh *et al*, 1991). At these institutions, ".....students are appreciated for what they bring to the institution, and institutional resources are devoted to helping each student further develop his or her potential" (Kuh *et al*, 1991, p. 56)

In a corresponding study using the some of the same subjects (in this case college seniors) and data gathered as a part of the 1989 study, Kuh furthered elaborated on the importance of the psychological climate of a university to student success and student identity achievement (Kuh, 1995). Participants in this study were interviewed and asked five questions, two of which were: "How have you changed since starting college? and "To what do you attribute these changes?" (Kuh, 1995, p. 127) Students who

participated in this study attributed 11% of the changes in their identity during college to the institutional culture of the university or its “ethos” (Kuh, 1995). Some of the students interviewed felt that the culture of the university encouraged them to act or behave a certain way and this was reported in statements such as, “Earlham did this to me” (Kuh, 1995, p. 142). Notably, in this study none of the students surveyed from the commuter universities attributed any of their identity gains to the university’s institutional ethos, and students at the smaller colleges were most likely to report ethos as a factor (Kuh, 1995). Kuh concluded that even though students in this study reported that more than 10% of what they learned and how they developed personally during college was connected to the institutional culture of the university, there is not much research exploring the psychological climate of the university (Kuh, 1995).

A two-year study by Jillian Kinzie and George Kuh (2004) provided an in-depth review of 20 colleges and universities that performed better than predicted in student engagement and graduation rates when taking into account the student and institutional characteristics (Kinzie & Kuh, 2004). Using data from the National Survey of Student Engagement (NSSE) and the institutional characteristics and graduation rates, Kinzie and Kuh identified 20 colleges and universities from across the United States that met their criteria (Kinzie & Kuh, 2004). These 20 universities scored better than expected in some or all of the NSSE’s five benchmarks, which include: “...level of academic challenge, active and collaborative learning, student interaction with faculty members, enriching educational experiences and supportive campus environment” (Kinzie & Kuh, 2004, p. 2).

The project team reviewed institutional documents, web sites, made campus site visits to each college and university and interviewed 2,700 people throughout the course of the project to understand and develop case studies of what made these colleges and universities so effective (Kinzie & Kuh, 2004). The team learned that one of the critical factors of success among many of these universities was the level of support that the students felt from the university community (Kinzie & Kuh, 2004). This was illustrated in the viewpoints of the University of Michigan's past President Lee Bollinger on the importance of a supportive campus environment to the academic success of the Michigan's students, which was one of the universities studied by the Kinzie and Kuh team (Kinzie & Kuh, 2004). Bollinger said he believed that the strength of the university is connected to the way that the university cares for its students (Kinzie & Kuh, 2004).

At these universities, the researchers found that the high-performing colleges and universities studied often hire employees who are very intentional in the way that they care for the students (Kinzie & Kuh, 2004). At one institution, the researchers noted a particular employee at one of the eating establishments on a college campus, who was observed greeting individual students by name, offering advice to students who were having academic problems, and encouraging students to attend up-coming college activities (Kinzie & Kuh, 2004). This employee felt it was her job to offer a high level of support and caring to all the students at her college (Kinzie & Kuh, 2004). Notably, all of the colleges and universities in this study had high levels of engagement with the on-campus student affairs professionals and academics, but there were hundreds of other staff not trained in the academic or student development theories that felt that they, too,

played an important in the education of all the students at their colleges and universities (Kinzie & Kuh, 2004).

About the same time as Kuh's 1989 study, a similar national study was conducted by the Carnegie Foundation for the Advancement of Teaching, looking at social conditions on college and university campuses (Boyer, 1990). This study reviewed data collected from 382 institutions of higher education who responded to the National Survey of College and University Presidents and 355 institutions who responded through the 1989 National Survey of Chief Student Affairs Officers administered by the American Council on Education and the National Association of Student Personnel Administrators (Boyer, 1990). This survey asked administrators to provide their perceptions on campus issues of concerns (Boyer, 1990). The results of the data analyzed for this study was a report on the pressing campus life issues facing colleges and universities authored by Ernest L. Boyer, president at the time of the Carnegie Foundation for the Advancement of Teaching (Boyer, 1990).

Using the results of the study, Boyer identified what he described as a campus compact that all university leaders should adhere to if they are to rectify the problems that administrators report they are faced on their campuses (Boyer, 1990). The compact identified by Boyer (1990) centers around six principles that he believed should shape the community of a university. These principles include: "(1) a purposeful community, (2) an open community, (3) a just community, (4) a disciplined community (5) a caring community and (6) a celebrative community" (Boyer, 1990, pp. 7-8). Boyer (1990) states

that 97% of the administrators surveyed felt that administrators should take a greater responsibility in shaping the community of their college or university.

At the time of this report, Boyer (1990) had spent almost four decades in higher education and had seen the evolutionary change in campus life on college and university campuses and had served as president of the Carnegie Foundation for the Advancement of Teaching for more than a decade. The analysis in this study was largely reflective of Boyer's experiences during his time in higher education. For many years after World War II, Boyer said that the focus of the administration was on faculty hires and campus facility growth to accommodate the influx of students attending colleges and universities on the G.I. Bill (Boyer, 1990). It was not until the 1960s, a period of unrest across the country, that students began to desire more personal contact and did not want to be just another number on campus (Boyer, 1990). As a result, administrators needed to focus more on the quality of student encounters, not just quantity of experiences (Boyer, 1990). He placed specific concern on the need for students to have interactions with others during their college and university experiences, which includes in-class and co-curricular experiences (Boyer, 1990). Boyer (1990) believed that the campus community should be a laboratory for service learning experiences where students learn to have intergenerational experiences both with younger and older generations. He believed a caring campus is one that not only prepares the students with book knowledge, but also teaches students how to be prepared to address the needs of humanity in the future (Boyer, 1990).

A project conducted in 2000 applied Boyer's 1990 study on community and used these principles as a guide to attempt to create a change in community at the State University of West Georgia (WGU) (Dyer *et al*, 2002). This project was the result of a qualitative planning process conducted by the Vice President of Student Services (VPSS) at this institution of 9,600 students as she defined for her Student Services team how this department could become engaged in their role in increasing the university's graduation rates and developing an engaged community for the students (Dyer *et al*, 2002). As a result of the initial brainstorming sessions, which included 136 participants representing students, faculty and staff on the campus the group identified the ideals in the community that they were most proud of and those ideals within the university community that could be improved (Dyer *et al*, 2002). Some of the noted deficiencies within the campus community were a sense that there were some staff, students and faculty at the university that had unhelpful attitudes and that increases in enrollment had made providing good service to the community challenging (Dyer *et al*, 2002).

After the opportunities on the campus were defined, the participants were asked to develop lists of projects that the campus believed would help them be successful in creating the community they desired on campus (Dyer *et al*, 2002). The result was the identification of seven key goals and action items within the goals that would help achieve the desired sense of community on the WGU campus (Dyer *et al*, 2002). In addition to the specific actions that the university identified, one of the notable results was a change in culture as university departments and groups began to take action on their own in creating a sense of community in their regular programming (Dyer *et al*, 2002). As examples, the study pointed to the WGU Facilities Department who set up

tables with refreshments for parents on move-in day and also provided staff to support the residential staff in moving in new students to the residence halls (Dyer *et al*, 2002). The VPSS also set up welcome tables on campus during the first two days of classes to provide directions and assistance to students (Dyer *et al*, 2002). These tables are manned by students, faculty, staff and university administrators (Dyer *et al*, 2002).

While there were some improvements in creating a sense of community as a result of the project at WGU, administrators reported that these changes did not permeate the campus immediately (Dyer *et al*, 2002). Administrators felt that they needed to broaden their sphere of influence to include other campus leaders in order for the cultural shift in the community to occur across the campus (Dyer *et al*, 2002). Looking back, administrators felt they were too ambitious and if they were to begin the project over again, they would scale back and focus on a few larger goals in order to have more of an impact (Dyer *et al*, 2002). With limited financial resources and recent state-wide budget cuts, they have been slow to implement many of the goals identified at the start of the project (Dyer *et al*, 2002). Overall, the WGU team planned to expand the group to include more faculty, staff and students to continue their project to create a sense of community on their campus (Dyer *et al*, 2002).

The literature about community of care on college and university campuses was mainly qualitative in nature. Much of the studies on the importance of an ethic of care on college and university campuses and its connections to student success come from interviews of college and university students, administrators, faculty and staff by Kuh *et al* (1991), Kuh (1995) and Kinzie & Kuh (2004), which reflect on the students'

perceptions of the care they received while enrolled at a college or university.

Importantly, the concept of a community of care as part of a campus compact that college and university presidents should use as a guiding principle was also noted in a 1990 report by the Carnegie Foundation for the Advancement of Teaching (Boyer, 1990), authored by the foundation president at the time. This report analyzed data from two national surveys of college and university presidents and college and university student affairs professionals to determine the important qualities that colleges and universities should use to develop a sense of community on their campuses (Boyer, 1990). In an additional study, a student affairs leader on a university campus used Boyer's principles of community to try to promote a sense of community and caring among university staff at that institution (Dyer *et al*, 2002). All of these except the Boyer study were qualitative studies and while the importance of a community of care on college and university campuses was noted in these studies, there have been no empirical studies measuring the concept of care in university staff.

Gaps and Opportunities in the Literature

The research on Erikson's adulthood stage and generativity and the studies on an ethic of care at American universities are connected by several important concepts. They are connected by the concept that generativity or caring for the next generation is a key component of social institutions, like universities (McAdams, 1998). In fact, the single goal of the university should be to make the world a better place (Harrington, 1963). In Erikson, because the social component is so important to resolution of the key crisis within each stage, intergenerational interaction is necessary in order for each individual

to develop the virtue critical to each stage (McAdams *et al*, 2002). In a university, with many individuals in several different life stages, there appear to be many opportunities for this type of interaction to occur. Also, the largest apparent connecting point between the psychosocial world of Erikson and an ethic of care within a university setting may be in the way that care is defined by Erikson and Kuh. In Erikson, care is defined as care for future generations (McAdams, 1998) and in Kuh *et al*'s (1991) work an ethic of care at a university is synonymous with the support students receive from the institutional agents at a university, in the form of faculty, staff and administration.

Even with these strong connections between the psychosocial concepts of care in adult staff at a college or university campus, all of the current studies on care measured the perception of students on whether their college or university provides a supportive environment. None of the current studies used the empirical methods of measuring generative commitment or actions on staff at a university. Though the Kuh (1991; 2004) and Boyer (1990) studies have shown direct connections between the care and supportive environments on the success of students at a college or university campus, the literature was silent on if exposing staff to potentially generative activities will result in the staff exhibiting or becoming more likely to participate in caring behaviors, either to fellow staff or to the faculty and students that they interact with on a daily basis. There are glimpses that depicted this concept from the WGU project (Dyer *et al*, 2002), which illustrated that because the campus community was focused on being more supportive fellow staff from departments other than Student Services began to participate in more caring behaviors such as residential move in. However, because the staff were not

measured before and after the project empirically, it is difficult to make this direct correlation.

A New Measure of Adult Generativity for Colleges and Universities

This study took the psychological construct of care in adults and utilized empirical tests that have been developed by the psychological community to measure commitment to generativity and caring behaviors in university staff. Much of the current higher education literature on an ethic of care at a university illustrated the perceptions of students and college and university presidents on the importance of staff care in creating a sense of community on a college or university campus. Studies by Kuh illustrated that staff caring and support is linked to student performance at colleges and universities (Kuh, 1991; 2004). The literature, though, is silent on how university administrators can foster and develop the psychological construct of caring in their staff. In this study, the researcher used the LGS (McAdams & de St. Aubin, 1992), which is a self-test used to measure commitment to caring behaviors and the GBC (McAdams and de St. Aubin, 1992), which is a self-test of generative behaviors used to measure perceptions of caring in adults, as these instruments are generally accepted measures of these constructs in the psychological community. The researcher analyzed the impacts of exposures of university staff to potentially generative or caring activities using these same instruments and qualitative individual interviews with a subset of the subjects from the study. This study helps administrators understand if prolonged exposure by staff to potentially generative activities is a viable method to increasing caring behaviors in their own staff, as administrators seek to build a caring community on their university campus.

