AN EXAMINATION OF THE EFFECT OF THE GERORICH PROJECT IN THE BSW CURRICULUM

by

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DEDICATION & ACKNOWLEDGMENTS

This process would not have started or ended successfully without the friendship, love, encouragement, and mentoring of these individuals.

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An Examination of the Effect of the GeroRich Project in the BSW Curriculum

Abstract

by

VALERIE L. RADU

Influencing undergraduate social work students to consider a career in aging has become an important focus in higher education since 2000. Prior educational efforts had mixed results and did little to address the continuing inadequate number of students interested in working in aging settings. The purpose of this study was to evaluate the effect of a project (GeroRich) that aimed to aging-enrich both the curriculum and field practicum sites in selected social work programs. A constructivist framework was used to evaluate the effect of the GeroRich project on aging knowledge, opportunities to seek out older adults in a practicum setting, perceptions of older adults, intent to seek employment in an aging setting, the perceived level of treatment bias toward older adults and the perceived level of competence in working with older adults. Using a cross-sectional design, data was collected over a three-month period from junior and senior students (N = 90) in BSW programs that participated in the GeroRich project and junior and senior students (N = 153) in non-GeroRich BSW programs.

A questionnaire collected demographic information, the degree of aging knowledge, the intent to seek opportunities to interact with older adults in a practicum setting, perceptions toward older adults, and intent to seek employment in an aging setting.
A case study was used to assess perceived treatment potential of older adults and perceived level of competence in working with older adults. Phone interviews with five teaching faculty members provided additional qualitative information in terms of the constructivist framework, assessment, and teaching methods. Hierarchical and logistic regression analysis was used to predict the effect of the GeroRich project on the dependent variables. The project had a generally positive influence on career choice, treatment potential of older adults, and perceived level of competence in working with older adults and significantly impacted students in regard to positive perceptions of older adults. Finally, the project had a less positive influence on students in terms of unintentionally reinforcing negative aging knowledge.
Chapter 1

Rationale

The world is “graying”. The United Nations estimates that by 2050, “the number of older persons will triple to approximately two billion, or 22 percent of the world's population of six billion with the fastest growing group aged 85 and older” (Sandrasagra, 2001, n.p). A baby boomer turns 50 every 7.6 seconds, and by mid-century seniors will outnumber young people for the first time in history (MSNBC, n.d.). In America, the aging population is growing more diverse with approximately 12 percent of older adults “being a member of a minority race or culture” (Klein, 1995, n.p.). As indicated by the 2000 U.S. Census, a 2000 study by the Association of Active Retired Persons (AARP) also found that Hispanics are the fastest growing ethnic group of baby boomers; the Spanish version of AARP’s magazine My Generation targeted at boomers debuted in the past five years (Segunda Juventud, 2003). Between 1930 and 1990 the percentage of elderly in the general population grew from five percent to thirteen percent (AOA, 1997.). The fastest growing segments of the aging population are those aged 85 and older, and the majority of these “oldest-old” are women.

These increased longevity rates are primarily attributed to improved quality of and access to healthcare. This “oldest-old” population often has chronic health problems, an increased need for assistance with activities of daily living and higher rates of dementia and depression. Approximately 24 percent of persons aged 85 and older reside in a nursing home, and of this group, one in three are women (1997.). The baby boomer population is predicted to be one of
the most diverse aging populations in terms of ethnicity, women’s career achievements, educational attainment, income, religious orientation, and sexual orientation. Furthermore, this group is politically-savvy and concerned about the general welfare of their generation and future generations in terms of healthcare, social policy, and the environment.

The growing number of aging persons will require a broad and diverse spectrum of services. This demographic change has created an increased demand for aging-competent professionals such as doctors, nurses, social workers, and policy-makers. The National Institute on Aging predicted in 1987 that 60 - 70,000 social workers would be needed by 2020 to work with older adults (NIA, 1987). Despite these trends, professionals in medicine, nursing, allied health, and social work have been slow to respond to the workforce realities of this emerging aging boom.

This poor response has been well-documented beginning in 1987 when the National Institutes on Aging funded a comprehensive report that examined the future aging workforce needs among five professions largely responsible for providing care to the elderly: physicians, dentists, nurses, social workers, and other health personnel. Retrospectively, one of the most startling initial facts in the report suggested that the numbers of older adults cared for by physicians and other healthcare personnel (including social workers) could be as high as “one third to two thirds of future workloads” with the fastest growing group being those aged 85 and older (1987, n.p.). Key recommendations from this report were that all health care personnel should be educated and trained in addressing the
needs of older adults and their families; special attention should be given to the impact of lifelong disability, culture, and economic background on the aging process; there should be an increase in targeted training of faculty in aging content who can then educate the next generation of professionals.

Not surprisingly, the report found that while future demand would be great, the numbers of professionals in all of these groups who were interested in geriatric care were far fewer than needed. For example, in 1987 it was projected an estimated 10 - 21,000 geriatricians would be needed by 2000. In 2002, a report by the National Alliance for Aging Research found that the United States would need up to 36,000 geriatricians by 2030 but could fall 25,000 short of this need unless “effective steps are taken to train new providers” (NAAR, 2002, p.4). A survey by the National Association of Social Workers in 1998 found that only four percent of MSWs indicated aging as their primary practice speciality as compared with sixteen percent of BSWs (Scharlach, Damron-Rodriguez, Robinson, & Feldman, 2000). A 1990 study by Peterson & Wendt evaluated professionals in four fields who had likely contact with an elderly population (social work, counseling, occupational therapy, and recreational therapy). This study found a general agreement among all of these professionals of the need for knowledge about aging, regardless of the area of practice. Additionally, the majority of respondents in the study indicated that the field of aging was a good career choice with growth potential.

This ongoing lack of “aging-competent” health care professionals has potentially serious negative implications for aging policy and service delivery.
The unique and complex medical, emotional, and psychosocial issues specific to the aging process will not be adequately or appropriately addressed unless there is a committed long-term change effort by professionals and educators to upgrade current professionals’ skills and improve the education and training of future health care professionals. As this current study examines the low interest among social work students in working with older adults and their families, it is important to examine similar trends, patterns, and interventions in the disciplines of medicine and nursing.

_Aging Career Interest in Medicine_

Statistically, older adults now account for nearly forty-percent of inpatient hospital stays and consume nearly fifty-percent of a physician’s time on average. The average 75-year old has three chronic health conditions and takes approximately 4.5 prescription medications (NAAR, 2002). These numbers are expected to increase; the baby boomer generation began the transition into older age in 2006 when the first cohort turned 60 years old. Despite this demographic trend, there continues to be an inadequate number of physicians who are licensed in geriatrics. Currently, there are “fewer than 9,000 physicians [out of 950,000 licensed and practicing physicians in the U.S.] who have met the qualifying criteria in geriatrics” (NAAR, 2002, n.p.). The September 2003 issue of _Geriatrics_ reported that only “1 in 30 graduating medical students have taken an elective course in geriatrics” and only 5 out of 145 medical schools in America have a geriatric medicine department (Sherman, 2003, p.10). Twenty percent of the top 16 geriatric fellowship programs were unfilled between 1991 and 1994.
due to lack of qualified applicants. With recent changes in specialty
certifications, fellowship training is now required for re-certification. Many
experts now predict a decrease in the number of certified geriatricians due to this
requirement (Chiang, 1998).

Politicians and professionals continue to argue that there is some evidence
of age bias present in the modern health care system possibly as a result of the
lack of geriatric training among physicians. Bias seems evident in medical
clinical trials which rarely include older adults even though older adults, as a
group, consume the highest numbers of prescription and over-the-counter
medications (Mitka, 2002). The fact that only 10 percent of older adults are
screened for glaucoma, as compared with a 95 percent immunization rate for five
year-olds, seems to provide further support for the ageism bias argument
(Sherman, 2003). Furthermore, when older patients report medical or somatic
complaints, the risk these complaints will be dismissed as aging-related instead of
disease-related is higher if the physician has no geriatric training or knowledge of
normal aging processes (n.a., 2003). As one medical student stated, “caring for
older patients needs to be reframed in terms of the wealth of knowledge,
historical, cultural, psychological, and medical complexity that it is” (Shroeder-
Mullen, 1998, p. 1034). The current numbers of geriatric trained and certified
physicians remain low despite the fact that the field of medicine has perhaps the
oldest chronological history of efforts aimed at identifying ageism in medicine
and implementing interventions to address age bias in the training of physicians.
In 1978, the Institute on Medicine published a national report, *Aging and Medical Education*, emphasizing the need to increase interest in aging among medical students, recommending the development of a geriatrics specialty and also calling for an effort to include knowledge on aging in all aspects of the medical school curriculum (Warshaw & Bragg, 2003). The Veteran’s Health Administration (VHA) emerged as a leader in 1975 by funding and developing geriatric research through the establishment of Geriatric Research, Education and Clinical Care Centers (GRECCs). As a result of this early initiative, 2001 data identified 20 GRECC Centers of Excellence affiliated with academic medical centers ([http://www.grecc-gla.org/mission.htm](http://www.grecc-gla.org/mission.htm)). The VHA also offered some of the first fellowships available in geriatric medicine and continues to do so today. In addition to recruiting medical student interested in geriatrics, there has also been an ongoing need to recruit and train medical school faculty in geriatrics and gerontology. A 1980 study by UCLA and the RAND Corporation recommended “900-1,600 faculty in geriatric medicine, 1,300 PhD basic scientists in geriatric medicine, and 450 geropsychiatrists” just to meet the needs of medical academia (n.a., 1994, n.p.).

Research has found that early exposure to older adults is crucial for medical students in considering a career in geriatrics. Lieff and Clarke (2000) examined the factors that increase senior psychiatry students’ interest in geriatric psychiatry. The overwhelming majority of respondents indicated that a positive clinical experience was the strongest factor in selecting geriatric psychiatry. Enthusiastic or charismatic supervisors, who were also clinically competent and
willing to serve as role models, were rated as the second strongest influence on
career choice in geriatrics. Similarly, Abyad (2000) found that recruiting medical
students to a geriatric fellowship program was difficult but could be positively
influenced by the length of the fellowship and the salary level. In the study, 32
percent of respondents indicated an interest in a geriatric fellowship; this interest
correlated positively with a generally positive attitude toward older adults.

Studies have also found a high rate of satisfaction among geriatricians as
compared with other medical specialties (Warshaw & Bragg, 2003). A 1996
study of family practice medical students’ knowledge of normal versus
pathological aging found that over one-third reported that their attitudes toward
older adults became more positive during their residency experience while half of
the sample reported no change in their attitudes (Beall, Baumhover, Maxwell, &
Pieroni, 1996). However, this same study also found knowledge deficits among
residents in the context of normal aging versus disease-related functional changes.
Residents who cared for a higher number of elderly residents scored significantly
higher on normal aging items than the residents who cared for few numbers of
elderly patients (1996). Conversely, some physicians demonstrate
“compassionate stereotyping” of older patients. This perception can be equally
detrimental as it reinforces the “assumption that aging is a singular, somewhat
predictable process of decline and masks the greater diversity of the older
population” (Revenson, 1989, p. 230).

One specialty area in medicine that has historically and currently remained
underrepresented in geriatrics is psychiatry. Older adults make up 13 percent of
the general population but currently only account for seven percent of all inpatient care, six percent of community-based mental health, and nine percent of private psychiatric care (Persky, 1998 cited in *The State of Aging & Health in America*, 2001). As the older adult population continues to increase so will its mental health needs. However, older adults themselves can be barriers to receiving mental health services with close to 58 percent of those over 65 believing that it is ‘normal’ to get depressed as one ages (n.p., 2001). The current low numbers of geropsychiatrists will not be able to effectively meet the demand for services. Currently there are “200-700 geropsychologists and 2,425 board-certified geriatric psychiatrists” (AOA, 2001, n.p.). The American Association for Geriatric Psychiatry (AAGP) estimates that by 2010, given current demographic trends, there will be a need for a minimum of 2,980 board certified geriatric psychiatrists.

Several historic and current factors contribute to the continuing low numbers of physicians interested in geriatrics. The majority of older adults have Medicare as their primary insurance however the government has cut already low Medicare reimbursements to physicians by 5.4 percent resulting in a continuing decrease in the number of physicians accepting Medicare reimbursement (Jaffe, 2002). Older adults also require more physician face time than younger patients due to medical needs complicated by psychosocial needs. As one gerontologist put it, “for the geriatrician, treating a patient is more than treating a disease. If a patient doesn’t have transportation, keeping medical appointments is nearly impossible. If an individual can’t pay rent, then paying for expensive drugs is out
of the question. If fingers are twisted by arthritis, then opening a pill bottle can be difficult” (Lipsitz, 2003, p. A15).