Chapter 3: Methodology

This section describes the subjects and location of the study, as well as the data gathering methods that were used by the researcher to understand if prolonged exposure to potentially generative behaviors has an impact on the overall generativity of university staff. The researcher discusses the instrumentation used to measure generative commitments and behaviors in this study, as well as the interview questions that were used to collect qualitative data through individual interviews to a subset of the study population. Finally, the researcher discusses detail the data analysis that was used to understand the overall impacts of prolonged exposure of university staff to potentially generative behaviors to understand if this type of exposure warrants additional study to university administrators who desire a methodology to use in the creation of an ethic of care on their university campuses.

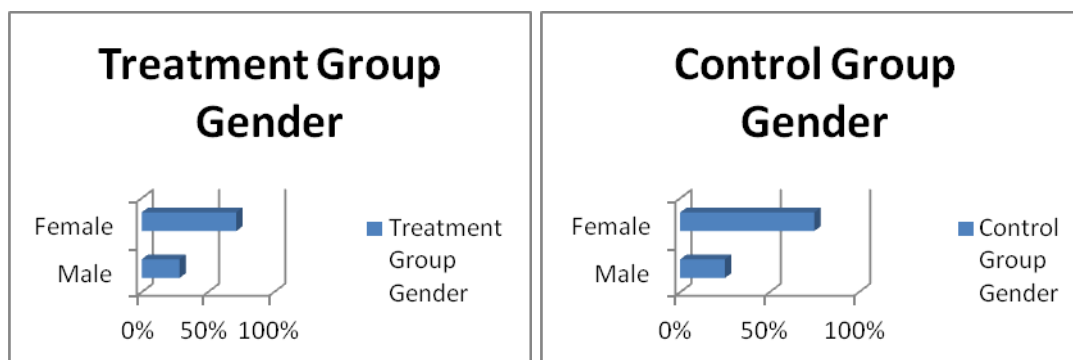
Subjects and Setting

All subjects are employed as staff at a large, urban research university, which is a comprehensive national research institution. This university serves more than 39,000 students in the nation's fourth-largest city. The university employs approximately 8,000 staff to support the campus needs in a variety of positions, including administrative, service and professional trade functions. For the purposes of this study, stratified random sampling was used to identify university staff to participate in the study. Supervisory employees from all departments on campus will be included in the population from which the sample was identified.

The Sample

Stratified random sampling of adult University of Houston staff, ranging in age from 36 to over 65, was used to obtain the sample for this study. The goal sample population was approximately 40, with equal groups of 20 in both the treatment and control groups. Since participation in the study was voluntary, the end result was a much smaller study sample, consisting of an original sample size of 16. These 16 members were randomly assigned to treatment and control groups, consisting of equal groups of 8. One member of the treatment group voluntarily withdrew from the study prior to participating in any activities, bringing the study size to 15, with 8 in the control group and 7 in the treatment group. The mean age of the treatment group was 52 and the control group mean age was 48. Females made up the largest proportion of both groups with 71% in the treatment group and 75% in the control group. The below charts illustrate the composition of the groups:

Figure 1. Comparison of treatment and control group participants. This figure illustrates the gender composition of the treatment and control group participants.



The population in both the treatment and control group included employees from many departments at the University of Houston to understand adult generativity in university staff from a wide range of employee types, including those who do and do not interact with students on a regular basis. All information, including demographic information about the sample was recorded using a number assigned to each individual in the study to insure confidentiality. In this study, all participants were supervisors at the university. Supervisors were selected for the sample as all supervisors have the similar job duty of managing and supervising one or more employees and it was thought that this common duty would make it easier to understand and explain the observed results.

In the treatment group, participant #13 was a 58-year-old male employee in the Enterprise Systems department within the centralized department of Information Technology. Two participants, #6 and #30, were employed in the university's Human Resources department. Participant #6 is a 56-year-old female trainer and participant #30 was employed in the university's benefits department. Participant #22, the oldest participant in either group, was a 63-year-old male employed in the Real Estate Office. Both participant #34 and #35 were 39-year-old females who work in business offices within academic units at the university. Participant #34 was an employee in Mechanical Engineering and participant #35 was employed in the business office for the chief academic officer at the university. Rounding out the treatment group is participant #43, a 57-year-old female and the oldest female in either group, employed in an academic department in the College of Education.

The control group is also representative of the varied units of the University of Houston. Three members of the control group are 52-years-old. These included participant #10; a male employee in Facilities Management; participant #39, a female from the College of Business; and participant # 23, a female employed in the university's Human Resources Department. Three members of this group are in their 40s, including participant #21, a 48-year-old female working in the ID Card Office; participant #42, a 44-year-old male employed in the Printing Department; and participant #15, a 47-year-old female from the Information Technology Department. The youngest participant in either group is #31, a 36-year-old female Librarian and the oldest participant in the control group is participant #1, a 53-year-old female who was employed in the President's Office.

Experimental Procedures

After the invitations to participate were e-mailed to study participants, a group meeting was scheduled for all potential subjects at an on-campus location. At the meeting, the researcher explained the general details of the study and answered questions from the participants. In addition, the researcher introduced the Master's students, not professionally affiliated with the university, who were responsible for the qualitative individual interviews with a smaller group of participants at the end of the study. A consent form was distributed to all potential subjects. Interested subjects were asked to sign and initial the consent documents. Those potential subjects not interested in participating were excused from the meeting. After signing the consent documents, the researcher administered questionnaires, which were completed and submitted to the researcher at the time of the administration.

After the administration of the questionnaires, the researcher divided the subjects into treatment and control groups for the remainder of the experiment. Individuals were notified by e-mail of instructions and activities related to the experiment. Subjects who were part of the treatment group received instructions from the researcher for the remainder of the experimental period, which spanned a four-month period during the fall 2011 semester. Subjects in the treatment group were directed to participate in three activities that could potentially elicit generative behaviors during the four-month period. The three activities chosen by the researcher were selected because they were traditional events on campus and because they span the entire fall semester. The total commitment to event participation by the treatment group was estimated at 10.5 discontinuous hours over the entire semester.

The first activity for the study participants was to receive one or more PALS with whom the subjects communicated with as part of the experiment. PALS is a program administered by a faculty member, and is a pen-pal program for in-coming freshman students. Faculty and staff in the program commit to sending e-mails of academic and co-curricular information to freshman to support freshman in their first academic year on campus. Communication with their PALS during the experiment included academic dates that freshman should know, how to go to football games, and how to access university services like the Recreation and Wellness Center or the Writing Center. Subject participants received at least one PAL and were assigned to communicate with the PAL or PALs for the entire academic semester, as directed by the PALS program.

The second event the subjects were directed to participate in was the university's Green Day, a day-long celebration of sustainability activities on campus. Faculty and

staff on campus run game booths, informational booths, campus tours and other events that showcase the sustainable departments and activities on the campus. Participants had flexibility to participate in the event in a capacity that was interesting or in line with their skill set, as long as they participated for at least one hour in the activities. This event occurred in the center of the campus at Butler Plaza, which is a large green space, directly outside of the Library.

The third activity that the subjects were directed to participate in was a university pancake supper, FinalsMania, which occurred the night before the first final exam. Student leaders, faculty and staff served pancakes and other treats as part of a late-night study break in the university's Library. This event is popular among the students and it is estimated that at least 2,000 students attend this free breakfast at the Library. In addition to pancakes and all the toppings, students are served sausage, coffee and juice. Study participants in served in a variety of ways, including coordination of lines, greeting students as they entered the event, cooking pancakes, serving juice or coffee, or manning one of the tables with the pancake toppings. Subjects were given the freedom to select the way that they would participate in this event, provided that the subjects committed to the minimum participation level, which was two hours.

At the end of the academic semester, members of both the treatment and control group were provided the questionnaires, which were the same instruments used at the beginning of the study. Participants completed the questionnaires, noting their assigned number on the questionnaires. Questionnaires were collected by the researcher.

Qualitative Procedures

Since the researcher is also a staff member in the university administration, the researcher solicited assistance from Master's students from the College of Education program in Higher Education Administration who assisted the researcher with the administration of the interviews for the qualitative portion of the study so as not to unduly influence the outcome of the study and minimize any potential for psychological harm. These Master's students contacted individuals who were selected by the researcher from both the treatment and control group to participate in the individual interview portion of the study. Individual interviews were chosen because it was difficult to schedule large group meetings due to conflicting schedules in a university and it was hoped that by using the individual interview procedure, university staff were more forthcoming in their responses than if the subjects were in a large group setting. Member checking was not used as part of the process of understanding and evaluating the themes from the individual interviews.

Instrumentation

This study used two empirical instruments from the field of psychology, the LGS (McAdams & de St. Aubin, 1992) and the GBC (McAdams & de St. Aubin, 1992) to measure generative concern and activities in university staff, using a pre-test and post-test administration. These instruments were complemented by individual interviews with the study subjects (Appendix A) and the researcher analyzed the responses from the individual interviews to understand themes that emerged from the self-reflections of university staff on the concept of care and how the findings impact further research on generative concern and behaviors in university staff.

Loyola Generativity Scale (LGS: McAdams & de St. Aubin, 1992)

The LGS was administered as both a pre and posttest to subjects to understand their degree of generative concern, or how concerned the subjects were with performing caring activities. This self-test is a 20-item instrument, which assessed individual differences in concern for participation in caring activities (McAdams *et al*, 1993). The subject was asked to rate each item on a four-point scale, indicating whether the statement never applied to them or the statement applied to them very often (McAdams *et al*, 1993). The LGS was developed by Dan McAdams and Ed de St. Aubin as a way to measure individual differences in generativity (McAdams & de St. Aubin, 1992). The LGS was developed using the theoretical literature on generativity (McAdams & de St. Aubin, 1992) and contains items representing passing on knowledge and skills to future generations, bettering one's community, participating in activities that could be perceived as leaving a legacy, and participating in activities that will be remembered for a long time (McAdams & de St. Aubin, 1992).

In the development of the instrument, McAdams and de St. Aubin asked the subjects in their study to complete the LGS instrument, the Social Desirability Scale (Ochese & Plug, 1986), a 10-item scale developed by Ochese and Plug (1986) and a 14-item scale developed by Hawley (1985). The subjects' scores were compared and the following noted: high correlations (above .30) with the two instruments used to measure generativity (convergent validity) by Hawley (1985) and Ochese and Plug (1986); low correlations (below .20) with the Social Desirability scale (Ochese & Plug, 1986), which they believe illustrates discriminant validity (McAdams & de St. Aubin, 1992). A calculation of Cronbach's alpha was made by the researchers using the 20 items in the

final LGS developed as part of this study. For the adult sample, $\alpha=.84$, which suggested high internal consistency (McAdams & de St. Aubin, 1992).

Generative Behavior Checklist (GBC: McAdams & de St. Aubin, 1992)

The GBC was the empirical test of generative or caring commitment to generative action administered as a pre and posttest to subjects in both the treatment and control groups to measure the subjects' self-assessment of their participation in generative acts. The GBC was developed by McAdams and de St. Aubin to have an empirical measure of generative action (McAdams & de St. Aubin, 1992). McAdams and de St. Aubin believed that this checklist is a way to measure the predictive reliability of the LGS and also provided one way to measure the action component of generativity, while the LGS measures generative concern (McAdams & de St. Aubin, 1992). In their research, McAdams and de St. Aubin compared subjects' scores on the LGS and the GBC and noted the following: 24 of the 49 potentially generative acts showed statistically significant correlations ($p<.05$) with the LGS and 11 acts were significant at $p<.01$. Further, the correlation between the total score on acts not related to generativity from the GBC and the LGS was not significant, $r=.18$, (McAdams & de St. Aubin, 1992).

Using the method described in the research by McAdams and de St. Aubin (1992), the instrument used had a 50-item checklist consisting of acts that are representative of generative behaviors and acts that appear not to be consistent with generative behaviors (McAdams *et al*, 1993). Activities suggesting generative behaviors include action such as, "taught somebody a skill, read a story to a child, attended a neighborhood or community meeting" (McAdams *et al*, 1993, p. 224). Acts inconsistent with generativity included in this instrument included activities such as, "went to see a

movie or a play, participated in an athletic sport, and purchased a new car or major appliance” (McAdams *et al*, 1993, p. 224). An additional item was added to the GBC, to understand more about the participants’ participation in university activities that benefitted students. Using this instrument, subjects identified which activities they participated in over the previous two months (McAdams *et al*, 1993). Subjects used 0 to indicate if an activity had not been performed at all, one to indicate if an activity had been performed once and two to indicate if the activity had been performed more than once during the two-month period (McAdams *et al*, 1993).

Qualitative Individual Interviews

Master’s students not affiliated with the University of Houston professionally contacted selected treatment and control group participants for individual interviews. The interviews were conducted over the phone or in person, depending on the subject’s schedule. Interview responses were recorded for the researcher to transcribe, using only the numerical value assigned to the subject to identify the subject to maintain confidentiality. Examples of questions that were asked to subjects in the control group participants include, “Over the course of the academic semester, did you volunteer, participate or attend university events (examples: Green Day, FinalsMania, PALS, football games, Fine Arts)? If so, which events?” and “If you did participate in university events, what motivated you to participate or attend these events?” The questions to the control group attempted to understand generally occurring caring or generative behavior in university staff. Additionally, the questions were worded by the researcher in a way to gather the information about volunteering or participating in potentially generative activities, using a positive connotation, by inserting part of the question to include the

phrase about attending events as well as volunteering so that subjects participating in the interviews did not feel threatened by the questions.

Questions asked to the treatment group were connected to the activities that they participated in over the course of the academic semester. Examples of these questions were: “Over the course of the academic semester, you agreed to participate in at least the following university events: Green Day, FinalsMania and PALS. Did you fulfill this requirement? Why or why not?” and “Have these experiences changed how you interact with students? Why or why not?” The questions that were asked to the treatment were used in order to elicit feedback about whether exposure over a prolonged period of time increased the likelihood that university staff have more generative concern and were more likely to participate in generative behaviors and if these behaviors transcended into their work experiences on the university campus as well.

Data Analysis

After the pre and posttest data from both the GBC and the LGS was collected, the researcher calculated group means for each instrument item, participant and administration, as there were not enough study participants to use other statistical methods. Standard deviation was also calculated each administration. The scores for each administration were compared. The data was reported and differences in the scores were analyzed by the researcher.

Likewise, the qualitative data collected by the researcher was reviewed and analyzed looking for similarities and differences within the treatment and control groups.

The researcher sought to understand motivation within the treatment group and if there were underlying motivations that contributed to a staff member participating in more generative acts. Understanding the motivation and what encouraged staff to participate in generative activities will help administrators as they develop a culture of care on their campuses. The researcher sought to understand from the control group, if they did volunteer or participate in university activities, the motivation for them to do so.

As the researcher reviewed the responses from the qualitative individual interviews for both the treatment and control groups, the researcher looked for themes that emerged from staff related to their self-reflections of participation or non-participation in activities at the university during the duration of the experiment. The themes are critical to the development and future study of the creation and evolution of a caring community on a college or university campus. These themes, which were based on self reflections of university staff, may also potentially influence professional development programs for university staff that are interacting with students, faculty and other staff colleagues on a daily basis. As these themes emerged, the researcher noted overlapping themes and similarities in word choices or phrases amongst the two groups and the differences, between the themes from the treatment and control group participants as they were compared and contrasted. The researcher also noted potential future directions for research on caring concern and caring action in university staff as a result of the data collection and content review of the individual interviews and themes.

Chapter 4: Results

This chapter includes the results of the pre- and post-test instruments for the LGS and GBC as well as the individual interviews from selected participants from both the treatment and control groups. Additionally, included in this chapter is an analysis of the themes that emerged from the individual interviews and the relationship of these themes to adult generativity and the importance of caring commitment and caring behaviors in university staff to student success.

LGS Pre-Test Results

LGS pre-test results were reviewed first by group and then by individual to learn more about caring commitment in university staff. The treatment group pre-test LGS pre-test mean was 41.43 and the control group pre-test LGS mean was 37.75 (see *Table 2*). Three participants in the treatment group had LGS pre-test scores ranging from 31-38, which are considered below average scores (McAdams & de St. Aubin, 1992) and the remaining four members of the treatment group participants had LGS pre-test scores ranging from 41-51, which represents at or above average scores on this instrument (McAdams & de St. Aubin, 1992). Most participants from the control group had LGS pre-test scores in the 30s. Five control group participants had LGS scores ranging from 31-39, and three participants had LGS pre-test scores that ranged from 40-43. In the treatment group, two males and one female had the lowest LGS pre-test scores, and the two male scores were the lowest at 31 and 33, while the lowest female treatment group LGS pre-test score was 38. The treatment group mode was 51 and the control group mode was 40. In the control group, a male also had the lowest LGS score of the group at

32; however, many more female participants in the control group began the study with LGS pre-test scores in the 30s than the female members of the treatment group.

Looking at the participant responses to the individual items to the instruments also provided information about each of the groups. On the LGS pre-test instrument, the item with the highest mean (2.86) for treatment group participants, was the item “I try to pass along the knowledge I have gained through my experiences.” For the control group, the item with the highest mean (2.75) was “I feel that I have done nothing that will survive after I die.” This item is reversed scored, which meant that more participants answered this item with a negative response, meaning that the reverse is true and that participants felt their actions or contributions will survive after their death. The items with the second-highest means (2.57) for the treatment group were the items, “People come to me for advice” and “I feel as though I have done nothing of worth to contribute to others.” For the control group there were three items with the second-highest item mean at 2.50. These items were, “I feel as though I have done nothing of worth to contribute to others,” “I feel as though I have made a difference to many people,” and “I try to pass along the knowledge I have gained through my experiences.” The item “I feel as though I have done nothing of worth to contribute to others” is also reverse scored, which meant that the majority of the study participants believed that their actions have contributed to others.

GBC Pre-Test Results

GBC pre-test results were also reviewed first by group and then by individual to learn

more about caring behaviors in university staff. The GBC pre-test mean for the treatment group was 30.29 (see *Table 2*) and the GBC pre-test control group mean was 24. The majority of the treatment group participants had GBC pre-test scores in the 30s and the mode for the treatment group pre-test GBC was 33. In the control group, the majority of the participants had GBC pre-test scores in the 20s, and the GBC pre-test mode was 25. The lowest GBC pre-test score for the treatment group was 17 and the lowest GBC pre-test score for the control group was 15. The highest GBC pre-test score among treatment group participants was 49 and the highest pre-test GBC score for control group participants was 34.

Study participants in the control group participated in more student events than the treatment group prior to the study, with 7 members of the control group reporting participation in at least one event that benefitted students in the pre-test. In the treatment group pre-test, only 2 participants reported participation in at least one student event that benefitted students. Also on the GBC pre-test, the two self-reported behaviors with the highest treatment group means (1.86) were “Listened to a person tell me his or her personal problems” and “Taught somebody about right and wrong, good and bad.” For the control group, the self-reported behavior with the highest mean (1.88) was “Listened to a person tell me his or her personal problems.” The second most reported behavior by control group participants in the GBC pre-test was “Taught somebody a skill,” which had a group mean of 1.75.

Table 1. Comparison of pre-test means. This table illustrates the pre-test means by group and by participant for each pre-test instrument.

| | | Pre-test | | |
|-----------------------------|-----------|--------------|--------------|---------------|
| | Group | Mean | | Pre-Test |
| Participant # | Name | LGS | GBC | Participation |
| 1 | Control | 38 | 15 | 1 |
| 10 | Control | 36 | 22 | 1 |
| 15 | Control | 39 | 23 | 2 |
| 21 | Control | 43 | 21 | 1 |
| 23 | Control | 40 | 34 | 1 |
| 31 | Control | 34 | 25 | 1 |
| 39 | Control | 40 | 25 | 0 |
| 42 | Control | 32 | 27 | 1 |
| Control Group Mean | | 37.75 | 24.00 | 1.00 |
| | | Pre-test | | |
| | Group | Mean | | Pre-Test |
| Participant # | Name | LGS | GBC | Participation |
| 6 | Treatment | 45 | 33 | 0 |
| 13 | Treatment | 31 | 19 | 0 |
| 22 | Treatment | 33 | 31 | 1 |
| 30 | Treatment | 51 | 30 | 2 |
| 34 | Treatment | 41 | 49 | 0 |
| 35 | Treatment | 38 | 33 | 0 |
| 43 | Treatment | 51 | 17 | 0 |
| Treatment Group Mean | | 41.43 | 30.29 | 0.43 |

Instrument Post-Test Results

The treatment group post-test LGS mean (42) was higher than the control group mean (36.6) and both groups had three participants with scores that are considered above average, which is any LGS score greater than 41 (McAdams & de St. Aubin, 1992). The LGS treatment group mean increased .57 points when compared with the LGS treatment group pre-test, while the LGS control group mean only increased by .13 points between administrations. In the treatment group, the highest LGS post-test score was a 51 and for

the control group, the highest score was a 44. The lowest score in the control group LGS post-test was a 30, down two points from the pre-test low score, which was 32. In the treatment group, the lowest score was a 31, which was the same as the LGS treatment group pre-test low score. The mode for both groups on the LGS post-test was 39.

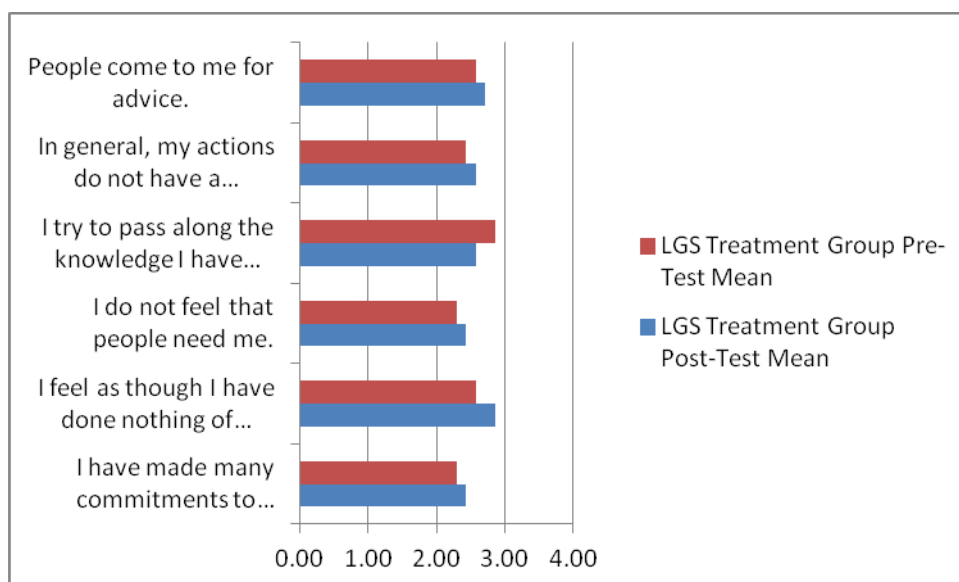
Table 2. Change in post-test means. This figure represents the change in mean from the pre-test to the post-test.

| | | Post-test | | |
|---------------|-----------|--------------|-----|----------------------------|
| | Group | Point Change | | Post-Test |
| Participant # | Name | LGS | GBC | Participation Point Change |
| 1 | Control | +1 | +1 | -1 |
| 10 | Control | +7 | -1 | -1 |
| 15 | Control | -5 | +6 | -1 |
| 21 | Control | -1 | 0 | 0 |
| 23 | Control | -10 | +9 | 0 |
| 39 | Control | 0 | -7 | -1 |
| 41 | Control | -1 | -4 | 0 |
| 42 | Control | 0 | -1 | -1 |
| 6 | Treatment | +2 | -6 | +1 |
| 13 | Treatment | 0 | -2 | 0 |
| 23 | Treatment | +6 | 0 | +1 |
| 30 | Treatment | 0 | +10 | 0 |
| 34 | Treatment | +2 | +1 | +1 |
| 35 | Treatment | -1 | +2 | +1 |
| 43 | Treatment | -1 | -3 | +1 |

In the LGS treatment group post-test, the top-three items with the highest group means were still top caring commitments for this group, but the scores fluctuated between the items and a new, top caring commitment emerged. The highest mean (2.86) was for the item “I feel as though I have done nothing of worth to contribute to others.” This item is reverse scored, indicating that a high number of the treatment group participants