Efforts are certainly underway to increase the number of geriatricians both in practice and at the highest levels of academia. Ten percent of the total content of the 1998 American Board of Internal Medicine included questions focusing on knowledge about geriatrics. This percentage tied with critical care for the greatest portion of the exam (www.amsa.org/ger). Harvard began requiring geriatric course work for first and second-year students in 2002. While many medical schools are attempting to integrate more aging content into their curriculum, a report found that many of these courses tend to be elective, rather than required, reducing the numbers of potential medical students exposed to aging (Dembner, 2002).

Medical schools have developed student geriatric interest groups, fellowships, summer institutes on aging. The American Medical Student Association (AMSA) formed a Geriatric Health Interest Group which provides information and resources for medical students interested in geriatrics including a listserv for discussion purposes and interviews with prominent geriatricians. The goals of this section include:

- increasing the interest in geriatrics by focusing on the huge demand for geriatric-trained physicians
- emphasizing the medical complexity and intellectual challenge of caring for older adults
- highlighting the emotional fulfillment aspect of this type of career
• focusing on the benefits of a team approach to care with this population, and the variety in possible career areas in geriatrics (www.amsa.org/ger).

Aging Career Interest in Nursing

Nursing is the “largest health care occupation, with approximately 2 million jobs in 1996” (Minnick, 2000, p. 211). Older adults currently account for forty-nine percent of hospital stays (NAAR, 2002). Additionally, sixty-nine percent of home health care clients are older adults as are 83 percent of residents in nursing facilities (Kovner, Mezey, & Harrington, 2002; United Association of Geriatric Nursing Assistants, 1995). The low numbers of nurses certified in geriatrics is strikingly low: “less than one percent of 2.2 million registered nurses are certified in geriatrics” (2002, n.p.). A recent initiative through the Hartford Foundation focuses on providing specialty training in aging to at least 20 percent of registered nurses already working (Dembner, 2002).

Nurses along with physicians, social workers, and other health care professionals, generally hold negative or mixed attitudes toward older adults. The reluctance to select a geriatric nursing career may begin in the first weeks of nursing education when nursing students are often sent to a local nursing facility to practice taking vital signs. This early exposure to the small percentage of older adults who tend to be frail and chronically ill may reinforce images of older people as helpless, dependent, demented, and unpleasant to work with.

Similar to social work, nursing researchers have become increasingly interested in examining what factors may influence a person’s early interest in
older adults and intent to select a career working primarily with older adults. A study of professional nurses working in long-term care found the majority (86 percent) were satisfied with working in long-term care (Robertson & Cummings, 1991). When asked to rank the factors which influenced their decision to work in long-term care, prior work experience in geriatrics ranked first, a geriatrics clinical rotation in nursing school ranked fourth, and an interest in older adults ranked fifth. Interacting with nursing faculty during nursing school who were interested in geriatrics ranked seventh (1991).

One of the difficulties with assessing nursing workforce issues in aging is the limited data available regarding the specific numbers of nurses employed in settings where older adults are the primary population served. This lack of data is related to the fact that most nursing surveys don’t specifically ask about geriatrics (Mezey & Kovner, 2003). The National Institute of Aging’s 1987 report, *Personnel for Health Needs of the Elderly through the Year 2020*, predicted that the population of registered nurses would grow at a slow rate and peak in 2000 due to the increased age of the nursing workforce and possible economic issues. The report estimated a need for a minimum of thirty-five percent of full-time registered nurses to provide care specifically to older adults in 2000; this minimum is assuming fifteen percent of registered nurses would be working in nursing home settings (NIA, 1987). A 2002 survey found that less than seven percent of nurses reported working in a nursing home setting (HRSA, 2002).

In the past five years, several reports have been issued which attempt to more closely examine the nursing shortage from different perspectives. A general
survey of nurses done in 2002 by the U.S. Department of Health & Human Services found the majority of nurses worked in hospital settings (59.1 percent) while 9.5 percent reported working in ambulatory care settings and only 6.9 percent reported working in a nursing facility (HRSA, 2000). The numbers of nurses employed in nursing facilities has declined since the nursing shortage began at the end of the 1990’s resulting in fewer licensed nurses overseeing the care of the most frail, at-risk older adults. Complicating the nursing shortage is the fact that close to fifty percent of nurses are aged 45 or older, meaning many will retire in the next decade resulting in further shortages of qualified, experienced nurses (n.a., 2002). The Robert Wood Johnson Foundation also published a report in 2002, Health Care’s Human Crisis: The American Nursing Shortage. This report identified several historic and current factors which contribute to nursing shortages including an aging population, an aging nursing workforce, more career options for women, a lack of interest in nursing among young adults, and a complex healthcare system which creates complicated work environments (Kimball & O’Neill, 2002).

The nursing education process also contributes to the lack of aging knowledge or interest in geriatrics. Mezey & Kovner (as cited in Public Policy & Aging Report, 2003) found that while all baccalaureate nursing programs require rotations in pediatrics, no similar requirement for geriatrics is present. Out of 670 baccalaureate nursing programs, “only four percent met all the criteria for exemplary geriatric education, only 23 percent had a required [aging] course and 58 percent had no full-time faculty certified in geriatric nursing” (p. 22). These
numbers have declined since 1984 when a study found that seventy-one percent of nursing programs reported integrating aging content in the curriculum, eleven percent required courses on aging, and only twenty percent reported little aging content (NIA, 1987).

The primary challenge in increasing the number of aging-competent nurses is the lack of qualified faculty to teach geriatrics content; nationwide there are only 700 advanced practice nurses (APN’s) certified as geriatric nurse practitioners or specialists (Mion, 2003). An additional challenge facing nursing education is the continuing low rate of diversity among nurses. The majority (86 percent) of nurses are white, 4.9 percent are African-American, and only two percent are Hispanic (Berliner & Ginzberg, 2002). These statistics do not reflect the diversity of the U.S. population where Caucasians now make up only 69 percent of the overall population (2002).

Most experts agree that nursing students should have required content on the social, emotional, psychological, and physical aspects of aging “as well as experience caring for older adults” (Mezey & Kovner (as cited in Public Policy & Aging Report, 2003, p. 24). Mion (2003) proposes several strategies to increase the geriatric nursing workforce including improving the work environment by training nurse managers in geriatric nursing competencies, addressing the declining image of nursing as a positive career choice, addressing the complexities of delivery of care models, and creating more partnerships between academia and various aging service sectors.
Aging Career Interest in Social Work

In 1987, the report, *Personnel for Health Needs of the Elderly Through the Year 2020*, estimated a need for 40 - 50,000 geriatric social workers by 2000 and 60 -70,000 by 2020 (NIA, 1987). A 2001 survey by the National Association of Social Workers identified only 5,000 social workers who reported aging settings as their primary area of practice (Rosen & Zlotnick, 2001). Another emerging challenge is the lack of ethnically diverse social workers. Similar to medicine and nursing personnel, the majority of social workers are Caucasian which is not reflective of the growing diversity in both the general and the aging population. As one report suggests, even when older adults have access to mental health care there is often a lack of staff to “provide appropriate, culturally sensitive prevention and treatment services to minority elders and continuing care to those who are chronically mentally ill” (AOA, 2001, n.p.).

Most experts agree that attracting the interest of students early in their academic career is an important factor in determining career choice. Hanson & McCullagh (1995) found that over a 10-year period, eighty-five percent of undergraduate social work students who were in the beginning phase of a BSW program made their decision to choose social work as a career during their first three years of college. Of this group, two-thirds had explored other majors before selecting social work, and women were more likely to select a social work career based on altruism or service whereas men were more likely to consider economic security when selecting a career. The two motivational factors identified by respondents which influenced their career choice were service to others and
economic security and well-being (salary levels). The low professional status and pay characteristic of the social work profession continues to be a barrier for many college students when selecting social work as a career. When combined with negative perceptions of a group such as older adults, it is easier to understand the challenges of recruitment and retention not only to the profession itself but also within this specialty practice area.

One of the limitations in assessing the true number of social workers who are practicing in an aging setting is how “social worker” is defined. The majority of states do not require licensure or certification at the baccalaureate level resulting in a large number of professionals with related degrees in psychology, sociology, or human services identifying themselves as social workers. Organizations often don’t recognize that the complexity of providing services to an older adult requires specialized education and training. As Elizabeth Clark, Executive Director of the National Association of Social Workers stated in an interview, “too often it is believed that anyone can offer aging services, that it doesn’t take a specialized knowledge base to provide quality care. Social work looks at the person-in-environment and assesses biopsychosocial issues” (ASA, 2003, n.p.).

Furthermore, the majority of research on social work careers, mobility, and salaries has only examined MSW social workers, not BSW social workers. A 2001 report, *The Labor Market for Social Workers: A First Look*, by economist Michael C. Barth, utilized data from NASW membership and from the Current Population Survey (CPS). The CPS is a monthly survey of 50,000 households
done jointly by the Bureau of Labor Statistics and the Census Bureau. In this report, all NASW respondents had a minimum of a BSW degree as this is a baseline requirement for membership. The CPS is a “self-referred survey” in which respondents self-identify their occupational role. Approximately thirty percent of the CPS respondents who identified themselves as a ‘social worker’ had less than a bachelor’s degree education and ten percent had no college education (Barth, 2001). One principle finding of the report was how the lack of a clear definition of ‘social worker’ contributes to the lack of educated, well-trained professionals in all areas of social service delivery.

Similarly, a study by Scharlach, Simon, & Dal Santo (2002) of social services personnel in California who were employed in state aging agencies found gaps in both education and training. Less than fifty percent of the positions in adult protective services were held by individuals with an MSW degree. Agency directors were asked to identify the most significant barriers to filling vacant employee positions aging practice settings. Of the agency directors surveyed, seventy-two percent report a lack of appropriately educated and qualified applicants. The second significant barrier was identified as generally low salaries in practice settings that serve a primarily aging population. Over forty percent of the agency directors also reported a lack of ethnically diverse applicants who were appropriately educated and trained (2002).

A 1990 survey of primarily MSW trained NASW members compared members who were part of the Services to the Aged division (the predecessor to the specialty practice section on aging) with members who were not in order to
identify characteristics and factors related to practice in an aging setting. Ninety-seven percent of respondents who were members of the Services to Aging division indicated that aging knowledge was required in their jobs. Surprisingly, in the comparison group, sixty-two percent also indicated aging knowledge was required. When asked, both groups stated that “internships, specialized courses, and concentrations were the three preferred forms of education [to obtain aging knowledge and skills]” (Peterson, 1990, p. 414). The findings from these studies are consistent with other studies which have identified these similar factors as barriers to emphasizing the positive aspects of a career in aging and increasing the numbers of students interested in a career in aging.

A 1998 study of aging services providers’ attitudes about the aging process and attitudes toward older adults found generally positive attitudes (Singleton, 1998). However, social workers who reported being employed for over seven years in an aging practice setting had more negative attitudes than social workers with less aging experience. There were also significant differences between urban and rural social workers with urban social workers expressing more anxiety and stress about their own aging process.

One of the few studies of BSW social work students and their attitudes toward older adults found that only 6.9 percent of respondents indicated they were “definitely planning on doing their field practicum in an aging setting” (Tan, Hawkins, & Ryan, 2001, p. 49). Furthermore, only four percent of the respondents indicated a definite intention to seek a career working with older adults. The study found that attitudes toward older adults were generally neutral
in the sample with a tendency for slightly more negative attitudes towards older
categories of seniors. Factors which correlated positively with positive attitudes
toward older adults were a close relationship with an older relative, a close
relationship with a non-relative older adult, and the number of gerontology
courses taken (2001). The study sample was from Florida where there is a large
population of healthy, active older adults who are very visible in daily settings
such as the grocery store, gym, and other public places. Additionally, the mean
age in the study sample was over 30, indicating more non-traditional students.
These sample characteristics could have resulted in some of the students being in
the role of a caregiver or having several older adults available within their family
system which may have positively influenced their perceptions of older adults.
These factors may not correlate in a study with more traditional students in a
different geographic area who have not had as much life experience or exposure
to a large population of healthy, active older adults.

A combination of negative perceptions and attitudes toward older adults,
lack of interest in aging field practicums, and a lack of aging content in social
work curriculum resulted in only ten percent of social workers in a 1996 study
identifying themselves as practicing geriatric social workers (Damron-Rodriguez,
Villa, Tseng, Lubben, 1996). Approximately four percent of MSW and sixteen
percent of BSW graduates report an intention to work in an aging practice setting
(CSWE, 2001); this statistic has remained unchanged since 1989. In 1995 the
National Association of Social Workers (NASW) identified geriatric social work
as one of the fastest growing specialty areas in social work practice (Klein, 1995).
Furthermore, sixty-two percent of NASW members reported an interest in and need for continuing education on aging practice issues. In 1992 the US Bureau of Labor Statistics projected a thirty-nine percent increase in the need for aging-competent social workers during the next decade. To address this increase, several social work educators estimated that “5,000 new social workers with expertise in gerontological social work should be trained each year by schools of social work” (n.p., Scharlach, Damron-Rodriquez, Robinson, & Feldman, 2000).

Despite this growing empirical evidence, the number of baccalaureate and master’s level social workers interested in working with older adults is not increasing at the same rate as the aging population; this may be seen as an indirect consequence of the ageism prevalent in modern society. Reasons cited in the literature for the low number of social workers interested in aging include low pay, unfamiliarity with different types of careers in aging, and the perception that there is little a social worker can effectively do with an older adult. Furthermore, Kosberg and Kaufman (2002) emphasize the findings from the CSWE-SAGE 2001 report, *Blueprint for a New Millennium*, which identified several additional reasons including a “lack of national leadership, lack of awareness regarding roles, settings, and opportunities, and inadequate research” (p. 4).

How has social work education responded to this pressing need to increase the numbers of “aging-competent” social workers? The social work education response has been varied since an organized effort was undertaken in the 1960s. Historically and currently, the primary educational intervention in social work education has been to focus on integrating or infusing social work curriculum
with more aging content. The recent GeroRich Project, while continuing to focus on curriculum change efforts, also integrated a field practicum component where practicum sites were “aging-enriched” to increase the exposure to older adults by social work students (CSWE, 2001).

This effort to add aging content and increase the interest of social work students in aging as a career choice has been challenging for social work education. Like medicine and nursing, both undergraduate and graduate curriculums are full of required courses, and it is difficult to add yet another “piece” to the course content. Furthermore, social work education has historically and currently been committed to educating students on the many special-interest groups seen in practice settings such as the developmentally disabled, mentally ill, and so forth. Aging is perhaps different from these other groups in the sense that everyone ages – the experience is universal. Adding the dimension of aging to the discussion of these other special-interest groups makes both educational and practical sense.

Given the fact the numbers of social workers who identify themselves as geriatric social workers remains unchanged, the role of social work education and the limitations of the educational interventions used must be examined. Little research has been done to specifically identify what types of educational interventions are most effective for both changing perceptions or attitudes and increasing intent to select a career in aging. These are two separate and important considerations in addressing the continuing inadequate supply of geriatric social workers. This persistent and significant lack of “aging competent” social workers
at both the undergraduate and graduate level has impacted social work practice settings.

Many aging practice settings utilize social workers who may have only a rudimentary knowledge of the many dimensions of the aging process and who may not be aware of empirically-based psychosocial interventions appropriate for use with this population. Furthermore, if social work education curriculum and continuing education presentations continue to provide only minimal content on aging, other professions such as nursing and psychology will step in to fill employer needs, and the social work perspective will be marginalized. In some medical settings, social work has already experienced significant decreases in reimbursement, service delivery, and professional recognition during the past decade due to changes in Medicaid and Medicare policy and reduced state and federal funding levels. However, the increasing aging population is predicted to change this employment trend. The US Labor Department predicts a twenty-seven percent increase in social work positions in healthcare settings between 2000 and 2010 (<http://www.bls.gov/oco/cg/cgs035.htm>).

**Summary and Scope of Research Questions**

Several important issues are raised from this examination of professionals who work primarily in aging settings. Similar to the fields of medicine and nursing there are not an adequate number of social work students interested in and committed to practicing in the field of aging. Factors such as low professional status, low salaries, and the perception of not being able to effectively work with an older person all contribute to a reluctance by students to explore geriatric
social work as a viable and rewarding career choice. However, while the numbers of social workers who identify themselves as geriatric social workers remain low, statistically there are more geriatric social workers currently in practice than there are geriatricians and geriatric nurses (AOA, 2001).

Secondly, the majority of professionals in medicine, nursing, and social work who work in aging settings do not have appropriate education or training in aging. Organizations often do not recognize the complexity of care required for older adults and the benefits of hiring professionals with specialized education and training. This education and training gap contributes to the age bias present in many aspects of the health-care system: inappropriate mental health treatment, inappropriate delivery of social services, and a perpetuation of the negative views of the aging process. As reviewed in this chapter, several studies in all three professional areas found that “aging-competent” knowledge and practice skills have been increasingly identified by professionals in non-aging practice settings as being both important and necessary for effective practice.

Thirdly, there is a considerable lack of ethnically diverse professionals in medicine, nursing, and social work. This emerging trend has significant implications for policy-making and service delivery both within the health care system and the social services system. As both the general and aging populations continue to grow more diverse, the development of culturally competent aging knowledge and practice skills will be crucial to ensuring appropriate medical and psychosocial interventions.
Finally, while the educational structures in all three professional areas have been aware of this growing demographic trend during the past 40 years, few effective educational interventions have been documented and empirically supported. Social work education has specifically struggled to effectively address this problem due in part to the dense content in social work curriculum which aims to educate students about all groups, not just older adults. Funding in social work education to address this problem has also been limited as compared to funding levels in medicine and nursing. This is most likely related to the low professional status of social work within academia and the workplace. The recent 2001 funding initiative from the John Hartford Foundation specifically sought to address the lack of geriatric social workers, the inadequate knowledge of aging by all social workers, and the need to increase student interest in aging as a viable career choice.

While it is not feasible in one study to examine all the possible factors which may influence a career choice in aging, the issues discussed above indicate a pressing need to address two important issues: 1.) A need to significantly increase the number of social work students interested in aging, and 2.) a need to ensure an adequate number of social work students committed (not just interested) to practicing in aging settings.

During the past 40 years social work education has implemented various curriculum changes and other educational interventions directed at increasing both aging content in the curriculum and interest in aging by students. These interventions have had with mixed results as evidenced by the continuing low
numbers of social workers practicing in aging settings. However, it is apparent the majority of these educational interventions have had little empirical support or theoretical orientation. There have also been methodological problems with the design of many of these studies resulting in outcomes which were mixed at best.

The academic environment remains the traditional setting where students are socialized to a profession, exposed to knowledge, and taught skills required for practice. The apparent lack of studies which focus exclusively on aging and BSW education is surprising as the majority of social workers who report working in an aging setting are BSWs (Gibelman & Schervish, 1997). This lack of empirical evidence in this area of social work education, the history of educational interventions with mixed results in social work education, and the continuing lack of social work students interested in aging as a career choice provide the rationale for this study. The scope of the study will evaluate and compare the effectiveness of the GeroRich Project with traditional BSW programs in terms of student knowledge of aging, perception of older adults, level of treatment bias, and student commitment to practice in aging settings. The following research questions are asked:

**Research Question 1:**

a. Do BSW students in a GeroRich funded BSW-only social work program who have had “aging-rich” practicums demonstrate more aging knowledge as compared with BSW students in a non-GeroRich social work program?

b. Do BSW students in a GeroRich funded BSW-only social work program with more aging knowledge demonstrate a higher intent to seek opportunities to
interact with older adults in a practicum setting as compared with BSW students in a non-GeroRich social work program?

**Research Question 2:** Do BSW students in a GeroRich funded BSW-only social work program that integrated both non-experiential and experiential educational interventions into the curriculum demonstrate more positive perceptions of older adults as compared with BSW students in a non-GeroRich social work program?

**Research Question 3:** Are BSW students in a GeroRich funded BSW-only social work program that integrated both experiential and didactic educational interventions into the curriculum more likely to seek employment in aging settings as compared with BSW students in a non-GeroRich social work program?

**Research Question 4:** Do BSW students in a GeroRich funded BSW-only social work program demonstrate more aging knowledge, higher intent to seek out opportunities to interact with older adults, more positive perceptions of older adults, higher intent to seek employment in an aging setting, and a more positive perceived level of treatment potential and a higher perceived level of competence in ability to work with older adults?
CHAPTER 2

This chapter describes the factors and variables associated with the GeroRich Project in the context of curriculum transformation and the use of educational interventions. The primary limitation of the GeroRich Project was the absence of a clear conceptual framework which guided development, implementation, and evaluation. This deficit provides a context for developing the proposed conceptual framework of constructivism as a potential model for evaluating the effectiveness of the different types of educational interventions developed and implemented by various GeroRich programs. This framework has gained increasing consideration from various disciplines in higher education, particularly in the context of diversity and women’s issues. A review of the literature related to curriculum change models and efforts includes a critique of the available studies of aging content in social work education.

The GeroRich Project

According to the GeroRich website (www.gerorich.org), the GeroRich Project was funded in 2001 as part of a $5 million grant to the Council on Social Work Education from the John Hartford Foundation to prepare aging-savvy social workers. Historically, the Hartford Foundation has devoted $20 million to funding projects solely in the areas of academic geriatric training and integrating and improving services for the elderly (http://www.jhartfound.org/aboutus.htm). In addition to the Geriatric Enrichment/GeroRich project, several other independent projects were funded with this grant including the Faculty Scholars, Doctoral Fellows, Practicum Partnership, and Faculty Development projects.
The GeroRich Project was funded for three years beginning in 2001 with the goal of changing social work curriculum to enrich the aging learning experiences for social work students at both the undergraduate and graduate levels. In the fall of 2000, all CSWE-accredited undergraduate and graduate social work programs were invited to submit project proposals. Of the 611 eligible programs (CSWE, 2000), 160 programs (26%) submitted proposals. A total of 67 (11%) BSW and MSW programs were selected to receive up to $30,000 in funding for the first year; these programs were also eligible to apply for additional funding in the second year. The first year of funding, 2001-02, was generally identified as a planning year with the second funding year, 2002-03, focusing on implementation of curriculum changes related to improving aging content. The third year, 2003-04, was unfunded and focused on dissemination of knowledge and outcome evaluation. Preliminary work done by the Council on Social Work Education prior to implementation of the GeroRich Project involved the Strengthening Aging and Gerontology Education for Social Work (SAGE-SW) project completed during the winter of 2000.

The focus of the SAGE-SW project was to identify and develop a core set of aging competencies for all social workers. A survey developed with input from a sample of 2,400 social work practitioners and academics both with and without aging interests, stakeholders, and aging experts resulted in 65 items within three professional domains: a.) knowledge about elderly people and their families, b.) professional skills, and c.) professional practice. From these initial 65 competencies, a list of ten competencies for *all* social workers was compiled, followed by a top ten list of advanced/specialized competencies (SAGE-SW, 2000). During the planning phase for the GeroRich Project,
project directors were oriented to these competencies and encouraged to incorporate these competencies into learning objectives and goals within the project. As the focus of this study is on undergraduate social work education, the ten aging competencies for all social workers are listed below (SAGE-SW, 2000, Table 10).

Aging competent social workers should be able to:

1. Assess one’s own values and biases regarding aging, death and dying.
2. Educate self to dispel the major myths about aging.
3. Accept, respect, and recognize the right and need of older adults to make their own choices and decisions about their lives within the context of the law and safety concerns.
4. Identify normal physical, psychological and social changes in later life.
5. Respect and address cultural, spiritual, and ethnic needs and beliefs of older adults and family members.
6. Recognize the diversity of attitudes toward aging, mental illness and family roles.
7. Understand the influence of aging on family dynamics.
8. Use social work case management skills (such as brokering, advocacy, monitoring, and discharge planning) to link elders and their families to resources and services.
9. Gather information regarding social history such as: social functioning, primary and secondary social supports, social activity level, social skills, financial status, cultural background and social involvement.
10. Identify ethical and professional boundary issues that commonly arise in work with older adults and their caregivers, such as client self-determination, end-of-life decisions, family conflicts, and guardianship.