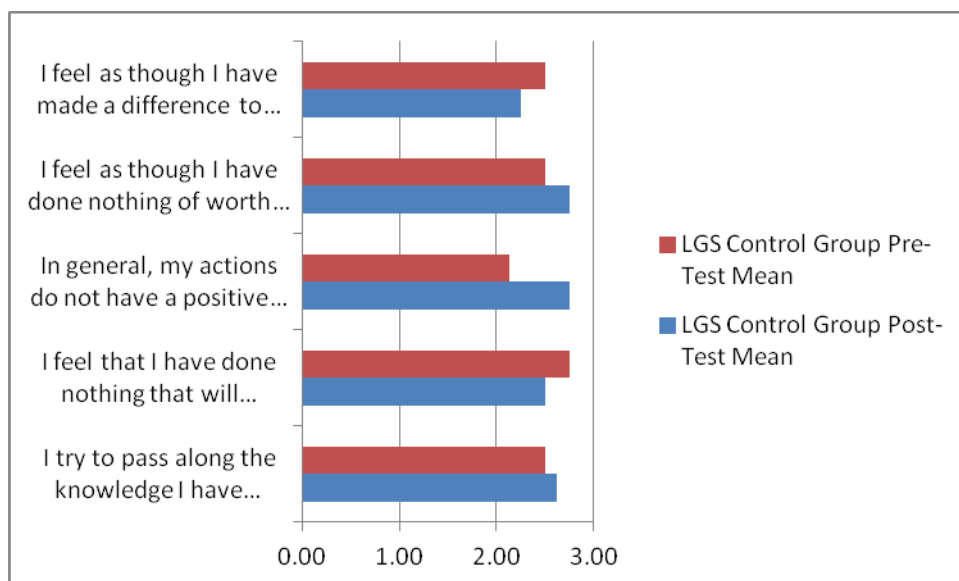
believed that their behaviors and actions have contributed to others. The second highest “People come to me for advice” had a mean of 2.71 and “I try to pass along the knowledge I have gained through my experiences” ranked third with a mean of 2.57. The new caring commitment that emerged from this group was the item, “In general, my actions do not have a positive effect on other people,” also with a group mean of 2.57. This item is reverse scored, indicating that many from this group believed that their actions have had a positive effect on people. All of the means of the top items for the treatment group gained at least .14 points between the pre and post-test administrations, except for the item, “I try to pass along the knowledge I have gained through my experiences,” which dropped .29 points between administrations.

Figure 2. Comparison of treatment group pre-test and post-test LGS items. This figure shows a comparison of the top treatment group LGS item means between the pre and post-test administrations.



For the control group, two of the means of top items from the pre-test LGS administration decreased in the post-test by .25 points. These items were “I feel as though I have made a difference to many people” and “I feel that I have done nothing that will survive after I die,” which is reverse scored. The top item with the biggest change in mean between the pre-and post-test administrations, was the item, “In general, my actions do not have a positive effect on other people,” which is reverse scored meaning that those who answered these item believe that they have had a positive effect on others. The mean for this item increased by .62 points during the post-test.

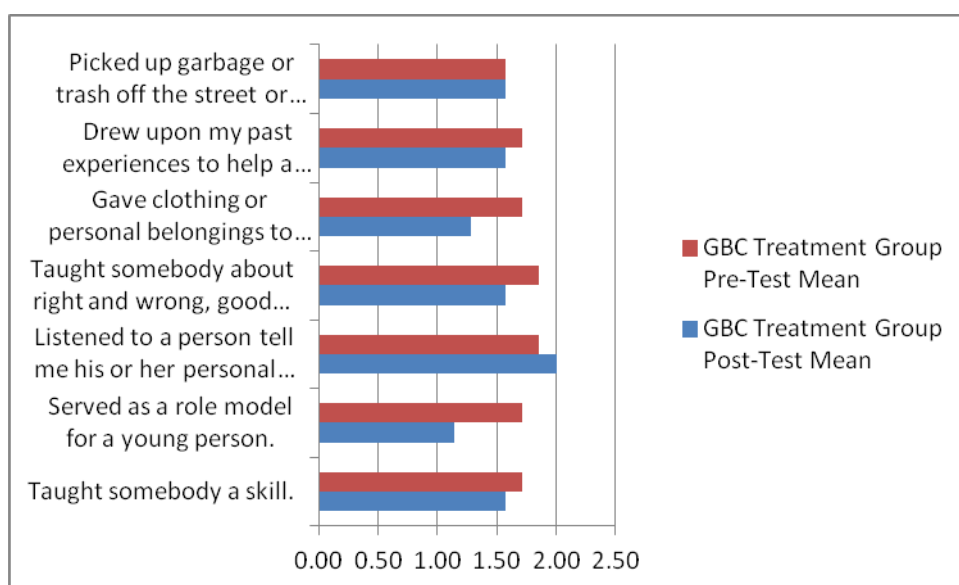
Figure 3. Comparison of control group pre-test and post-test LGS items. This figure shows a comparison of the top control group LGS item means between the pre and post-test administrations.



When reviewing the self-reported participation in potentially generative activities in the treatment group GBC post-test, the item with the largest increase was, “Listened to a person tell me his or her personal problems.” The item group mean increased from 1.86

to 2.00 during the treatment group GBC administrations. The item for “Picked up garbage or trash off the street or some other area that is not my property” remained consistent with the first administration, with a group mean of 1.57 and all members of the treatment group reported participating in this activity at least once during the study timeframe.

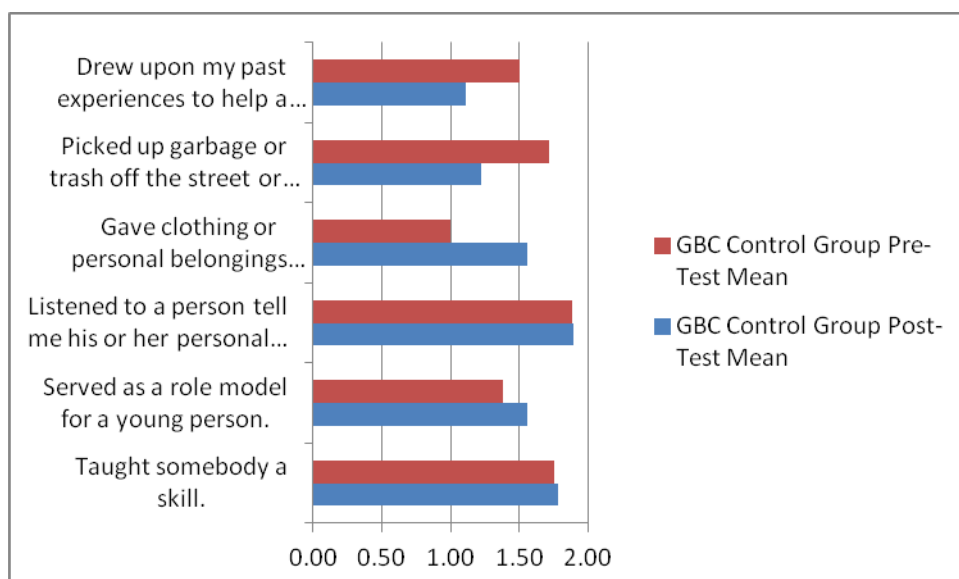
Figure 4. Changes in group mean between treatment group top activities. This chart illustrates the changes in treatment group mean during the GBC pre- and post-test administrations.



For the GBC, the treatment group mean increased .30 points while the control group mean decreased .40 points between administrations of the pre- and post-tests. Many of the same top self-reported activities remained consistent between the administrations of the GBC within the control group participants. One of the activities that saw the largest fluctuations in mean between administrations was the item “Gave clothing or personal belongings to a not-for-profit organization (such as the “Good Will,”

"Salvation Army," etc.)," which grew half a percent between administrations. The item mean for "Listened to a person tell me his or her personal problems" remained almost consistent with the pre-test GBC control group administration, moving from a group mean of 1.88 to 1.89.

Figure 5. Changes in group mean between control group top activities. This chart illustrates the changes in control group mean during the GBC pre- and post-test administrations.



It is also important to understand the individual scores on the pre- and post-tests to understand potential patterns between the individual scores and those individuals who participated in University of Houston events that supported students during the study (see Figure 3.). The largest overall gain on single instrument was treatment group participant #30, whose overall GBC score increased 10 points between the pre-and post-test administration. This individual also reported participation in more than one activity benefitting students before and during the study timeframe. The largest overall decrease

on single instrument was control group participant #23, whose overall LGS score decreased 10 points between the pre-and post-test administration. All of the individuals from both the treatment and control groups who participated in one or more activities benefitting students had scores on at least one instrument that either increased or stayed the same between administrations, except one participant, whose LGS score decreased by 1 point and whose GBC score decreased by 3 points. There was one treatment group participant whose GBC score dropped 6 points on the post-test, but this same individual saw a 2-point increase on their LGS post-test score. One control group participant who reported participating in at least one activity benefitting students saw a 10-point decrease on the individual's LGS post-test score, but this individual's GBC post-test score increase by 9 points. One control group participant, #39, reported not participating in any activities benefitting students before or during the study. Both of these individual's post-test LGS and GBC scores decreased from the pre-test administration. Participant #10 reported participation in activities benefitting students prior to beginning the study and reported no participation during the study. This participant's post-test LGS score increased 7 points, while this participant's post-test GBC score decreased by 1 point.

Treatment Group Individual Interviews

In this section, narrative from individual interviews with selected participants in the treatment group will be presented. Participants were selected for individual interviews based on the noted change between the pre-and post-test administrations of the instruments. Since participation was voluntary, not all participants responded to requests for individual interviews.

Participant 30

Treatment group participant #30 is a 52-year-old female manager in the university's benefits unit within the Human Resources department. Participant #30 experienced the largest growth of any participant in the study on any of the instruments – gaining 10 points in the post-test GBC. Her LGS score of 51, which is an above average LGS score, (McAdams & de St. Aubin, 1992) remained unchanged on the post-test, and was the highest LGS score among all study participants.

Participant #30 had participated in the university's PALS program for two years prior to the study and accepted responsibility for additional PALS as part of her participation in the study. Prior to the study, she had not been exposed to Green Day or FinalsMania events, “but observed this events from afar.” She believed being part of these interactions with students greatly enhanced experienced as a staff member on a university campus. “It did put me more in touch with students more than I ever have been before since joining HR. It gave me the ability to see the benefit of the programs that we have on campus and a desire to advertise them more.” (Participant #30, personal communication, January 3, 2012)

After participating in these events, she also has a desire to advertise these events more to staff who attend the new hire orientations. She reported great satisfaction in being able to assist students.

I kind of felt it was kudos to me because when the students would contact me – and there haven't been a lot - I felt priviledged to direct them to the person they

really needed to speak with because I knew the staff side. Going forward, the other two events I think it's important and imperative for the staff on our campus to realize that we're here for the students and not just the other staff and faculty and the administration and spend some time learning and with the students.

(Participant #30, personal communication, January 3, 2012)

This participant provided feedback about her participation in all three activities and what she has learned as a result.

The PALS program has changed me in that I realize how stressful it is to be a freshman on our campus. The pancake one – I can't think of the proper name – assisted me because it's pretty tough when finals come around and I think it's really nice that we come together and have a function for them, letting them know we understand how stressful it is and we're here to help you. The recycling one that one is the one of all the three that needs the most attention because I don't think that the students appreciate it as much as they should. When I participated in that one, I left there thinking, 'We've got to do something about recycling and getting our students involved because this is for them - for the students and for the future. They all three helped me. (Participant #30, personal communication, January 3, 2012)

Participant #30 said she will continue to participate in all three events in the future, even FinalsMania, which occurs later in the evening. She has already begun recruiting HR colleagues to participate in these events next year. "I do feel within the department of HR my voice and the enjoyment that I had from all three of them has been

spread and I'll continue to do that.” (Participant #30, personal communication, January 3, 2012)

Participant 22

Treatment group participant #22, is a 63-year-old manager in the university's Real Estate Office, which is housed at an off-campus site. This participant had the second-highest increase of any of the treatment group participants on the LGS, moving from 33 to 39 between administrations of the instrument. Both of these LGS scores are below average (McAdams & de St. Aubin, 1992). His pre-test GBC score of 31 remained unchanged on the post-test. Participant #22 expressed a great deal of knowledge and understanding about's six-year graduation rate. He accurately stated the current graduation rate and his desire to be a part of helping the university retain and graduate more students and expressed continued concern about the state of higher education in Texas in portions of his interview.