Types of Educational Interventions Implemented by GeroRich Projects

The majority of GeroRich Projects (both MSW and BSW programs) used a wide variety of educational interventions that were grouped in the categories of discussion, lectures, exercises, written assignments, interviews, projects and presentations, case studies, exercises, and community projects (personal communication, E. DeGooyer, March 5, 2004 and March 8, 2004). The following educational interventions (methods) illustrate the general types of interventions implemented:

- In-class discussions
• Didactic lectures
• Quizzes, games, in-class exercises
• Oral histories with older adults
• Interviews with older adults
• Case studies
• Individual and group projects
• Community projects

The GeroRich Project data did not differentiate between the specific types of interventions used by BSW programs versus MSW programs. The descriptions of the interventions used are limited and unclear which does not provide adequate information regarding the specific components or process of an intervention. For example, an intervention requiring students to complete an interview could be structured or unstructured, thematic or non-thematic. The interview subject might be a healthy older adult, a frail older adult, an older couple (either straight or gay or lesbian), an individual or couple of color, and so forth. All of these variables potentially influence the actual development, implementation, and outcome of the specific educational intervention used and may make replication difficult.

A preliminary content analysis of syllabi from the non-GeroRich programs found similar types of educational interventions that combined both didactic and experiential methods (GeroRich data, 2005). Syllabi from HBSE courses and a micro practice course were reviewed. For example, in the practice course syllabi, educational interventions used included:

• Required volunteer or service learning hours
• Videotaped interviewing assignments
• Reflective journaling
• Group activities
• Role plays
• Lectures & guest speakers
• Self-evaluation activities
• Various written assignments such as short papers, research papers, annotated bibliographies, literature reviews, etc.
• Exams (paper and pencil, essay, take-home)
• Formal presentations using technology (WebCT, Blackboard, Powerpoint)

_GeroRich Evaluation Models_

Evaluation of the project’s overall goals and individual participating program goals was done at the end of year 2 and year 3 through a process evaluation and a summative evaluation. According to GeroRich documents, the process evaluation should answer the questions, “What worked, what didn’t work” and why did specific approaches or methods work or not work (www.gerorich.org). Content from the process evaluations, termed “key accomplishments of Year 1” of the BSW-only programs can be found in its entirety on pp. in the appendix. Process evaluations are usually qualitative in nature; sample statements from selected programs are included here to illustrate this type of evaluation method:

• Development of 13 teaching projects by community practitioners who received mini-grant awards. Projects were developed to facilitate infusion of gerontological material across the curriculum and are adaptable as entire units or can be separated into smaller teaching "pieces" to infuse multiple social work courses.

• Two faculty members, the practicum coordinator, and the GSWI Project Assistant have attended Faculty Development Institutes.

• Reconfigured the Introduction to Generalist Practice course to include a large service learning component; students in the class interview an older adult over the course of the semester to obtain oral histories and to create a resource book to give the elder with whom they are working.
- Sponsored a faculty retreat, provided individual faculty consultation to all part-time faculty, and established a faculty listerv to provide support and information.

- Implemented aging-focused learning strategies in all courses that include interviews with older adults, video presentations, case studies, and role plays.

- Providing stipends for students to do field work in agencies that address the needs of older persons and to conduct research on aging-related issues.

A summative evaluation, on the other hand, answers the question, “To what level did this intervention/project produce its intended effect?” The project asked each individual program to summit data on the following six measures for the summative evaluation process (www.gerorich.org):

1. Increase in the number and percentage of students who have been exposed to geriatric social work content as a result of the project.

2. Increase in the number and percentage of students who graduate indicating a commitment to a career in geriatric social work practice.

3. Increase in the number and percentage of faculty who participated in training/faculty development related to geriatric content.

4. Increase in the number and percentage of faculty who made structural changes (e.g., revised course goals, objectives, assignments, etc) to include geriatric content in their foundation and required courses.

5. Increase in the number and percentage of the required/foundation courses that now include geriatric content (your original proposals have provided us with pre-GeroRich funding data). Be sure to include the name of the foundation course and how such content is infused in it (course objectives, assignments, readings, etc.).

6. Identify and fully describe your 1) major innovation, 2) success and 3) challenge over the two-year period.

The results of the summative evaluation for four of the above six measures is located in the appendix, pp. 252-261.
The social work curriculum for both BSW and MSW programs remains “crowded” with mandated content on many groups as determined by the accreditation standards set forth by the Council on Social Work Education. Given this content challenge, the principal investigators of the GeroRich Project felt it was important not to add-on aging content but to “infuse needed course objectives and materials into existing curricula – to create aging enriched social work foundation courses” (Tompkins & Hooyman, 2002, n.p.). The overall goals of the project were pervasiveness (every social work student in every year exposed to issues related to working with older adults) and sustainability (the embedding of geriatric social work content in courses so that it will continue over time) (Hooyman, 2002). The aims of the GeroRich project were threefold: a.) develop appropriate gerontological resources and materials, b.) provide extensive technical assistance to social work educators, and c.) develop and implement Faculty Development Institutes (FDI’s). The hoped for outcome from these aims was to create a sustainable process which would engage students, faculty, practicum instructors, and other key stakeholders “in a comprehensive change process that will sustain aging-rich learning opportunities” (Tompkins & Hooyman, 2002, n. p.).

The primary mechanism for this change effort within the GeroRich Project was conceptualized as “curriculum transformation,” which differs from prior traditional curriculum change efforts in social work education in terms of instructional strategy, learning philosophy and expectations of students. The Geriatric Social Work Initiative (GSWI) materials suggest that in this type of change effort “a curriculum is a collection of learning experiences with an expected set of outcomes, articulated or not. Those outcomes are associated with some vision of what a student educated in social work
should be like after completing the curriculum. As a result of both external and internal changes, a mismatch may develop between the curriculum and the desired outcomes. The process of change is to realign the learning experiences with the desired (changed) outcomes” (http://www.gswi.org/educational_resources/change_curriculum.html).

Clearly, a preliminary review of the GeroRich project indicated the lack of a conceptual framework to guide the development, implementation, and evaluation of overall project goals and individual program efforts. Informal discussions with various personnel associated with the project including the principal investigator revealed that the funding was received and the project had to be implemented in a short amount of time which did not provide adequate time for consideration of various theoretical frameworks. For the purposes of this study and in order to evaluate the effectiveness of the educational interventions developed and implemented by programs who participated in the GeroRich Project it is necessary to apply some type of theoretical framework to guide this evaluation process.

For this current study, several theoretical models were considered including social learning theory, behavioral theory, and cognitive theory. Several factors influenced the selection of constructivism as the framework for this study. a.) New research on the complex connections between the biology of the brain and learning are providing both educators and students with new challenges and the need for an alternative framework regarding the educational process. b.) The unique facets of constructivism such as authentic learning environments, student-centered learning processes, collaboration, and multiple perspectives lend themselves well to the tenets of social work education. c.) Many of the key constructs of constructivism (contextualization, situated learning, and
multiple representations of reality to name a few) are congruent with the principles of curriculum integration and curriculum transformation strategies. d.) Finally, the growing prominence of service-learning and other forms of experiential learning as viable educational interventions provides support for the use of constructivism, a form of cognitive theory with an emphasis on experiential learning, as relevant for this current study.

While there is limited empirical validation of the positive effects of experiential learning, results from the few studies available suggest that experiential learning experiences have a meaningful impact on improved academic performance (Gray et al, 2002), a commitment to community service (Giles & Eiyler, 1994), a positive change in attitudes toward the elderly (Blieszner & Artale, 2001, Brown & Roodin, 2001, Greene, 1998, McGowan & Blankship, 1994), increased self-awareness, critical thinking skills, and an appreciation for human diversity (Waskiewicz, 2001, Greene, 1998). A close examination of constructivism and its characteristics along with a proposed use of the framework as an evaluation mechanism for assessing the effectiveness of the educational interventions in the GeroRich Project follows in the next section.

**Conceptual Framework**

*Professional Education and Socialization*

Bruner (1966) posited that the basic underlying principle of any learning process involves the student understanding fundamental or basic ideas and then applying these ideas to real life situations and through this process recognizing that the new skills developed are really variations on a theme. Particular to professional education, and to social work education in particular, is the intertwining of early socialization and learning
experiences and the “transfer of [current] principles and attitudes. This type of transfer is at the heart of the educational process – the continual broadening and deepening of knowledge in terms of basic and general ideas” (p. 16). In 1904, John Dewey conceptualized the three program elements which should be included in any professional education: a.) increased academic prerequisites for initial entry into both the professional school and professional practice, b.) a more relevant role for the applied sciences in the professional curriculum itself, and c.) a greater emphasis in the practical work of the professional school on the “intellectual methods” of the profession. Furthermore, Dewey identified the primary challenge of students in higher education as mastering professional knowledge and the techniques of professional practice (Shulman, 1998). Indeed, this historical tension between theory and practice, characteristic of all professional education, continues to be present within social work education. The education and training of professionals in medicine, nursing, teaching, and social work has usually contained two elements: classroom-based learning where general knowledge is transmitted and field-based learning where “situated knowledge” and skills are learned. Within these professional disciplines, these two elements have varied widely with mixed results.

Professional education is traditionally strongly connected both to the value base of each profession and to the professional socialization process of new professionals into their respective fields. Donald Schön (1987) argues that competence has been traditionally defined as a combination of specific skills focused on solving the problems inherent to the daily practice of a profession. Within this definition, professional competence “consists of the application of theories and techniques derived from
systematic, preferably scientific research to the solution of the instrumental problems of practice” (Schön, 1987, p. 33). Clark (1997) uses a broader definition for professional socialization as “the acquisition of knowledge, skills, values, roles, and attitudes associated with the practice of a particular profession” (p. 442). These characteristics are often exhibited in the unique language patterns, dress, demeanor, and behavioral norms of each individual profession. Social work education is no exception and prides itself on its unique voice and worldview perspective (both personal and professional).

Schön proposes an alternative epistemology of “professional artistry” in which professional competence is developed through the process of reflection-in-action (1987). This epistemology builds on the work of Bruner (1966) whose three-step process Schön conceptualizes as reflection-in-action - a process with multiple steps with particular attention to the use of intentional reflection:

Some type of action occurs to which the learner brings spontaneous, routine/rote responses.

Acquisition of new information (Bruner, 1962).

The routine/rote response produces some type of pleasant or unpleasant unexpected outcome which doesn’t fit with the learner’s existing knowledge base.

This unexpected outcome (surprise) leads to reflection within an action-present. The reflection is on both the surprising moment and on oneself.

This reflection-in-action then leads to “on-the-spot experiment” in which the learner tries out new actions and strategies and tests new knowledge structure.

This reflection-in-action is critical because it questions the structure of knowing-in-action and forces the learner to restructure ways of knowing, strategies of action, and reframing of problems.

Evaluation – “checking whether the way we have manipulated information is adequate to the task” (Bruner, p. 48).
This alternate method of developing professional competency allows for flexibility and creativity (Schön uses the term “artistry”) in developing skills and solutions for the often complex, untested, and unknown problems of the real professional world. The elements of interaction and reflection are considered key to this process of professional socialization and are most often exhibited and applied through an internship or practicum experience. As Clark (1997) observes, “professional identity is constructed by reciprocal interaction between the self and the environment. This dialectic is built into the professional education process. Interactions with faculty, other students, and patients [clients] all influence the emergent nature of the practitioner’s identity” (p. 443).

While the social work educational process has combined elements of experiential (field) learning with traditional pedagogy, it also emphasizes the notion that values take precedence over knowledge. In fact, “the centrality of values and value conflicts seems to characterize the literature on socialization into social work” (Clark, 1997, p. 447). Schön’s competence development through reflection-in-action also holds key that not only must the apprentice (student) develop and become competent in certain skill areas, he or she must also develop the ability to recognize competent practitioners and the skills and knowledge which differentiate them from incompetent practitioners (Schön, 1987). This fundamental principle is particularly important in social work education where students must also develop a sense of ethical practice and purpose congruent with social work values.

Not only are social work students socialized to the profession through the formal educational system, but the development of professional competence is also viewed as an essential outcome of social work education. Kirschner & Van Vilsteren (1997) define
professional competence as composed of two dimensions: knowing (knowledge) and performing (skill). Specifically, competence is “the ability to make satisfactory and effective decisions in a specific setting or situation. Apart from taking effective and appropriate actions within unfamiliar or changing circumstances, it involves judgments, values, self-confidence to take risks, and a commitment to learn from experience” (1997, p. 4). A 1999 study exploring what specific competencies professionals in the field of aging felt were necessary for entry-level aging professionals, found the top five competencies were interpersonal in nature. These entry-level professional competencies included sensitivity to the aging process, a nonjudgmental attitude, listening and interacting with older clients and their families in an effective manner, and an understanding of multiculturalism (Bennett & Sneed, 1999). Certainly, these competencies are reflective of generalist social work education and, more specifically, the basic generalist aging competencies for all social workers as identified in the SAGE-SW (2001) project (see p. 39 of this document).

The acquisition of the knowledge and development of the skills needed for professional competence occurs most effectively in a relevant context. It is in these relevant contexts that students learn a new skill or set of skills and then are able to theoretically transfer these new skills to the “real world.” Educational interventions which have proven effective in this arena include case studies, simulations and games, project-based learning, problem-based learning, traineeships, and research papers (Kirschner & Van Vilsteren, 1997).

The case study is one of the most frequently used teaching mechanisms in social work education. Shulman (1998) espouses the use of case studies in professional
education settings due to the fact that “a case resides in the territory between theory and practice, between idea and experience, between normative ideal and achievable real. Cases capture pieces of experience that initially existed solely within the life of a single individual and they transform that solitary experience into text” (p. 525). Donald Schön (1987, cited in Kirschner & Van Vilsteren, 1997) suggests approaching competence development from another perspective. The problem must be turned upside down “by creating learning situations in which people learn to design, perform, and produce by engaging in design, performance and production in a safe environment where practice is contextually rich, where reflection is stimulated and where there is access to coaching” (p. 6). This approach to teaching differs significantly from traditional didactic methods by moving the instructor into a coaching role and the student into a more active, self-directed role. This role shift, if done correctly, should provide the necessary ingredients for creating an environment where reflection-in-action genuinely occurs.

Given the nature of this professional socialization process and the necessary development and growth of ethical, compassionate, and effective social work professionals, the modes in which social work students gain knowledge, skills, and are socialized into the profession have significant implications for what a social work student “looks like” at the completion of his or her professional training. While social work curriculum varies widely depending on the demographic area in which a social work program is located or whether it is a public, private, or faith-based institution, the tradition of requiring all social work students to participate in an apprenticeship (field practicum) experience provides a unifying construct. Social work has justifiably achieved prominence in this tradition of apprenticeship training. Lodge (1975), cited in
Papell & Skolnick (1992) notes that “unquestionably, much of the genius of social work education has been, through the years, an intermingling of conceptual and experiential learning. Other professional disciplines have looked to social work as a model in the use of the practicum” (p. 5).

Schön (1987) defines three types of practicum experiences: the first type being technical training (professional knowledge is viewed as facts, rules, and procedures applied non-problematically to problems and the instructor is required to communicate and demonstrate these rules and operations). The second type of practicum experience involves “thinking like” a manager, doctor, social worker, nurse, and so forth. Students, of course, learn the important facts and rules, but are also expected to develop critical thinking skills for making connections between classroom learning and specific types of cases. The third type of practicum uses the reflection-in-action model that requires the student to not only learn the facts and operations but to also understand and accept the fact that most problems or situations in the real world are not easily resolved with rote knowledge or procedures. Instead, the student is expected to move beyond the basics, “not only by devising new methods of reasoning, as above, but also by constructing and testing new categories of understanding, strategies of action, and ways of framing problems” (p. 39).

As Dewey observed, theory, while useful, if taught without exposure to the contexts and conditions of practice, becomes deadly (Shulman, 1998). For example, by discussing the strengths framework as an assessment and intervention method in the classroom only and not exposing students to actual older adults, the stereotypes of older people as frail, disengaged, depressed, and so forth are unlikely to change. The desired
cognitive and behavioral changes are more likely to occur when students are exposed to information and then required to apply the information to a “real life” or “authentic” situation which either reinforces or alters the perception. This combination of both classroom and field learning is the foundation on which the framework of constructivism has continued to emerge and evolve in educational epistemology as a richer alternative for meaningfully engaging students in their own learning.

Rationale for Applying the Constructivist Framework

Addressing and reducing ageism in both students and faculty remains one of the ongoing challenges facing all social work programs attempting to aging-enrich their curriculum. The constructivist framework provides some guidance as to what types of learning situations have the potential to most affect a student’s perception of the world and which specific type of experiences allow the individual student to explore their own prior socialization and learning experiences prior to creating new knowledge and developing effective practice skills. Furthermore, this framework appears to be very congruent with the tenets and processes of social work education. The emphasis on students taking ownership, either independently or with support and feedback from others, for planning, coordinating, and evaluating their own learning experiences mirrors effective geriatric social work practice where the client “takes initiative [is self-determined] and is involved in a collaborative relationship with the practitioner” (Whitford, 2001, p. 60).

As many prior educational efforts and interventions in social work education related to increasing aging content have had poor or mixed results, this framework, while limited in its predictive power, may provide some clues as to the relative effectiveness of
certain types of educational interventions in the subject area of aging and what type of interventions have the greatest impact on altering perceptions and knowledge construction. Most importantly, this framework potentially tells us what educational interventions have the possibility for long-lasting, sustainable effects.

The constructivist framework views the student as an active learner who is not simply given knowledge but is expected to construct his or her own meanings of knowledge and take ownership of his or her learning experience. This framework, which came to prominence in the 1980’s, is usually associated with the works of Jean Piaget, Jerome Bruner, Ernst von Glasserfeld, and Lev Vygotsky. Traditional learning is rooted in behaviorism, which continues to influence the educational process. However, educational experts have begun to view constructivism as the “most current theory in the psychology of learning” (Fosnot, 1996 cited in Stage, Muller, Kinzie, & Simmons, 1998). The models of collaborative learning and problem-based learning (PBL) are grounded in the constructivist framework.

Bruner (1962) argued that while learning is a continuous process, this process is dependent on the transfer of principles which in turn is “dependent on upon the mastery of the structure of the subject matter” (p. 18). In other words, when an individual understands basic, broad fundamental principles or truths, then he or she should by definition, be able to apply this knowledge to new, more specific and complicated problems and situations. Constructivism, like other cognitive theories, is based on key organizational principles including: activation of prior knowledge, elaboration of new knowledge, contextual learning, transfer of knowledge, and organization of clinical knowledge (Mann, 2002).
Within this framework the main constructs are: Learning is defined as occurring and developing through the interactions with one’s social environment, the exploration of this environment, and the knowledge construction which forms from these experiences. Assimilation and accommodation are the cognitive processes through which individuals use the many elements of the learning context and relate those elements to their own experiences (i.e. participating in a one-on-one structured exchange or interaction with an older adult who does not fit the traditional, negative stereotypes. One must assimilate this new information and knowledge and then make accommodation for this new knowledge within existing knowledge). The cognitive apprenticeship is the behavioral process through which individuals are taught and then exposed to the processes experts use to handle complex tasks (i.e. a student first reads client records and then discusses specific interviewing and assessment techniques in class and with his or her field instructor. The student then observes the field instructor interviewing a client. The student then interviews a client with coaching from the field instructor and adequate time for reflecting and processing). Scaffolding is a method by which an individual learner develops effective problem-solving skills through the support and resources of peers and instructor. Scaffolding may take the form of “questions, prompts, suggested tasks, available resources, challenges, and classroom activities” (Vermette, Foote, Bird, Mesibov, et al, 2001, p. 1). Contextualization involves the use and application of a wide variety of reference materials and resources for constructing (not reproducing) knowledge (i.e. a student uses an interview, a video, a website, and several research articles to develop his or her knowledge about caregiving). Multiple representations of reality are the diverse perspectives considered and used (a student discusses with his or her peers
and consults historical references regarding the alternate views of the cultural context of aging). *Situated learning* is learning which occurs in a real-world environment which is either genuine or simulated to be as real as possible (i.e. student develops a topic for a support group and then “facilitates” the support group with her peers as group members).

The *cognitive apprenticeship* construct is generally considered a key defining principle of this framework. A cognitive apprenticeship is a type of learning process which focuses on developing both cognitive and metacognitive skills. In other words, this type of learning differs from the physical processes of a traditional apprenticeship by requiring the student to focus on the internal and external cognitive development needed to develop professional problem-solving skills (Conway, 1997). The role of the instructor in the cognitive apprenticeship differs in several significant ways from traditional teaching methods. This alternative method requires the application of the following teaching strategies: modeling, coaching, articulation, reflection, and exploration.

The constructivist instructor is viewed as a *coach* and expert who *models* a task so students can “observe and build a conceptual model of the processes required to accomplish the task” and then offers encouragement, feedback, and hints to the students attempting to perform the task. The constructivist instructor also focuses on *articulation* (moving students toward clearly articulating their knowledge, reasoning, or problem-solving processes). The use of *reflection* and *exploration* is also considered key to helping the student examine his or her own problem-solving, particularly if applying Schön’s reflection-in-action model (1997).
Constructivism and the Learning Process

The impact of this framework on learning is threefold: a.) curriculum should be customized instead of standardized in order to better capture students’ prior knowledge and increase hands-on problem solving; b.) instruction strategies should focus primarily on creating ways for students to make connections between facts and encouraging new degrees of understanding in students through analyzing, interpreting, and prediction; c.) assessment should be integrated into the learning process so students are forced to take a greater responsibility for their learning instead of being relegated to standardized testing strategies where the instructor is responsible for all aspects of student learning (www.mil.za). The instructional methods of constructivism “emphasize students’ ability to solve real-life, practical problems. Students typically work in collaborative groups rather than individually; they tend to focus on projects that require solutions to problems rather than on instructional sequences that require learning of certain content skills” (Conway, 1997, p. 2).

For example, the social work curriculum in a small, private faith-based rural college should reflect the existing knowledge and experience of the predominately Caucasian, traditional students who attend. In other words, these types of students are more likely to have not been exposed to the rich diversity in the aging population and, as a result, will need both extensive knowledge and exposure interventions on multiple levels beginning in the freshmen year. Instructional strategies from the freshmen year should create an environment that fosters and reinforces independent (self-determined) learning and connections between classroom knowledge and application of skills in authentic or situated settings. More importantly, instructional strategies should promote
the development of student self-determination and closely resemble and promote the actual intervention process used with all client groups including the tasks of assessment, evaluation, and termination (Whitford, 2001). Assessment strategies should be in the form of individual and group projects where students are expected to take ownership of their learning experience and to also facilitate the same process within their peers. These assessments should be multi-dimensional, continuous and ongoing, not just in the form of a mid-term and final exam.

*Figure 2.0 illustrates the influences and processes of this framework.*
Figure 2.0.

Concept map (http://www.missouri.edu/~so672/portfolio/kb/constructivism.htm).
The latest application of this framework is directly connected to the new and emerging research on the brain and how learning occurs. This framework suggests that “brain-compatible” teaching is generally based on specific characteristics including the emphasis on using a variety of teaching strategies to address the simultaneous learning occurring in the brain and the influences of emotions and culture (www.ncrel.org). The increased application of technology in the educational setting has also influenced the use of this framework. In a review of Brent Wilson’s 1996 book, Constructivist learning environments: Case studies in instructional design, three categories of learning environments are recommended within the context of this framework: computer microworlds, classroom-based learning environments, and open, virtual environments (Murphy, 1997). Within social work education technology continues to develop and influence curriculum development and the way teaching and learning is done. Many of the programs who participated in the GeroRich Project developed websites with information regarding aging. These websites typically provided information about aging, about the types of activities implemented by the social work program in collaboration with the GeroRich Project, and resources such as syllabi, websites, and so forth.

Constructivism differs somewhat from traditional cognitive theory as importance is also placed on the potential influences of social and environmental factors based on Vygotsky’s work. These potential influences are characterized by the beliefs that individuals are always interacting with their environments, learning occurs through observation, learners see incentives and rewards in the environment and can set goals and work toward them, perceptions of self-efficacy are key to developing competency and
autonomy, and finally, knowledge is constructed in the environment and situated there (Mann, 2002; Murphy, 1997; Ertmer & Newby, 1993).

Even though one of the key elements of this framework is student-centered learning, the social work education literature on students’ perceptions of effective teaching is sparse. A 1993 exploratory study (Solas) used a repertory grid (a complicated process by which students characterized social work instructors on a scale with bipolar constructs) to explore how social work students perceived their instructors. The significant limitation of the study was a sample size of four undergraduate students in a social work program. However, the findings are useful in providing some basic contextual information related to the student dimension of the constructivism framework.

The study revealed that instructors perceived as being effective were characterized as being methodical in preparation and presentation of classroom material, and providing adequate opportunity for experimentation and feedback. The most significant finding was that students perceived the most effective instructors as those who were capable of forming reciprocal relationships and sharing power with students while encouraging autonomy and providing student support (1993). A 1998 study examined the educational orientations of graduate social work faculty through a measure which grouped teaching philosophy and strategies as either “master teacher” or “mentor” (Pearson, 1998). The master teacher model viewed education as the transmission of knowledge from teacher to student while the mentor model viewed education as a mutually collaborative effort between student and teacher to create learning activities and goals. The majority of study respondents tended to characterize themselves as adhering to the master teacher model, while incorporating some aspects of the mentor model.
Respondents also indicated their educational philosophies were developed primarily from work experiences, personal experiences, and professional socialization (1998). These findings, while different, are congruent with some of the general characteristics required of instructors adhering to the constructivist framework of teaching and learning and suggest possible influences on the teaching styles and influences of social work educators.