Participant #22 reported he was already participating in PALS prior to the study, but had not participated in the other activities before beginning the study. He believes PALS:

is an interesting approach to trying to involve our freshman students and I hope I have some impact on retainage of freshmen and graduate rates. Most of the responses that I've had have had to do with what to do to get academic advising. The young people get stuck on such things as trying to declare a major. They get stuck on, 'Well, what do I do if I want to go to summer school and how do I make

sure all the courses line up with my degree program?’ The other two activities, I can remember helping out on FinalsMania I spent a little time helping to set up and (at Green Day) set up tables and spent a few hours taking questions. It was a worthwhile experience. (Participant #22, personal communication, January 3, 2012)

Participant #22 learned much about the students as he has participated in these events.

It’s pretty easy as we sit behind our desks here not to know any students. We see students all around and it’s very helpful to have a feel for what these young people are actually doing and you get a flavor for how is growing in the field of undergraduate instruction. The reputation for graduate instruction has been there nationally for many, many years and I think the forefront for the university right now is undergraduate instruction and that’s going to translate into a higher overall preparation standard for in-coming freshmen and I’d like to see our graduation rates go up in the 70 or 80% range. They’re in the 45-50% range right now. (Participant #22, personal communication, January 3, 2012)

This participant said these or other programs that engage staff with students may be a catalyst to increase the graduation rate

You never know where a program is going to end up but you have to start somewhere. Try A if A doesn’t work try B, change B a little bit and if it doesn’t work try C. I think this is a very low-cost approach and I think very well worth

trying. I don't have a feel for the full range of programs that we have to try to target those students who will have a better chance of succeeding with some help. A lot of the students are going to succeed no matter what we do. But it's the ones who are most at risk that I think are going to benefit the most from having regular encouragement. (Participant #22, personal communication, January 3, 2012)

This participant believed there was minimal disruption to his work schedule as he participated in these events. "It's structured such that there's really no impact. We all have a little slack time and this certainly did not adversely impact or conflict with any other responsibilities I have." (Participant #22, personal communication, January 3, 2012) He also did not see working at the Energy Research Park as a hindrance to accessing these events or interacting with students on the campus. "I think as time goes by we'll see the Energy Research Park become more part and parcel of this university over the years. The bus system works quite well for those who use it." (Participant #22, personal communication, January 3, 2012)

Participant #22 said participating in these activities will not change how he interacts with students:

I think I'm a little more aware of what it was like for me 40 years ago and what it might be for the young people now. I've had a couple of kids I've put through college myself. I think it benefits every employee to have a little bit of a finger on the pulse for what it is we're actually doing and why we're here. None of us have jobs except to help kids get undergraduate and graduate education and help our

researchers get more federal grants and be more competitive in the national and international level. (Participant #22, personal communication, January 3, 2012)

He hoped university administration is keeping metrics on the role that PALS plays in freshman retention.

Keep trying different things and I hope people who do metrics on this or who do follow up on PALS and related programs in terms of trying to get volunteer staff involved in the university's overall efforts in improving retention and success among undergraduate students and if it has a measurable impact I hope other schools pick up on it because one thing we do not have the luxury of doing at the University of Houston or anywhere else nationally for that matter is unnecessarily adding to any cost. We have a responsibility as stewards to keep the cost of undergraduate education down. We know that the state is not going to give us any more money particularly as we have the quality of state leadership we have. We're up to our own devices to raise additional money and hold costs down.

(Participant #22, personal communication, January 3, 2012)

Participant 35

Treatment group participant #35 is a 39-year-old business manager who works in the Provost's business office and is housed in the administration building in the center of the campus. This participant reported that she did not participate in events that benefitted students prior to beginning the study. Her LGS pre-test score was a 38 and her LGS post-test score was a 37, both below average LGS scores (McAdams & de St. Aubin, 1992).

Her GBC pre-test score was a 33 and her GBC post-test score was a 35. She was one of three participants from the treatment group that had an increase on their post-test GBC scores.

This participant reported she did not fully participate in all requirements of the study. “I did participate in FinalsMania. I did not participate in Green Day. I just wasn’t able to get away that day. The PALS e-mails, I never did send out the initial one. I didn’t follow up. So, slightly embarrassed about that, but did participate in FinalsMania.”

(Participant #35, personal communication, January 3, 2012) Even though she did not fully participate in all study activities, she still felt it was a valuable experience for her. “I think any time we can interact and be seen by the students and know that’s the reason why we’re here is good and so it’s reaffirmation why I continue to work at the university which is just to support students and our mission here.” (Participant #35, personal communication, January 3, 2012)

Even though the experience was valuable, she reported that she did not feel that it impacted her work environment.

I don’t think they (the activities) impacted my work environment. Other than what I stated previously in that it helps to know why you come to work every day and know why you’re here and what you’re here to do which is support students getting an education. (Participant #35, personal communication, January 3, 2012)

She also believed these experiences did not change how she interacts with students.

I'm fairly student friendly. I always like the beginning of the semester and I look for lost people and show them where to go or kind of see the fear in their eyes. I don't think it's impacted me anymore than the way I go about doing what it is I need to do. (Participant #35, personal communication, January 3, 2012)

She will continue to participate in FinalsMania and encourage other colleagues to be part of this activity as well. "We have a group in the Provost's Office that does the pancake dinner for FinalsMania and I think now that I've been part of that I'll definitely encourage my co-workers to join up next time." (Participant #35, personal communication, January 3, 2012)

Participant 43

Treatment group participant #43 was also selected for an interview. This female participant is a supervisory employee in the College of Education. Her LGS pre-test score of 51 was above average as was her LGS post-test score of 50 (McAdams & de St. Aubin, 1992). Her GBC pre-test score of 17 and her GBC post-test score of 14 were the lowest scores in the treatment group. This participant reported during the interviews that in her past roles at the university, she had been more engaged with students and that during the study she was re-connected with undergraduate students for the first time in two years. She reported no participation in events that benefitted students prior to the study and participation in one event in her post-test GBC. This participant reported that she was able to fulfill most of the study requirements.

I fulfilled two of the three. When it came to FinalsMania, I was sick that week and could not participate as I had intended, but I did do Green Day, sat at the tent which blew away by the way – one of the moments with the high wind - but had a good time and definitely participated in PALS. I did not ever receive a response from my PALS but I continued to send the e-mails and offer my help and having had experiences with mentoring programs, I knew not to expect that they would come to me all the time for answers. (Participant #43, personal communication, January 11, 2012)

She offered some suggestions for improving the PALS program based on her experience with participating in the program during the study and her previous experiences running student mentoring programs.

From having run a similar program, I have found that when students sign up for that type of program, they're very enthusiastic because they really do figure they're going to need the help. As they actually get into school, they either get so wrapped up with friends and school and other things that they don't really think of it very often or they really don't know enough to know what questions to ask and they're hesitant and I think part of PALS' issues may be that they don't meet us face to face. The program I ran – it was face-to-face – we had a meet-and-greet at the beginning of the semester so you put a face to the name and for the mentee it gave them an idea of how welcoming this person was going to be or how helpful this person could be to them. Whereas when you do it just by e-mail, it's kind of faceless and nameless and that's just what I know from my own experience. I

think PALS is really good. I think we should continue it, but we might want to tweak it a little bit. (Participant #43, personal communication, January 11, 2012)

Participant #43 believed participation in the events helped remind her of the importance of being connected with students and to the programs offered by the university.

It definitely re-connected me with the student body. It has been a couple of years since I was involved outside of my job duties with students and I have always enjoyed that outside involvement and in fact I have always pursued it because I believe it gives me a balance. When you see students only from your job perspective you only see part of the students and you only see an aspect of the students. To see the whole student and to enjoy more of the student body, you usually have to get out of your office to do that. I believe that for students and staff alike, you get most out of the university experience if you're involved in a lot of different things. I was blessed because I was involved in a lot of committees. I volunteered to work with student groups and that always, always enhanced my work experience. And so that's what was really nice about this experience, it got me back into it. (Participant #43, personal communication, January 11, 2012)

She reported no impact to her own work on campus, but it reminded her of the importance of getting involved in university activities.

Again, there was no direct impact because my students in this job are graduate students; however, it reminded me of the undergraduate experience. It reminded me of all the university has to offer to students that they're not always aware of and it reminded me that I need to get involved more often again because it's been part of my university experience that I have missed in the past couple of years.

(Participant #43, personal communication, January 11, 2012)

Participant #43 said she will encourage her colleagues to participate in events that benefit students in the future.

Yeah, I always have and I will continue to do that and usually I'm pretty successful because they see how enthusiastic I am about it and so they go, 'There must be something to it.' And I think with any kind of volunteer work it's always been my experience to reassure the person that you're not going to take up a whole big chunk of their time. This was not very time consuming and yet it connected me with students I would have never met and known outside of my office and it gave me that feeling of really contributing to the bigger picture of the university and so I think as long as I reassure people we're not asking people to give up their lives then they're always willing to pitch in and do a little bit.

(Participant #43, personal communication, January 11, 2012)

Control Group Individual Interviews

In this section, narrative from individual interviews with selected participants in the control group will be presented. Participants were selected for individual interviews

based on the noted change between the pre-and post-test administrations of the instruments. Since participation was voluntary, not all participants responded to requests for individual interviews.

Participant 10

Control group participant #10, who is a 52-year-old male business manager in the Facilities Department, was interviewed. He had an LGS pre-test score of 36, a below-average score and an LGS post-test score of 43, which is an above average score (McAdams & de St. Aubin, 1992). This participant reported participation in events benefitting students in his pre-test, and no participation in events benefitting students in the post-test. He did report attending all of the home football games during the study.

I've gone to all the home football games this year and participated in the clean-up day back in July where we went around and picked up all the debris and trash and stuff on campus. Well, the football games, I like football and some of my children wanted to go as well and it just made sense to go to the games and follow the team. The clean-up day was a Facilities Management function and it just made sense that we would not only be a stakeholder from a vocational standpoint where it's our job, but also from a personal standpoint from where I am personally involved or engaged in making sure that the campus is sufficiently maintained at least from an appearance standpoint. (Participant #10, personal communication, January 3, 2012)

This participant discussed what he gained from both of these experiences.

Usually from the football games I gain a few pounds, you know the bad football food. The last two or three we started going to one of the tailgate events. It's just an atmosphere of camaraderie and some of its foolishness because I like to watch people and I'm not a big drinker. People like to get drunk and silly and it's entertaining and the game – especially as well as the team did this year - the games were exciting and fun and I was able to do that as well as being able to spend time with my kids at the same time. It was an activity that was related to the school that did not pull me away from the family but allowed me to include the family. The clean-up day it was just an opportunity to be personally engaged as opposed to just professionally.

He reported little impact to his work environment. “The only impact is you're away from the office. It didn't affect work negatively. Positively you're out working with people in a different environment and a different setting you can kid and you can joke, it's a different setting, a different environment. (Participant #10, personal communication, January 3, 2012)

Participant 31

Control group participant #31 is a 36-year-old female librarian at the University of Houston. Her pre-test and post-test LGS scores of 34 are considered below average (McAdams & de St. Aubin, 1992). Her pre-test GBC score of 25 was close to the control group GBC pre-test mean of 24. Her post-test GBC score of 18 was the second lowest control group GBC post-test score. Her post-test GBC score was also not close to the control group post-test mean of 23.56. This participant reported participation in events

that benefitted students before the study and in her post-test reported no participation in events that benefitted students. “I didn’t do any of the ones listed and I don’t think I did any other ones,” she said. “I have two young children. I don’t get out much out. It’s a time issue.” (Participant #31, personal communication, January 3, 2012)

Participant 21

Participant #21 in the control group is a 48-year-old female manager that works in an administrative unit that provides support services for students. Her LGS pre-test score of 43 is considered above average as is her post-test LGS score of 42 (McAdams & de St. Aubin, 1992). Her GBC score in both the pre- and post-test was 21. She reported participation in events before and during the study.

This participant discussed in detail the university events that she participated in that benefitted students.

I volunteered to sign up for PALS because I want to help our students, you know, as they’re new to campus, helping them get acclimated to college life. I do like participating in PALS. I did attend FinalsMania this past December. This year, I actually worked the line to where they’re waiting before they go into the room and was able to interact with the students asking them how they were coming with their studies and were they ready for finals, and just trying to talk with them.

(Participant #21, personal communication, January 3, 2012)

Participant #21 discussed her motivation to participate in events that benefit students.

My motivation is I always want to see our students do well. I just feel really good when our young people are trying to make a difference in their lives because I know eventually they'll make a difference in our society. When they're doing things to contribute to their well-being and their families, their future families, their future career, their future professional careers, I think that's what motivates me more. Hopefully, I can talk to one student and then that will stick with them and so when they become an adult and they have a chance to mentor or reach out to a young person, they'll remember the experience that they had on our campus and they'll in turn give it back. (Participant #21, personal communication, January 3, 2012)

Participant #21 also described what she gained from her participation in these events.