Bruner (1966) proposed four claims related to teaching methods based on the premise of teaching the broad tenets and fundamental structure of a subject. First, creating an environment where students can learn the fundamentals makes the general subject area easier to understand. Secondly, the detailed aspects of the fundamental knowledge must be “placed into a structured pattern” so the long-term memory stores it or it is easily forgotten (p. 24). Thirdly, the key to the ability to transfer knowledge or training is an understanding of the fundamental principles of a subject. Fourthly, knowledge must stay current and not lag behind, and there must be concrete and understandable connections between what is learned in life (childhood, adolescence, and so forth) prior to the process of higher education. As Bruner (1966) emphasizes,

“teaching specific topics or skills without making clear their context in the broader fundamental structure of a field of knowledge is uneconomical in several deep senses. In the first place, such teaching makes it exceedingly difficult for the student to generalize from what he has learned to what he will encounter later. In the second place, learning that has fallen short of a grasp of general principles has little reward in terms of intellectual excitement. Third, knowledge one has acquired without sufficient structure to tie it together is knowledge that is likely to be forgotten” (p. 31).

This is the challenge for educators in general, but specifically for those who teach in professional programs such as social work where the expected outcome is a competent transfer of knowledge and skills from the laboratory setting to real life. As Kaufman
(2003) writes, an effective constructivist-oriented instructor is not viewed merely as a transmitter of knowledge, but rather as “a guide who facilitates learning” (p. 3). Secondly, the instructor must provide learning experiences which lead the student to examine the inconsistencies between his or her current understanding and their new experiences. Thirdly, the learning process should be active and the instructor should use relevant problems and support group interaction. Finally, if new knowledge acquisition is the expected outcome, “sufficient time must be provided for an in-depth examination of new experiences” (2003, p. 3). Spence and Kowalski (1984) discuss teaching strategies in which social work skills were directly applied in an instructional setting where the focus was aging. One of the educational interventions used was a peer-consultation/group supervision setting in which the principles of self-determination and problem-solving were emphasized. They found this approach increased self-disclosure by students while at the same time increasing feedback and support from peers. “Under the instructor’s supervision they are enabled to evaluate their own experience and behavior against social work standards” (p. 77).

Interviews with social work faculty who were currently teaching found a variety of approaches to teaching and facilitating a course. One instructor discussed how she facilitated the integration of theory and practical application in an HBSE course. While she said she tended to teach from the subject matter from broad to narrow, she used small group exercises “using the constructivist paradigm to help them integrate new theories and concepts into their existing experiences. In a Human Behavior and Social Environment course students bring film clips to illustrate certain lifespan areas” (personal interview, March 23, 2005). Another instructor begins with laying out the broad/general
themes or frameworks then uses case studies to illustrate content and themes. This particular instructor described his relationship with students as “facilitating, guiding, directing, collaborating, and partnering using different roles” (personal interview, February 28, 2005). However, another instructor said that while she personally favored a more constructivist approach to teaching, she had found that students are generally task-centered because of socialization, but “many are also intuitive which is challenging for them to learn and may force them into the more task-oriented methods” (personal interview, February 28, 2005).

Use of Constructivism in Designing Instructional Strategies

Consequently, not only does this framework guide the development and use of teaching methods and strategies, instructional design is also shaped by the principles unique to this perspective. The following instruction principles illustrate how knowledge construction can be facilitated within this framework (Jonassen, 1994; Savery & Duffy, 1995):

- Learning should be relevant
- Instructional goals should be consistent with the learner’s goals
- Multiple representations of reality should be provided;
- The natural complexity of the real world should be represented;
- There should be a focus on knowledge construction, not reproduction;
- Design authentic tasks (contextualizing rather than abstracting instruction);
- Real-world, case-based learning environments should be provided, rather than pre-determined instructional sequences;
- Reflective learning and reflective practice should be fostered;
- The learner should be supported in developing ownership of problem-solving process
- The instructor’s role is to challenge students’ thinking and to coach students;
- Students’ ideas should be tested against alternate views through social negotiation and collaborative learning.
As discussed earlier in this chapter, the *cognitive apprenticeship* and *scaffolding* are key concepts of constructivist learning. “According to Vygotsky (1978), students’ problem-solving skills fall into three categories: a.) skills which the student cannot perform, b.) skills which the student may be able to perform, and c.) skills that the student can perform with help” (Murphy, 1997, n. p.). Nursing education has termed this process the “cognitive apprenticeship” where “experts make their situational knowledge explicit as they coach the learner. Coaching involves the provision of feedback on the learner’s performance” (Cope, Cuthbertson & Stoddart, 2000, p. 851). Within this process, the “learner gradually acquires expertise through the process of working closely with an expert who provides a model and gradually socializes the student into the culture of the profession or field [professional socialization]” (Stage, Muller, Kinzie, & Simmons, 1998, p. 258).

A study of student nursing internships (Cope, Cuthbertson, & Stoddart, 2000) found support for the cognitive apprenticeship model when instructors shared their expert knowledge in “authentic contexts” (actual medical settings). An earlier 1990 study of mentoring in nursing programs identified two factors reflective of constructivist teaching and learning principles. These factors were directly related to students’ perception of the mentoring experience: socialization into the work role and professional role acquisition (Wright, 1990 cited in Cope, Cuthbertson, & Stoddart, 2000). Within social work education, it is apparent that this “cognitive apprenticeship” or professional socialization takes place throughout the educational experience, but the key elements are developed during the field practicum experience. Not only is the “cognitive apprenticeship” used in social work education, but the conditions required for applying the framework of social
constructivism in higher education fits well with the traditions and values underlying the basis of social work education. These conditions include:

- Students’ active involvement in the social processes of the classroom
- Emphasis on the critical role of peers, in particular more skilled students, in promoting understanding
- Enculturation of students into the community of the particular academic discipline or profession
- Emphasis on the common construction of knowledge that results when students involved in an activity negotiate their individual accounts and arrive at some level of agreement (i.e. intersubjectivity)
- Overt use of the sociocultural context to promote learning
- Use of relevant situations in which students are called upon to resolve dilemmas; and
- Appreciation of multiple perspectives (Stage, Muller, Kinzie, & Simmons, 1998).

Interviews with current social work instructors revealed they had a variety of views about teaching, evaluation of student performance, and engagement of students with differing learning styles. One particular instructor who identified herself as Pueblo Indian stated her ethnic heritage very much influenced her teaching evaluation process. She intentionally invited students to bring their experiences into the classroom and then uses those experiences to teach with. She gave an example of how she very much understood that students learn in different ways and as a result, she attempted to construct courses with that in mind, relying on feminist theory and other collaborative models of teaching. She intentionally used the apprenticeship model in an introductory social work course. She had three juniors help teach the course (lectures, grading of interchange papers, and handing out papers). She usually identified and invited these students based on her knowledge of their work and skills. This was very empowering for the students in the course and provided the opportunity for interaction and advisement between students (personal interview, March 3, 2005).
Strengths and Limitations of Constructivism

The constructivist framework has explanatory power and the ability to address some of the issues of power-sharing, race and gender that often occur within a learning context. Certainly, the sharing of power within the faculty-student relationship is congruent with feminist principles of egalitarianism, which has continued to develop as an important model within social work education. The use of constructivism allows students to apply their knowledge in appropriate and real situations; the use of scaffolding facilitates individual problem solving and students are more likely to develop meta-cognitive skills. Furthermore, students find support through the use of the cognitive apprenticeship for functioning within complex environments instead of the environment being simplified for the student (www.mill.za).

Obviously there are limitations to this model; its primary one being its limited predictive power. Another potential limitation is the risk of the student “being hampered by contextualism learning and then becoming unable to form abstractions and transfer knowledge and skills in a new situation” (www.mill.za). Operationalizing this framework necessitates that both faculty and students significantly change their conceptualizations and expectations of learning. These cognitive and behavioral changes imply the instructor role evolving into that of a coach or mentor role and the student taking a more active ownership role. The learning environment may become more unstructured which can be problematic for students socialized and accustomed to structured classroom environments. Additionally, very young traditional students (freshmen or sophomores) may find it difficult to take ownership of their own learning and to be open to learning from peers as well as instructors.
In summary, constructivism provides some guidance not only for the development of teaching methods and strategies, but also for instructional design and assessment of learning. Curriculum development is influenced by many factors including theoretical orientations of faculty, the political nature of the educational institution, and the requirements of accrediting bodies. As higher education continues to move towards becoming multifaceted and truly reflective of the complexities of modern society, educators, including those in social work education, continue the process of identifying and evaluating potentially innovative and effective curriculum change models.

Curriculum Change Models

Institutions of higher learning are being challenged to prepare students for a world that is becoming increasingly diverse and complex. As Jones (2002) notes in a summary of a U.S. Department of Education Report “employers are searching for graduates with strong abilities in problem-solving, teamwork, communications, and leadership” (p. 2). While most new graduates enter their first jobs with adequate technical knowledge and skills, employers report generally inadequate communication and problem-solving skills (Jones, 2002). Curriculum change efforts have taken on momentum in the past decade as colleges and universities seek more effective models and methods of teaching, learning and assessment.

Evidence from curriculum change efforts in the disciplines of accounting, nursing, and education suggests that effective models of curriculum change were characterized by active involvement of students in the learning process, presentation of real world issues or problems, use of open-ended problems with no “right” answers, and designing the assessment of student learning as a mechanism for determining whether the learning
outcomes were truly being mastered by the students (2002). Peter Ewell, a writer and researcher on teaching and learning, would also agree that effective education is student-centered with learning experiences taking place in a variety of settings outside the classroom. Ewell (1997) conceptualizes “direct experience” as necessary for altering preconceived notions about the world. He described these direct experiences as “a compelling situation“ necessary for creating a learning experience which is challenging and interesting for students with “frequent feedback“ from peers and instructors as a corrective mechanism. All of these processes then result in a “transfer of learning to new settings and for long-term impact” (Ewell, 1997, p. 3). This conceptualization, while framed in the context of modern higher education, is deeply rooted in Dewey’s seminal work on the processes of teaching and learning and is applicable to social work education. In particular, as social work is a professional degree, it is important to maintain the generalist perspective while at the same time introducing aging content because as Jones (2002) argues, “professional education should include an integrative sequence to help students see the full portrait of the profession’s services” (p. 13).

Traditionally, curriculum change efforts undertaken in higher education generally and within social work education specifically have utilized one of three models: infusion, integration, or specialization. It is important to discuss the conceptual and operational definitions of “infusion” and “integration” in the specific context of social work education. Both of these concepts have been poorly and vaguely defined with little clear consensus among educators. Based on the following literature review and for the purposes of this study, infusion is defined as an intentional and planned method of blending and combining specific content into all areas of the curriculum using established
courses. Conversely, curriculum integration is defined for the purposes of this study as involving a more complex process than curriculum infusion, requiring the restructuring of learning activities to assist students with developing meaningful connections between varieties of topics (www.foundationcoalition.org). The characteristics and processes of curriculum integration are much closer to the concept of curriculum transformation than curriculum infusion.

The most commonly used model, infusion, focuses on adding content to an already established course or courses. This added-on content should be intentional and reflected in course objectives, course readings, assignments, and course evaluations (Healy, 2003). While infusion is repeatedly used in the social work education literature and by the accrediting body (Council on Social Work Education), effective infusion of aging content into social work curriculum has been fair at best. The second type of infusion model, specialization, has become prominent in graduate social work education where it is typical (and a good marketing strategy) for graduate schools of social work to offer specializations in a variety of topics such as children and families, substance abuse, mental health, administration, and policy among others. Undergraduate social work education is considered a “generalist degree” which does not allow for specialization at this level. Undergraduate social work students generally have options to take “specialized” courses on topics such as aging, health care, women’s issues, families, and other related issues.