I think I gained just more confidence to just start up a conversation with a strange student because as we age the generation gaps gets bigger and so the more you keep engaging in that the more it helps you to want to keep engaging in that. I think what I gained – especially during FinalsMania – I just gained the confidence to just reach out to them and don't let the gap – the generation gap – stop you from doing that. It's just very different from when I was in college – from everything. Outward appearance shouldn't deter one from reaching out to a young person and like I said before, just make a difference. (Participant #21, personal communication, January 3, 2012)

Across interviews, several themes emerged that correspond both to the literature on Erikson's adulthood generativity and the higher education literature on an ethic of care. These themes included a desire by participants to care for and mentor students, an awareness of student stress and a desire to mitigate this stress, a desire to form connections with future generations, and a desire to care for the future of the university.

Teaching and Mentoring Students

Erikson defined adulthood generativity as the caring concern and well-being for future generations (McAdams, 1998). In Kuh's (1991) work on an ethic of care at colleges and universities, he defined this care as the support student feel from the network of caring staff that work at the college or university. In the individual interviews, the desire of these staff to be helpful and to mentor university students was evident. The staff expressed several reasons for their desire to help or teach students. Some cited personal experiences as a factor for their desire to help. Other staff said that teaching and learning with students is another way to remain connected and still another staff member reported a feeling of satisfaction from being able to teach students about the university. Treatment group participant #22 empathized with the college students, reflecting back on his own college experiences and as a father, citing this as one of the reason he is involved in activities benefitting students. "I think I'm a little more aware of what it was like for me 40 years ago and what it might be for the young people now. I've had a couple of kids I've put through college myself" (Participant #22, Personal Communication January 3, 2012). Participant #30 expressed the belief that it is important for staff to make time to interact and learn with the college students they support.

I think it's important and imperative for the staff on our campus to realize that we're here for the students and not just the other staff and faculty and the administration and spend some time learning and with the students (Participant #30, Personal Communication January 3, 2012)

Participant #35 noted that she looks forward to certain times in the academic year because of the opportunity to teach others about the university. "I always like the beginning of the semester and I look for lost people and show them where to go." (Participant #35, personal communication, January 3, 2012)

Awareness of Student Stress

Several treatment and control group participants reported that through their interactions with students at these activities they were provided glimpses of the stress and fears associated with being a student. Participant #22 learned through his interaction with students through PALS that one of the biggest stresses facing undergraduate students is not understanding how to obtain academic advising or how to declare a major.

Participants #21 and #30 both reported students were stressed out at the FinalsMania event at the Library the evening before university finals began. They were glad that they were able to provide a supportive environment for the students to show that staff cared for the students' academic performance. Participant #30 also picked up on student stress during her participation in PALS. "The PALS program has changed me in that I realize how stressful it is to be a freshman on our campus." (Participant #30, personal communication, January 3, 2012) Participant #35 reported that she observed lost students with "fear in their eyes" and was glad to be able to provide directions to the students.

Erikson spoke of the importance of intergenerational interaction to resolve psychological crises as he believed it was critical for the humans in different psychosocial stages to interact in order that crises could be resolved and healthy psychological development could occur (de St. Aubin *et al*, 2004). This intergenerational interaction is also necessary in order for each individual to develop the virtue critical to each stage (McAdams *et al*, 2002). Higher education theorists also believe supportive interaction between students and university staff is also critical to student success. This awareness of student stress and the pro-active actions of these staff are creating the safety nets described by Kuh (1991), which provide a supportive, but not coddling environment, which nurtures the student and enables them to grow psychologically and be successful academically.

Connections with Future Generations

Participants used the word “connected” to describe their experiences and interactions with students and their desire to continue to be linked to students and student activities at the university, even after the study. Erikson believed this desire in adults to be connected to and care for future generations is a reflection of the human’s desire to live on through others (McAdams, 1998). Boyer (1990) believed that the intergenerational experiences, between students and other members of the university community would enable the university to grow into a caring community. Participant #21 described her experiences of being able to bridge the generation gap and how that helped her grow in confidence in her interactions with students.

I think I gained just more confidence to just start up a conversation with a strange student because as we age the generation gaps gets bigger and so the more you keep engaging in that the more it helps you to want to keep engaging in that. I think what I gained – especially during FinalsMania – I just gained the confidence to just reach out to them and don't let the gap – the generation gap – stop you from doing that. (Participant #21, personal communication, January 3, 2012)

Participant #22 acknowledged that staff need to actively pursue these connections with students otherwise it is difficult to understand the overall mission of the university.

It's pretty easy as we sit behind our desks here not to know any students. We see students all around and it's very helpful to have a feel for what these young people are actually doing and you get a flavor for how the university is growing in the field of undergraduate instruction.

Participant #35 also believed staff should interact with students so staff are continually reminded that the role of university staff is to be supportive of student's educational endeavors. "I think any time we can interact and be seen by the students and know that's the reason why we're here is good and so it's reaffirmation why I continue to work at the university which is just to support students and our mission here." (Participant #35, personal communication, January 3, 2012)

Participant #43 said she had been unconnected with undergraduate students for two years and participating in these activities reminded her how much she had enjoyed her past connections with undergraduate students. "I believe that for students and staff

alike, you get most out of the university experience if you're involved in a lot of different things" (Participant #43, personal communication, January 11, 2012). Participant #30 noted a strong connection with the undergraduate students, one that she vowed to continue participating after the student and encourage colleagues to participate as well. "I do feel within the department of HR my voice and the enjoyment that I had from all three of them has been spread and I'll continue to do that." (Participant #30, personal communication, January 3, 2012)

A Sense of Well-being

Several interview participants used words in their interviews that indicated a sense of well-being or enjoyment from their interactions with students in on-campus activities. This well-being and its connection between caring commitment and caring behaviors was also noted in prior research on adult generativity. Previous research of McAdams et al (1993) on adult generativity noted correlations between the GBC (McAdams & de St. Aubin, 1992) and life satisfaction. Participant #30 used the word "enjoyment" when describing her experiences interacting with students. Participant #43 described the satisfaction she felt after interacting with undergraduate students. "It has been a couple of years since I was involved outside of my job duties with students and I have always enjoyed that outside involvement and in fact I have always pursued it because I believe it gives me a balance." (Participant #43, personal communication, January 11, 2012) Participant #21 said interacting with college students provides her a sense of well-being. "I just feel really good when our young people are trying to make a

difference in their lives because I know eventually they'll make a difference in our society." (Participant #21, personal communication, January 3, 2012)

Care for the Future of the University

Erikson and higher education theorists believe generativity should be a key component of social institutions, such as colleges and universities (McAdams, 1998; Kuh, 1991). Boyer (1990) believed caring, intergenerational interactions between students and staff were critical for student success and to the future of the university. In this study, staff were concerned with the future of the students they assisted and these staff wanted to ensure the university continued to be a transformative place, where student on-campus experiences made an impact in the lives of students, and were remembered long after the students had graduated. Participant #21 described this desire:

Hopefully, I can talk to one student and then that will stick with them and so when they become an adult and they have a chance to mentor or reach out to a young person, they'll remember the experience that they had on our campus and they'll in turn give it back. (Participant #21, personal communication, January 3, 2012)

Participant #30 was so inspired after being part of Green Day that she planned to continue to teach students about the importance of recycling when on campus.

When I participated in Green Day, I left there thinking, 'We've got to do something about recycling and getting our students involved because this is for

them - for the students and for the future. (Participant #30, personal communication, January 3, 2012)

Participant #43 said participating in activities that benefitted students is a way for staff to be part of contributing to the future of the university.

This was not very time consuming and yet it connected me with students I would have never met and known outside of my office and it gave me that feeling of really contributing to the bigger picture of the university (Participant #43, personal communication, January 11, 2012)

Participant #22 echoed this belief and said he hoped to be able to look back and see that his participation in university activities with students helped increased the university's graduation rates.

The reputation for graduate instruction has been there nationally for many, many years and I think the forefront for the university right now is undergraduate instruction and that's going to translate into a higher overall preparation standard for in-coming freshmen and I'd like to see our graduation rates go up in the 70 or 80% range. They're in the 45-50% range right now. (Participant #22, personal communication, January 3, 2012)

Chapter 5: Conclusions and Summary

Much has been written about the higher education concept of an ethic of care and its relationship to student success at colleges and universities (Kuh, 1991, 2004; Boyer, 1990); however, to date there has been little quantitative study about the psychological construct of caring in adult university staff, who are the largest population on a college or university campus. There are a number of quantitative studies in the psychological community that have successfully used the LGS and GBC (McAdams & de St. Aubin, 1992) to understand more about caring commitment and caring behaviors in adults. This study was a mixed method analysis of caring commitment and caring behaviors in university staff and sought to understand more about the psychological construct of adult generativity in university staff and how this knowledge might be utilized to create a community of care at a large, urban university. In order to examine the virtue of care within university staff, the results of a four-month research study conducted at a large, public research university, were analyzed. The researcher sought to answer the research question of whether prolonged involvement in activities that potentially elicit generative behaviors had an impact on the overall generativity of university staff. Generativity in university staff was measured after participation in caring acts over an extended period of time. Responses from qualitative individual interviews were used to have deeper conversations with university staff about their participation in this study and observed themes about generativity in both the treatment and control group were analyzed. It was hypothesized that university staff who are directed to participate in generative acts over an extended period of time would have more measurable generative behaviors than

university staff who are not specifically directed to participate in generative behaviors over the same time period.

Discussion of Study Findings and Themes

Reviewing the quantitative pre- and post-test results alone, it was difficult to understand why some GBC and some LGS scores increased during the study timeframe, why some decreased, and why some stayed the same. Looking at the individual interviews and comparing these results to the quantitative instruments, several themes emerged between the groups of participants. Those employees whose LGS scores were at least one point less than, were at or above the instrument average range, which the instrument creators report as 40-41 (McAdams & de St. Aubin, 1992), used words like “connection;” (Participant #43, personal communication, January 11, 2012) “bridging the generation gap;” (Participant #21, personal communication, January 3, 2012) “personally engaged;” (Participant #10, personal communication, January 3, 2012) “worthwhile;” (Participant #22, personal communication, January 3, 2012) and “for the future” (Participant #30, personal communication, January 3, 2012) to describe why they should or did participate in events that benefitted students. The two individuals interviewed whose scores were much lower than the average score and who reported minimal participation in university events used words like, “I couldn’t get away that day” (Participant #35, personal communication, January 3, 2012) and “it’s a time issue” (Participant #31, personal communication, January 3, 2012) to explain why they did not participate in all the events that were part of the study or why they do not volunteer on their own to participate in university events.

Additionally, many of the staff who participated reported that their contact with unfamiliar students exposed them to student fears and uncertainties that had not realized existed on the campus. These staff reported student fears about selecting a major, fears about final exams, and fears about not knowing who to contact on a large campus. Those who did make contact with students as part of PALS, expressed hope that they were or could be part of a student's success, either now or in the future. One employee also reported concern for students' apathy to recycling and her new-found desire to teach students the importance of recycling and care for the environment. All of the university employees that did fully participate were exuberant in their interviews. In their voices, you hear an enthusiasm for the university and its mission, a desire to either improve or understand the metrics behind a program they believed in, and a strong desire to continue to participate in these events and encourage other colleagues to participate with them as well.

The observed themes in this study relate back to the words and themes associated with Erikson's psychological stage of adult generativity. In Erikson's Stage 7: Generativity versus Stagnation, caring for the future and future generations is a key concept of achieving a healthy psychological balance between engagement in the care future generations and not caring at all for future generations (Miller, 2011). The word choices used by those participants who have higher LGS scores and who volunteered for university events appear to reflect that commitment to caring for the future and they use this commitment to engage and care for the students at the university in which they are employed. Some of their words implied not just a caring for the students, but care for the future of the institution as well. In word choices such as "I'd like to see our graduation

rates go up to 70-80%” (Participant #22, personal communication, January 3, 2012) being reminded of “all the university has to offer,” (Participant #30, personal communication, January 3, 2012) and hoping “they’ll (students) remember the experience that they had on our campus and they’ll in turn give it back” (Participant #21, personal communication, January 3, 2012) illustrate the way these employees care for the university as an organization where caring experiences happen and transform students. Through these experiences, these employees felt connected to the transformative power of the university. These experiences and word choices also relate back to the higher education literature on an ethic or community of care at a university. Boyer (1990) wrote he believed colleges and universities should be laboratories of service learning where intergenerational experiences create a community of care at that university. This caring campus will enable the student to not only have book knowledge but will equip this student for life and will teach them how to interact with humanity (Boyer, 1990). Former University of Michigan President Lee Bollinger also said he believed a university’s strength is connected to the way that the university cares for its students (Kinzie & Kuh, 2004). So, it appears that the qualitative and quantitative data collected during the study confirmed the original hypothesis; however, there are some study limitations that should be discussed to understand why additional research is necessary.