The curriculum integration model is not as widely used, but recent research in the engineering sciences indicates this model holds potential for creating and maintaining the interest of students in a topic long after a course is completed. A 1997 study which
examined reasons why undergraduates leave the sciences identified loss of interest and lack of recognition of the importance and relevance of the topic area as the main reasons (Seymour & Hewitt cited in www.foundationcoalition.org). It would seem apparent these two reasons are also relevant and applicable to social work education. Most current models of integrated curriculum contain the following elements (Maletta, n.d.): a combination of subjects, an emphasis on projects, sources that go beyond textbooks such as technology, relationships among concepts, thematic units as organizing principles, flexible schedules, and flexible student groupings. These elements are expected to then result in a student-centered model focused on assisting students with developing broad knowledge, skills, and concepts instead of a narrow focus or specialization. The primary outcome goal of this model is transferable learning in multiple contexts.

One of the most important operational aspects of this model is that it should not be used in a superficial way to simply rearrange courses or content. As Maletta (n.d.) emphasizes, “it is a way of thinking about what schools are for, about the sources of curriculum, and about the uses of knowledge” (n. p.) Clearly, the appropriate use of this model requires a significant shift in the conceptualization of the meaning of learning by both instructors and students. This cognitive shift should result in significant changes in teaching methods, learning experiences, and perception of the roles of students and instructors. Constructivism is a good fit with the curriculum integration model as there are many shared principles and constructs.

The GeroRich Project documents discuss curriculum infusion, specialization, and integration, but their conceptualization of an integration model as a model which “aims to coordinate or unite aging content with the rest of the curriculum...aims to place aging
content in strategic locations in the curriculum” (www.gerorich.org) does not reflect the necessary cognitive changes, re-conceptualization of teaching and learning processes, and the student-centeredness required by true adherence to the integration model. An interview with a faculty member who participated in the GeroRich Project revealed that the program was able to conceptualize broad ideas, but implementation was inconsistent and the faculty were not committed to the implementing the change efforts required. This resulted in a watered-down curriculum which currently had little aging content even after three years of participation in the project (personal interview, March 23, 2005).

Curriculum integration is the first step in the process of curriculum transformation which is an emerging trend among many disciplines. The concept of curriculum transformation has its roots in the context of women’s studies and ethnic studies. There is little written in the literature specifically about this process within social work education, thus, a brief examination of curriculum transformation strategies within women’s studies and diversity or ethnic studies will be utilized as a comparison for the methods used by the GeroRich project.

*Elements of Curriculum Transformation*

What is curriculum transformation? At its most basic, it is “the process of revealing unity among human beings and the world, as well as revealing important differences” (Butler & Walter, 1991). The key element of curriculum transformation which differentiates it from the other curriculum models is the notion of what the student should “look like” at the conclusion of the educational process. The conditions required for curriculum transformational change as identified by the GeroRich project were four-fold: a.) long-term internal commitment to improve the system, b.) willingness to learn...
The Diversity Web, a curriculum transformation project, focused on diversity and housed within the Office of Diversity, Equity and Global Initiatives at the Association of American Colleges and Universities (AAC&U), supports and provides resources and technical assistance to colleges and universities in their respective curriculum change efforts. A 1997 edition of the online newsletter, Diversity Digest, identified several characteristics of effective curriculum transformation:

- clarity about the expected learning goals for courses,
- development and maintenance of cross-departmental coalitions early,
- involvement of students in the change process,
- consideration of assessment early in the process,
- recognition of the importance of creating learning experiences outside the classroom in the campus community and within the larger community,
- and effective communication with both students and faculty regarding the rationale for the new focus and required courses.

The University of Washington has been on the forefront of developing, implementing, and assessing curriculum change and transformation across disciplines and maintains an ongoing Curriculum Transformation Project (CTP). Betty Schmitz, director of the CTP, identified the following necessary steps in transforming a course in a 1999
bulletin on teaching and learning: a.) define learning goals, b.) question traditional concepts, c.) understand student diversity, and d.) select materials and activities.

The GeroRich Project (2001) suggested the following components of curriculum transformation within social work education as part of the process to aging-enrich the curriculum: a.) program learning experiences are realigned with the desired outcome related to aging, b.) there is no one right way to organize the curriculum and instead, focus on the fit between learning experiences and desired outcomes; c.) emphasis is on learning experiences and outcomes, not on courses, d.) linkages are built with other curricular areas; and e.) “aging-rich” learning opportunities in aging are present in all learning experiences instead of used as isolated events. The project suggested that by incorporating these components, a curriculum transformation would have the capacity to sustain change over time.

As Butler (1991), a leader in the field of women’s studies curriculum transformation points out, transforming a curriculum is a complex process which “involves taking race, class, gender, and ethnicity seriously as categories of analysis functioning simultaneously separately and together in a matrix-like fashion” (p. 11). Certainly, the concept of aging, while inclusive of the characteristics of women and people of color, differs significantly in the very fact that everyone will age, regardless of ethnicity, gender, class, and so forth. While aging can be conceptualized as a commonality and/or organizing principle among the various groups examined in social work education, it is a complex construct which requires equally complex methods to truly affect curricular change. The argument Butler & Walter (1991) make for curricular change in women’s studies has significant implications for aging in social work
education. “A call for teaching from a multifocal, multidimensional, multicultural, pluralistic, interdisciplinary perspective…can be accomplished only through transformation” (p. 28). True curriculum transformation does not mean simply adding a content area (that is, aging) to an established knowledge base. Rather, this process should allow educators and students to remove the norms which dominate our dialogue and truly examine the multiple aspects of the aging process as a lifetime experience.

An evaluation of curriculum transformation within teacher education (Jones, 2002) found that effective transformation efforts were characterized by the following: a.) working in teams faculty members spent considerable time and effort reconceptualizing their expectations for student learning; b.) faculty delivered course content in ways that helped students develop stronger skills in the areas of reasoning, communication, and problem-solving; c.) the higher learning expectations of faculty were perceived as attainable by students; d.) student learning outcomes were clearly articulated by faculty before being taught to students; e.) clear, overall program outcomes were then linked to specific course outcomes; and f.) multidisciplinary partnerships and collaborations were developed on campus. Faculty found that by adhering to these characteristics a more coherent curriculum was developed, students knew the learning expectations early on, students were provided with assessment criteria early on for various assignments and projects, continuous feedback from faculty to students about their performance was ongoing, and finally, faculty found that using multiple assessment methods “provided useful information on which to make decisions about targeted changes to enhance student learning” (Jones, 2002, p. 7).
A 2003 qualitative study investigating the scholarship of teaching and learning emphasized the responsibility of individual faculty members within curriculum development and change efforts. Three implications for faculty from the study were: a.) Faculty should set higher expectations for students as a mechanism for encouraging students to move “beyond foundational knowledge and develop higher order skills,” b.) Syllabi should clearly “communicate what students are expected to learn, how they will learn, and how they will be assessed,” and c.) “the scholarship of teaching and learning is an investigation that is best served by implementing multiple assessment strategies” (Cottrell & Jones, 2003, n. p.).

Faculty Involvement and Curriculum Change Efforts

One of the challenges of curriculum transformation is attracting and maintaining the level of faculty interest, support, and involvement. Currently, little is known of the level of social work faculty involvement in the GeroRich project except for the fact that very few of the faculty involved had aging knowledge or experience prior to participating in the project (www.sage-sw.org). A 2003 meeting of GeroRich Project directors identified some anecdotal feedback in regard to faculty involvement: ongoing communication between faculty members is essential to prevent burnout on aging content by students; for effective curriculum change faculty must be involved at the beginning; financial incentives such as mini-grants or stipends can be useful in engaging faculty interest and involvement; training experiences for faculty are important to create a sense of competence in aging by faculty; and faculty need opportunities (such as retreats or conferences) to openly discuss their fears or ambivalence about aging. The sole study in the social work education literature to examine aspects of faculty development specific to
gerontological social work identified the primary barriers to implementation of any model to address faculty development in aging as: recruitment of faculty, need for a highly structured educational format, commitment and time constraints, and the effect of the political climate and academic power structure (Hodges, Mellor, & Solomon, 1996).

A recent study (Helton, 2000) of faculty members who participated in curriculum transformation projects related to diversity identified the intrinsic nature of faculty members as the primary motivator for them becoming and staying involved with the project. Faculty members reported wanting to share their knowledge of diverse peoples with students to create awareness and promote social justice issues. Faculty identified the primary professional or extrinsic motivators as the possibility of their career status being enhanced by their participation in the project and the opportunity to obtain research funding. The study identified seven categories, listed here from highest to lowest frequency, of faculty involvement within the curriculum transformation project: pedagogy, training, curriculum reform, co-curricular efforts, reading or writing research, specialized course offerings, and leadership. The study also attempted to identify what factors sustained faculty interest and involvement over time. While many of the faculty in the study cited increased workloads related to their involvement in the project, faculty also identified five perceived benefits: intellectual change, teaching satisfaction, opportunity to influence social change, teaching effectiveness, and student interaction.

An earlier study of interdisciplinary faculty development in aging found that after a completion of a faculty educational program on aging, nearly half the participants indicated plans to revise an existing clinical experience or develop a new clinical experience to include more aging content; approximately one third of participants
expected to revise an existing course to increase aging content or create a new aging
course (Neal & White, 1996). A 1994 study also found positive outcomes associated
with a faculty development program in gerontology: increased collaboration among
faculty scholars, curricular changes, development of mentoring relationships among
faculty, development of joint course offerings, and an increase in the “number of
publications, research proposals, and paper presentations achieved during the program”
(Olson, 1994, p. 391).

These studies clearly have implications for the GeroRich Project as one of the
overall goals of the project was sustainability. This very goal was dependent on both the
organization and the faculty for success. Most social work educators are intrinsically
motivated by social justice and the values of the profession. However, with the social
work curriculum remaining full of “required” content, it was necessary to identify
specific factors or variables which will engage faculty over time and thus potentially
sustain the effects, if any, of the project. As Butler & Walter (1991) emphasize, for
curriculum transformation to truly be effective and meaningful, faculty development is
key, university-wide support is necessary, and educators must rethink what is essential
for students to know.

This review of the main components of the GeroRich Project, and the elements
and characteristics of curriculum transformation in other disciplines, illustrates the
complexities of curriculum change efforts within the current higher education
environment and particularly, the challenge of implementing meaningful and sustainable
curriculum changes. A closer examination of the current status of aging content in social
work curriculum reveals some of the same issues and challenges discussed earlier in the areas of diversity and teacher education.

_Social Work Curriculum & Aging Content_

It is important to understand the meaning of curriculum in higher education in the context of this discussion and examination of social work curriculum. As Mann (2002) explains, there are three aspects of any curriculum, particularly within professional education disciplines like medicine, nursing, and social work. The first aspect is the _formal curriculum_ which is “included in stated course objectives, learning activities, and evaluations” (p.69). This curriculum is formally offered, and it is stated and endorsed. The second aspect, _informal curriculum_, which, although not usually stated formally, includes important learning outcomes that we assume will be achieved, for example, presentation skills. The third aspect, _hidden curriculum_, carries the “real” messages about how the system works and the values that arise from and reflect the organizational structure and culture. This curriculum is an “unscripted, predominantly ad hoc and highly interpersonal form of teaching and learning that takes place between and among students and faculty” (Mann, 2002, pp.69-70).

These curriculum dimensions are apparent in social work education where each individual school or program identifies its unique characteristics, objectives, and outcomes which are then formally stated in course syllabi and other program materials. The informal curriculum are faculty expectations, either stated or unstated, that students will also learn presentation skills, professional networking skills, professional documentation skills, etc. along with the required coursework. The hidden curriculum
may vary, but is usually linked to the traditional concepts in professional social work practice and social work education of social justice, self-determination, and advocacy.

Social work is considered a “soft science” in higher education and has many of the curriculum, assessment, teaching and learning characteristics associated with soft science disciplines. Curriculum content tends to be qualitative in nature “with knowledge-building a formative process and teaching and learning activities largely constructive and interpretative” with assessment tasks emphasizing knowledge application and integration (Neumann, Parry, & Becher, 2002, p.408). Assessment is viewed as continuous in nature with an emphasis on developing professional competence. Typical assessment practices include essays, project-based assignments, peer and self-assessment tasks, and application of practice skills. Faculty in a soft science like social work tend to spend the majority of their time on course and teaching preparation and generally have a preference for teaching over research (2002). Courses in soft science disciplines tend to be small in size with specific teaching methods focusing on small group interactions, seminars, verbal presentations and use of experienced practitioners in the classroom and field settings. Likewise, students are expected to be able to express themselves well, think laterally, utilize critical thinking skills, exercise problem-solving abilities and develop an appreciation of how actions shape events.