Study Limitations

There were several limitations to this study. First, the study was conducted at a large, urban research university so generalizations among all college and university types may not be possible. Additionally, the goal sample population for this study was

approximately 40, with equal groups of 20 in both the treatment and control groups. Since participation in the study was voluntary, the end result was a much smaller study sample, consisting of an original sample size of 16. Many potential candidates either did not respond to the researcher's request for participation in the study or when they did respond reported that they did not have time to commit. The study was also conducted during one academic semester, which may not be a long enough period to see extensive changes in an individual's overall caring commitment or caring behaviors. Additionally, in both the treatment and control group, there were more female than male subjects. A group with a composition of more males than females may have changed the observed results. It could be important for future research to use gender as a variable for learning more about generativity in adult college and university staff.

Implications for Policy, Practice and Research

There are several opportunities to use the understandings gained in this study to impact higher education research and also learn more specifically about the influences key, institutional programs are having at the University of Houston and other colleges and universities. In this study, several participants expressed curiosity at learning more about how their participation in the university's PALS program is having an effect on student persistence and graduation rates. These employees also discussed the impact that this program has had on them professionally by providing a larger connection to the student body. It may be important for the this university and other universities to allocate resources and place an importance on studying the overall impact of their programs that engage staff in activities that benefit student success.

It should also be critical for these universities to understand if these activities increase student success at their institution and if participation in these activities by large numbers of staff creates a more engaged and caring university community. Even though this study used a small sample size and was focused on staff at a large, urban research university, this study provides a roadmap for administrators at any institution to use if they desire to understand more about their own supervisory staff. This study and its methodology offer a quantitative component, currently missing from the higher education literature on an ethic of care. Future research studies should focus on larger sample sizes and multiple institution types to understand more about caring commitment and caring behaviors in university staff in an attempt to provide generalizations that leaders and administrators can use to affect policy and practice for the creation of caring communities at their own colleges and universities.

As leaders understand the importance of the creation of a caring community at colleges and universities, it is critical that leaders model the interaction they would like to see exhibited by the staff when interacting with students. Throughout this study and in the interviews, an inability to take time away from work was mentioned by participants as a reason they were not fully able to participate in on-campus activities. For those who did participate in the study and who volunteered for university activities, many were surprised at what a difference a small time commitment could make in the way these staff connected with students and the feelings of well-being that followed from this participation. In order to instill this value of volunteering and interaction with students as a way to increase student success and create a caring community, leaders at colleges

universities may desire to require a certain level of participation in university events as part of employee job duties or employee performance evaluations.

In this study, we learned more about caring commitment and caring behaviors in university staff at a large, urban university. There were several limitations which may have impacted the overall results; however, what we did learn from those who fully participate in university events either as part of this study or who do so voluntarily is that these individuals believe participation in university events enables them to enhance their caring commitment to students. Several participants expressed a desire or a commitment to participate in specific or more events at the university that they believe directly benefit student success. This study and future research to understand the impacts of specific programs at individual colleges and universities and using larger sample sizes will continue provide valuable insight and further discussions on adult generativity and the importance of a community of caring staff on student success at colleges and universities.

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Appendix A

QUALITATIVE RESEARCH QUESTIONS

FOR INDIVIDUAL INTERVIEWS

Notes about administration of qualitative research questions: Participants in the individual interviews will be contacted after the administration of the posttest by master's students (not the researcher) who do not have professional affiliation with the university. One master's student will be assigned to the treatment group and one master's student will be assigned to the control group. The respondents and their answers will not be connected in a way that identifies them to the researcher when they are reported back by the raters.

Control Group Questions:

1. Over the course of the academic semester, did you volunteer, participate or attend university events (examples: GreenUH Day, FinalsMania, PALS, UH football games, Fine Arts)? If so, which events?
2. If you did participate in university events, what motivated you to participate or attend these events?
3. If you did not participate in university events, why did you choose not to participate?
4. If you did participate in university events, what do you believe you gained from this experience?
5. If you did volunteer at these events, how did this impact your work environment?

Treatment Group Questions:

1. Over the course of the academic semester, you agreed to participate in at least the following university events: GreenUH Day, FinalsMania and PALS. Did you fulfill this requirement? Why or why not?
2. What do you believe that you gained from this experience?
3. How did these experiences impact your work environment?
4. Have these experiences changed how you interact with students? Why or why not?

Appendix B

TREATMENT GROUP LGS PRE-TEST SCORES

| Item | | Treatment Group | | | | | | | | |
|------|--|----------------------------|------|-----|-----|-----|-----|-----|------|-----------|
| | | Participant Pre-Test Score | | | | | | | Item | Standard |
| | | # 6 | # 13 | #22 | #30 | #34 | #35 | #43 | Mean | Deviation |
| 1 | I try to pass along the knowledge I have gained through my experiences. | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 2.86 | 0.33 |
| 2 | I do not feel that other people need me. | 3 | 1 | 2 | 3 | 2 | 2 | 3 | 2.29 | 0.65 |
| 3 | I think I would like the work of a teacher. | 2 | 1 | 1 | 2 | 3 | 3 | 1 | 1.86 | 0.78 |
| 4 | I feel as though I have made a difference to many people. | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 2.43 | 0.46 |
| 5 | I do not volunteer to work for a charity. | 3 | 1 | 3 | 2 | 2 | 1 | 3 | 2.14 | 0.78 |
| 6 | I have made and created things that have had an impact on other people. | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 1.71 | 0.42 |
| 7 | I try to be creative in most things that I do. | 2 | 2 | 2 | 3 | 2 | 3 | 1 | 2.14 | 0.60 |
| 8 | I think that I will be remembered for a long time after I die. | 1 | 0 | 0 | 2 | 2 | 1 | 3 | 1.29 | 0.96 |
| 9 | I believe that society cannot be responsible for providing food and shelter for all homeless people. | 3 | 1 | 0 | 3 | 1 | 3 | 3 | 2.00 | 1.12 |
| 10 | Others would say that I have made unique contributions to society. | 1 | 1 | 1 | 2 | 1 | 1 | 3 | 1.43 | 0.68 |
| 11 | If I were unable to have children of my own, I would like to adopt children. | 2 | 3 | 0 | 2 | 2 | 3 | 0 | 1.71 | 1.09 |
| 12 | I have important skills that I try to teach others. | 2 | 1 | 1 | 3 | 2 | 2 | 3 | 2.00 | 0.71 |
| 13 | I feel that I have done nothing that will survive after I die. | 2 | 1 | 3 | 1 | 0 | 1 | 3 | 1.57 | 0.98 |
| 14 | In general, my actions do not have a positive effect on other people. | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 2.43 | 0.46 |
| 15 | I feel as though I have done nothing of worth to contribute to others. | 3 | 2 | 3 | 3 | 3 | 1 | 3 | 2.57 | 0.68 |
| 16 | I have made many commitments to many different kinds of people, groups, and activities in my life. | 3 | 2 | 2 | 3 | 2 | 1 | 3 | 2.29 | 0.65 |
| 17 | Other people say that I am a very productive person. | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 2.43 | 0.46 |
| 18 | I have a responsibility to improve the neighborhood in which I live. | 2 | 2 | 2 | 3 | 2 | 1 | 2 | 2.00 | 0.50 |
| 19 | People come to me for advice. | 3 | 2 | 1 | 3 | 3 | 3 | 3 | 2.57 | 0.68 |
| 20 | I feel as though my contributions will exist after I die. | 2 | 0 | 2 | 2 | 2 | 1 | 3 | 1.71 | 0.82 |

| | | Participant Pre-Test Score | | | | | | | Item | Standard |
|--|--|----------------------------|------|-----|-----|-----|-----|-----|-------|-----------|
| | | # 6 | # 13 | #22 | #30 | #34 | #35 | #43 | Mean | Deviation |
| | | 45 | 31 | 33 | 51 | 41 | 38 | 51 | 41.43 | 6.96 |

Appendix C

CONTROL GROUP LGS PRE-TEST SCORES

| Item | | Control Group | | | | | | | | | |
|------|--|----------------------------|-----|-----|-----|-----|-----|-----|-----|-------|-----------|
| | | Participant Pre-Test Score | | | | | | | | Item | Standard |
| | | #1 | #10 | #15 | #21 | #23 | #31 | #39 | #42 | Mean | Deviation |
| 1 | I try to pass along the knowledge I have gained through my experiences. | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 2.50 | 0.47 |
| 2 | I do not feel that other people need me. | 1 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2.13 | 0.57 |
| 3 | I think I would like the work of a teacher. | 3 | 2 | 2 | 1 | 2 | 2 | 0 | 0 | 1.50 | 0.94 |
| 4 | I feel as though I have made a difference to many people. | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 2.50 | 0.47 |
| 5 | I do not volunteer to work for a charity. | 2 | 1 | 2 | 1 | 2 | 1 | 0 | 2 | 1.38 | 0.66 |
| 6 | I have made and created things that have had an impact on other people. | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 1 | 1.75 | 0.62 |
| 7 | I try to be creative in most things that I do. | 1 | 0 | 3 | 2 | 2 | 1 | 3 | 1 | 1.63 | 0.94 |
| 8 | I think that I will be remembered for a long time after I die. | 2 | 2 | 1 | 2 | 1 | 1 | 0 | 1 | 1.25 | 0.62 |
| 9 | I believe that society cannot be responsible for providing food and shelter for all homeless people. | 1 | 0 | 2 | 2 | 3 | 1 | 0 | 3 | 1.50 | 1.05 |
| 10 | Others would say that I have made unique contributions to society. | 2 | 1 | 2 | 1 | 0 | 1 | 0 | 1 | 1.00 | 0.67 |
| 11 | If I were unable to have children of my own, I would like to adopt children. | 2 | 3 | 1 | 0 | 2 | 2 | 1 | 1 | 1.50 | 0.82 |
| 12 | I have important skills that I try to teach others. | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 1 | 1.88 | 0.57 |
| 13 | I feel that I have done nothing that will survive after I die. | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 2.75 | 0.41 |
| 14 | In general, my actions do not have a positive effect on other people. | 2 | 2 | 0 | 2 | 3 | 2 | 3 | 3 | 2.13 | 0.87 |
| 15 | I feel as though I have done nothing of worth to contribute to others. | 2 | 3 | 3 | 3 | 3 | 3 | 1 | 2 | 2.50 | 0.67 |
| 16 | I have made many commitments to many different kinds of people, groups, and activities in my life. | 2 | 1 | 2 | 2 | 2 | 2 | 3 | 1 | 1.88 | 0.57 |
| 17 | Other people say that I am a very productive person. | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2.25 | 0.41 |
| 18 | I have a responsibility to improve the neighborhood in which I live. | 1 | 1 | 2 | 2 | 2 | 1 | 3 | 2 | 1.75 | 0.62 |
| 19 | People come to me for advice. | 3 | 3 | 2 | 2 | 2 | 1 | 3 | 2 | 2.25 | 0.62 |
| 20 | I feel as though my contributions will exist after I die. | 1 | 2 | 1 | 3 | 1 | 2 | 3 | 1 | 1.75 | 0.78 |
| | | 38 | 36 | 39 | 43 | 40 | 34 | 40 | 32 | 37.75 | 3.15 |

TREATMENT GROUP GBC PRE-TEST SCORES

[illegible]

| | | | | | | | | | Item | Standard |
|----|---|------|------|------|------|------|------|------|------|-----------|
| | | # 6 | # 13 | #22 | #30 | #34 | #35 | #43 | Mean | Deviation |
| 28 | Wrote a poem or story. | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0.29 | 0.42 |
| 29 | Took in a pet. | | | | | | | | | |
| 30 | Did something that other people considered to be unique and important. | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0.14 | 0.33 |
| 31 | Attended a meeting or activity at a church (<u>not</u> including conventional worship service such as Mass, Sunday morning service, etc.). | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0.43 | 0.68 |
| 32 | Offered physical help to a friend or acquaintance (e.g., helped them move, fix a car, etc.). | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 0.86 | 0.60 |
| 34 | Contributed time or money to a political or social cause. | 1 | 0 | 2 | 0 | 2 | 0 | 0 | 0.71 | 0.82 |
| 35 | Planted or tended a garden, tree, flower, or other plant. | 2 | 2 | 1 | 2 | 2 | 0 | 0 | 1.29 | 0.82 |
| 36 | Wrote a letter to a newspaper, magazine, Congressman, etc. about a social issue. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 |
| 37 | Cooked a meal for friends (nonfamily members). | 1 | 0 | 2 | 0 | 2 | 0 | 1 | 0.86 | 0.78 |
| 38 | Donated blood. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 |
| 40 | Sewed or mended a garment or other object. | 1 | 0 | 0 | 1 | 2 | 1 | 0 | 0.71 | 0.65 |
| 41 | Restored or rehabbed a house, part of a house, a piece of furniture, etc. | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0.43 | 0.68 |
| 42 | Assembled or repaired a child's toy. | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0.57 | 0.85 |
| 43 | Voted for a political candidate or some other elected position. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 |
| 44 | Invented something. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 |
| 45 | Provided first aid or other medical attention. | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0.71 | 0.65 |
| 48 | Participated in or attended a benefit or fund-raiser. | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0.29 | 0.65 |
| 49 | Learned a new skill (e.g., computer language, musical instrument, welding, etc.). | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0.43 | 0.46 |
| 50 | Became a parent (had a child, adopted a child, or became a foster parent). | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 |
| | GBC Treatment Group Pre-Test Mean | 33.0 | 19.0 | 31.0 | 31.0 | 48.0 | 33.0 | 17.0 | 30.3 | 8.90 |
| | | | | | | | | | | |
| 51 | I volunteered at a UH event (outside of my professional responsibilities) that supported students. | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0.43 | 0.68 |

| | | | | | | | | | | Item | Standard |
|-------------------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------|-------------|
| | | # 1 | #10 | #15 | #21 | #23 | #31 | #39 | #42 | Mean | Deviation |
| 44 | Invented something. | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0.13 | 0.31 |
| 45 | Provided first aid or other medical attention. | 0 | 0 | 1 | 0 | 0 | 2 | 1 | 2 | 0.75 | 0.78 |
| 48 | Participated in or attended a benefit or fund-raiser. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.13 | 0.31 |
| 49 | Learned a new skill (e.g., computer language, musical instrument, welding, etc.). | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0.50 | 0.67 |
| 50 | Became a parent (had a child, adopted a child, or became a foster parent). | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 |
| GBC Control Group Mean | | 15 | 22 | 23 | 21 | 34 | 25 | 25 | 27 | 24.00 | 4.78 |
| 51 | I volunteered at a UH event (outside of my professional responsibilities) that supported students. | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 1 | 1.00 | 0.47 |

Appendix F

TREATMENT GROUP LGS POST-TEST SCORES

| | | | | | | | | | Item | Standard |
|----|--|-----|------|-----|-----|-----|-----|-----|-------|-----------|
| | Item | # 6 | # 13 | #22 | #30 | #34 | #35 | #43 | Mean | Deviation |
| 1 | I try to pass along the knowledge I have gained through my experiences. | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 2.57 | 0.46 |
| 2 | I do not feel that other people need me. | 2 | 1 | 3 | 3 | 2 | 3 | 3 | 2.43 | 0.68 |
| 3 | I think I would like the work of a teacher. | 2 | 1 | 2 | 2 | 3 | 2 | 1 | 1.86 | 0.60 |
| 4 | I feel as though I have made a difference to many people. | 2 | 1 | 2 | 3 | 2 | 1 | 3 | 2.00 | 0.71 |
| 5 | I do not volunteer to work for a charity. | 3 | 1 | 3 | 2 | 2 | 0 | 3 | 2.00 | 1.00 |
| 6 | I have made and created things that have had an impact on other people. | 2 | 1 | 2 | 2 | 1 | 1 | 2 | 1.57 | 0.46 |
| 7 | I try to be creative in most things that I do. | 2 | 2 | 2 | 3 | 1 | 2 | 1 | 1.86 | 0.60 |
| 8 | I think that I will be remembered for a long time after I die. | 2 | 0 | 1 | 2 | 1 | 1 | 3 | 1.43 | 0.85 |
| 9 | I believe that society cannot be responsible for providing food and shelter for all homeless people. | 2 | 2 | 3 | 3 | 1 | 3 | 3 | 2.43 | 0.68 |
| 10 | Others would say that I have made unique contributions to society. | 2 | 0 | 1 | 2 | 1 | 1 | 3 | 1.43 | 0.85 |
| 11 | If I were unable to have children of my own, I would like to adopt children. | 1 | 3 | 0 | 2 | 3 | 3 | 0 | 1.71 | 1.20 |
| 12 | I have important skills that I try to teach others. | 3 | 1 | 1 | 3 | 2 | 2 | 3 | 2.14 | 0.78 |
| 13 | I feel that I have done nothing that will survive after I die. | 3 | 2 | 2 | 1 | 1 | 2 | 3 | 2.00 | 0.71 |
| 14 | In general, my actions do not have a positive effect on other people. | 3 | 3 | 3 | 3 | 2 | 1 | 3 | 2.57 | 0.68 |
| 15 | I feel as though I have done nothing of worth to contribute to others. | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2.86 | 0.33 |
| 16 | I have made many commitments to many different kinds of people, groups, and activities in my life. | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 2.43 | 0.46 |
| 17 | Other people say that I am a very productive person. | 2 | 2 | 1 | 3 | 2 | 2 | 3 | 2.14 | 0.60 |
| 18 | I have a responsibility to improve the neighborhood in which I live. | 2 | 1 | 2 | 3 | 2 | 2 | 1 | 1.86 | 0.60 |
| 19 | People come to me for advice. | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2.71 | 0.42 |
| 20 | I feel as though my contributions will exist after I die. | 3 | 1 | 2 | 2 | 2 | 1 | 3 | 2.00 | 0.71 |
| | | 47 | 31 | 39 | 51 | 39 | 37 | 50 | 42.00 | 6.46 |

Appendix G

CONTROL GROUP LGS POST-TEST SCORES

| Item | | Participant Post-Test Score | | | | | | | | Item | Standard |
|------|--|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-------|-----------|
| | | #1 | #10 | #15 | #21 | #23 | #31 | #39 | #42 | Mean | Deviation |
| 1 | I try to pass along the knowledge I have gained through my experiences. | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2.63 | 0.46 |
| 2 | I do not feel that other people need me. | 3 | 3 | 2 | 1 | 3 | 2 | 3 | 2 | 2.38 | 0.66 |
| 3 | I think I would like the work of a teacher. | 3 | 2 | 2 | 1 | 2 | 2 | 1 | 0 | 1.63 | 0.81 |
| 4 | I feel as though I have made a difference to many people. | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 2.25 | 0.41 |
| 5 | I do not volunteer to work for a charity. | 2 | 0 | 2 | 0 | 0 | 1 | 3 | 2 | 1.25 | 1.03 |
| 6 | I have made and created things that have had an impact on other people. | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 1.63 | 0.46 |
| 7 | I try to be creative in most things that I do. | 2 | 1 | 3 | 2 | 2 | 1 | 3 | 1 | 1.88 | 0.74 |
| 8 | I think that I will be remembered for a long time after I die. | 1 | 2 | 1 | 2 | 1 | 1 | 0 | 1 | 1.13 | 0.57 |
| 9 | I believe that society cannot be responsible for providing food and shelter for all homeless people. | 3 | 0 | 2 | 3 | 3 | 1 | 3 | 3 | 2.25 | 1.03 |
| 10 | Others would say that I have made unique contributions to society. | 0 | 1 | 2 | 2 | 0 | 1 | 0 | 1 | 0.88 | 0.74 |
| 11 | If I were unable to have children of my own, I would like to adopt children. | 2 | 3 | 1 | 0 | 0 | 2 | 0 | 1 | 1.13 | 0.99 |
| 12 | I have important skills that I try to teach others. | 2 | 3 | 2 | 3 | 1 | 2 | 1 | 1 | 1.88 | 0.74 |
| 13 | I feel that I have done nothing that will survive after I die. | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2.50 | 0.47 |
| 14 | In general, my actions do not have a positive effect on other people. | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 2.75 | 0.41 |
| 15 | I feel as though I have done nothing of worth to contribute to others. | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 2.75 | 0.41 |
| 16 | I have made many commitments to many different kinds of people, groups, and activities in my life. | 2 | 1 | 2 | 2 | 1 | 2 | 0 | 1 | 1.38 | 0.66 |
| 17 | Other people say that I am a very productive person. | 2 | 2 | 3 | 3 | 1 | 2 | 3 | 2 | 2.25 | 0.62 |
| 18 | I have a responsibility to improve the neighborhood in which I live. | 0 | 2 | 2 | 3 | 0 | 2 | 2 | 2 | 1.63 | 0.94 |
| 19 | People come to me for advice. | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2.25 | 0.41 |
| 20 | I feel as though my contributions will exist after I die. | 1 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1.50 | 0.67 |
| | | 39 | 43 | 44 | 42 | 30 | 34 | 39 | 32 | 37.88 | 4.65 |

[illegible]

Appendix I

CONTROL GROUP GBC POST-TEST SCORES

| | | Control Group | | | | | | | | | |
|----|--|-----------------------------|-----|-----|-----|-----|-----|-----|-----|------|-----------|
| | | Participant Post-Test Score | | | | | | | | Item | Standard |
| | | # 1 | #10 | #15 | #21 | #23 | #31 | #39 | #42 | Mean | Deviation |
| 1 | Taught somebody a skill. | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1.78 | 0.41 |
| 2 | Served as a role model for a young person. | 0 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1.56 | 0.41 |
| 5 | Gave money to a charity. | 2 | 2 | 2 | 0 | 2 | 1 | 0 | 2 | 1.22 | 0.87 |
| 6 | Did volunteer work for a charity. | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0.22 | 0.41 |
| 7 | Listened to a person tell me his or her personal problems. | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1.89 | 0.31 |
| 9 | Taught Sunday School or provided similar religious instruction. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 |
| 10 | Taught somebody about right and wrong, good and bad. | 0 | 2 | 1 | 0 | 2 | 1 | 2 | 1 | 1.22 | 0.66 |
| 11 | Told somebody about my own childhood. | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 2 | 0.89 | 0.67 |
| 12 | Read a story to a child. | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0.22 | 0.62 |
| 13 | Babysat for somebody else's children. | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0.22 | 0.62 |
| 15 | Gave clothing or personal belongings to a not-for-profit organization (such as the "Good Will," "Salvation Army," etc.). | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 1.56 | 0.47 |
| 16 | Was elected or promoted to a leadership position. | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0.22 | 0.62 |
| 17 | Made a decision that influenced many people. | 0 | 0 | 1 | 2 | 1 | 1 | 1 | 2 | 1.00 | 0.57 |
| 19 | Produced a piece of art or craft (such as pottery, quilt, woodwork, painting, etc). | 0 | 2 | 1 | 0 | 2 | 0 | 1 | 0 | 0.67 | 0.78 |
| 20 | Produced a plan for an organization or group outside my own family. | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 1 | 0.67 | 0.62 |
| 21 | Visited a nonrelative in a hospital or nursing home. | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0.33 | 0.46 |
| 23 | Made something for somebody and then gave it to them. | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 1 | 0.78 | 0.74 |
| 24 | Drew upon my past experiences to help a person adjust to a situation. | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1.11 | 0.57 |

[illegible]

| | | | | | | | | | | Item | Standard |
|----|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------|-------------|
| | | # 1 | #10 | #15 | #21 | #23 | #31 | #39 | #42 | Mean | Deviation |
| 50 | Became a parent (had a child, adopted a child, or became a foster parent). | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0.13 | 0.33 |
| | GBC Control Group Post-Test Mean | 16 | 21 | 29 | 21 | 43 | 18 | 21 | 26 | 23.56 | 7.46 |
| 51 | I volunteered at an event (outside of my professional responsibilities) that supported students. | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0.38 | 0.46 |