*Historical Precedents*

Louis Lowy’s important 1983 article on the incorporation and specialization of content on aging into social work curriculum reported that a 1958 “Seminar on Aging” sponsored by both CSWE and NIMH was the first significant discussion by social work academics about aging content and social work education. Lowy (1983) argued in favor
of the curriculum integration model usually found within generalist social work programs at the time. He suggested that the strengths of the integrative curriculum model lie in its ability, by incorporating aging content into all areas of the curriculum, to expose all students to aging content. However, given the effect of time, curriculum “fullness”, and resources, most students will get breadth, rather than depth which could be considered a limitation of this model. At the time of his article in 1983, the majority of graduate schools appeared to utilize this model with some also moving towards offering specializations or concentrations in aging.

Since the 1958 landmark “Seminar on Aging”, social work education has struggled in its efforts to significantly and effectively incorporate aging content in a meaningful manner into the curriculum. This struggle has been marked by the lack of a clear operationalization of “gerontological social work” content and failure to achieve consensus regarding how the aging process should be framed within social work education. The hoped for increase in the numbers of geriatric social workers has not happened, perhaps as a result of the varied curriculum models implemented, the lack of standard outcome measures, and until 2000, the lack of an identified set of aging competencies for all social workers.

There are several limitations in the studies of social work curriculum and aging content examined in the following review with the primary limitation being the small number of studies available. Secondly, these studies include only graduate social work programs and completely exclude undergraduate programs in the samples. Thirdly, the concepts of curriculum integration and curriculum infusion are not clearly defined and operationalized. Finally, even as there is growing consensus about the benefits of and
necessity for multidisciplinary and interdisciplinary education and practice, there are no studies comparing curriculum change efforts between social work and other disciplines.

*Chronological Review of Social Work Curriculum Review Studies*

In 1981, Nelson conducted the first survey of gerontological content in graduate social work programs (Nelson, 1981 cited in Lowy, 1983). A response rate of 71% found that all the responding programs reported some type of gerontological content in the curriculum, primarily in the Human Behavior and the Social Environment courses. Less than half (44%) of the programs offered one or more courses in aging with only 36 percent reporting gerontological specializations in aging. Aging programs and policy, aging knowledge, and practice with the elderly represented the areas of focus within these specializations.

A follow up study (Nelson, 1983) surveyed graduate social work programs specifically examining curriculum content and proposing four models of increasing aging content in social work education. A questionnaire was sent out to all accredited graduate schools of social work (n=88); 64 schools participated for a response rate of 73 percent. The questionnaire assessed four areas: 1.) gerontological course content, 2.) distribution of gerontological course offerings, 3.) distribution and prevalence of gerontological social work students, and 4.) institutional commitment to gerontological social work. The three most frequently offered gerontological courses were direct practice courses focusing on working with the elderly and their families, aging policy and programs, and courses focusing on basic introduction to aging issues and theory. The mean number of gerontological course offerings for all schools was 2.5 courses per school with schools having certificates in aging programs offering an average of 3.7 gerontology courses.
Schools with specializations in gerontology had a mean number of 4.5 courses in gerontology issues. An examination of the numbers of social work students committed to gerontology found approximately 7.4% of first year students in all schools reporting as specializing in gerontology; 67% of these students were enrolled in schools with specializations in gerontology. By removing this subgroup from the sample, Nelson found a mean number of four students at all graduate schools specializing in gerontology. In the study, an average of 2.1 faculty members in all the schools were devoted to teaching gerontology; this faculty number increased to 3.3 in schools with specializations in gerontology. Nelson proposes four curriculum models in this study to increase aging content in social work education: 1.) infusion, 2.) core model, 3.) certificate, and 4.) specialization with the use of an infusion model recommended. However, Nelson uses the words “infusion” interchangeably with “integration” which makes it difficult to clearly delineate his interpretation of this model.

Two studies in 1994 and 1997 examined multidisciplinary factors, demographic and organizational influences on the development of gerontological social work curriculum (Damron-Rodriquez & Lubben, 1994; Damron-Rodriquez, Villa, Tseng, & Lubben, 1997). The researchers adapted criteria related to curriculum development in these studies from a previous study which had evaluated curriculum in health and social work. The six criteria used in both studies were: 1.) number of aging courses, 2) number of students in aging courses, 3.) number of students taking aging courses over the past two years, 4.) faculty with expertise in aging, 5.) field faculty with expertise in aging, and 6.) number of field placements in aging settings. The 1994 study explored the effect of multidisciplinary factors on aging curriculum development. The study found at the
minimal level of curriculum development (schools met four of the six criteria) all three multidisciplinary factors of linkage to a gerontology center, having a medical school on campus, and use of a multidisciplinary approach to gerontological curriculum development were significant influences. However, at the substantial level of curriculum development (schools had to meet the minimum criteria on at least four of the six dimensions) the only significant predictor was the use of a multidisciplinary approach to gerontological curriculum development.

The later 1997 study examining the demographic and organizational influences on the development of gerontological social work curriculum found the demographic variable had little or no influence on aging curriculum development. The researchers found the variables of organizational size and a gerontology center on campus were both “related to positive outcomes in aging curriculum development” (Damron-Rodriquez, Villa, Tseng, & Lubben, 1997, n.p.). Both of these studies remain limited by a sample consisting exclusively of graduate schools of social work; no undergraduate schools were represented. The researchers argue that some of the findings from these studies support the pressing need to operationalize gerontological social work curricula and to identify and adhere to a standard set of criteria when evaluating social work curriculum.

A 2002 study of aging curriculum in schools of social work also examined research capacity in graduate programs (Lee, 2002). Approximately 87 graduate programs responded for a 62 percent response rate. The study found 81.6 percent of schools reported offering courses on aging which represented in increase from previous studies. Approximately 51 percent of the responding programs also had a doctoral program in social work and of these, only eight percent offered courses in aging and 6.7
percent offered a specialization or concentration in aging. One of the most significant findings was that on average, only two faculty at the doctoral level reported conducting research in aging; these numbers increased to an average of 2.1 faculty at the master’s level.

The most recent review of aging content and training was completed in 2003 and again evaluated only graduate social work programs (Cummings & DeCoster). This study sample size only included accredited graduate social work programs with gerontology programs (N=43) which represented approximately 30 percent of all accredited graduate social work programs. The researchers found that while the mean number of courses required for aging certificate programs had moderately increased since 1983 from 3.7 courses to 4.3 courses, the mean number of courses required by all gerontology programs had decreased from 4.5 in 1983 to 3.4 at the time of the study. Similar to Lee’s (2002) finding, only five of the 43 programs who participated in the study required a research course. This is a particularly troubling finding as one of the pressing needs in aging is not only to increase the number of professionals (including social work) interested in practicing in aging settings, but to address the significant lack of social science researchers focusing on aging research.

Clearly, there has been a failure to adequately address this need at the graduate level in social work education which may be a direct result of an actual decrease in the numbers of faculty who report gerontology as their primary focus which supports Lee’s (2002) findings. In 1983, the mean number of faculty in schools with aging specializations was 3.3; this number had decreased in 2003 to 2.4 faculty who reported a primary focus in aging at the time of this study.
Overall, the primary finding of the study was that the numbers of graduate social work programs offering aging-related training had declined by 18 percent since Nelson’s 1983 review of graduate social work education. The researchers suggest this decline is related to factors including a lack of student interest due to limited financial support, inadequate exposure to aging content within the social work curriculum, a perception of older adults as a marginal population, and a lack of awareness about the many career options in the field of aging. Furthermore, only 69 percent of the programs offering a certificate in aging required an internship which the authors argue results in students who have knowledge about aging but lack the basic practice skills and experience needed to effectively work with the aging population. This study would seem to provide evidence that MSW programs which offer a concentration in aging instead of a certificate in aging are better preparing students because all concentration programs required an internship in aging. The researchers suggest the content of these concentration programs provided knowledge and skill training more closely related to the aging competencies identified in the SAGE-SW project.

Summary

While there have been less than five studies reviewing the status of aging content in social work curriculum and all of which have exclusively examined only graduate level curriculum, certain findings are still applicable to undergraduate social work education. The most important finding from all the studies is related to curriculum design and implementation. The ongoing debate regarding integration versus infusion versus specialization has historically and currently limited the long-term effects of increasing aging content in social work curriculum. Furthermore, the lack of a conceptual
framework for curriculum development, implementation, and evaluation has potentially limited the curriculum transformation efforts proposed in the GeroRich project. This current study is interested in examining the effects of the project (the majority of which included curriculum change efforts using the integration approach) on BSW students. The previous examination of the characteristics and factors of genuine curriculum transformation suggest this model is most closely associated with the constructivist framework of knowledge and learning. Additionally, integration can be viewed as the first step in the process of curriculum transformation. The majority of the BSW programs in the GeroRich project did not achieve true curriculum transformation, but rather some form of curriculum integration. The characteristics of curriculum integration are congruent with constructivist epistemology: “situated cognition, anchored instruction, apprenticeship learning, problem-based learning, generative learning, constructionism, and exploratory learning” (Wilson, 1997, p. 34). The complex nature inherent to the variables of professional socialization, the development of professional competence, curriculum issues, and teaching and learning models is echoed in the limited amount of studies available regarding the effect of various educational interventions in higher education settings. The next chapter reviews a selected number of studies utilizing several differing types of educational interventions.
This chapter includes a review of selected studies in the medical, nursing, allied health, and social work literature. These multidisciplinary studies are grouped according to the types of educational interventions used: a.) traditional methods, b.) experiential-learning interventions, and c.) combinations of experimental and didactic interventions. This chapter concludes with a summary of the components of the constructivist framework relevant to this study followed by the proposed research questions which are developed from the literature review and conceptual framework.

Studies Using Educational Interventions

There have been three methods of empirically approaching the topic of negative perceptions toward older adults in college and graduate students. The most traditional approach is by simply focusing on providing knowledge didactically or via other traditional curriculum methods (Olson, 2002; Murphy-Russell, Die, Walker, Jr., 1986; Ragan & Bowen, 2001; Intrieri, Kelly, Brown, & Castilla, 1993; Haight, Christ & Dias, 1994). Secondly, the evolution of service learning as a mechanism for modifying perception, attitudes, and behavior in higher education settings continues to grow (Angiullo, Whitbourne, & Powers, 1996; Bringle & Kreme, 1993; Blieszner & Artale, 2001; McGowan & Blankenship, 1994; Greene, 1998; Brown & Roodin, 2001). Finally, a third approach which has gained in prominence since the 1980’s (when constructivism as a framework also emerged) combines knowledge creation and exposing students to older adults through structured activities as mechanisms for dispelling stereotypes and reducing negative attitudes (Hinrichsen & McMeniman, 2002; Eddy, 1986; Dellasega & Curriero, 1991; Sheffler, 1995; Brown, Gardner, Perritt, & Kelly, 1992; Gardner, 1994;
Alford, Miles, Palmer, & Espino, 2001; Wilkinson, Gower, & Sainsbury, 2002; Bernard, McAuley, Belzer, & Neal, 2003). Kropf & Tompkins (2002) suggest that while all social work curriculum should be examined to ensure the aging content reflects the diverse context of the aging experience, specific educational interventions should include experiential learning, service learning, and the creative use of technology.

While all three approaches will be reviewed, the third approach, which has stronger support empirically, will be the focus of this study and will be examined within the constructivist conceptual framework. Studies which represent each of the three methods discussed above have been selected based on each studies’ relevance to the proposed research hypotheses. These studies are grouped according to the type of approach and examined in terms of study design, sample, types of pre test and/or post test measures, and type(s) of educational intervention(s) and outcomes. The current study’s scope also necessitates a closer examination of the salient features of each type(s) of educational interventions used.

Traditional Approaches

An early study by Murphy-Russell, Die, & Walker, Jr., (1986) suggested that the didactic presentation of knowledge somewhat improved aging attitudes, but additional exposure to a healthy elderly couple was more effective in developing the improved attitudes in a sample undergraduate psychology students. Utilizing a traditional information-only intervention over a six-week period with small groups of medical students also resulted in positive attitudinal change (Intrieri, Kelly, Brown & Castilla, 1993). A study of nursing students who received traditional classroom lectures and also were gradually exposed over the course of three years to groups of older adults on a
continuum from very healthy to very frail found that the attitudes of the majority of students toward older adults positively increased after the first year and maintained the positive gain after the second year (Haigh, Christ, & Dias, 1994). However, at the time of graduation in the third year, the students’ attitudes had become more negative, particularly as they were exposed to more and more critically ill elderly people in the internship settings. Two recent studies with psychology and social work students established that while students generally do demonstrate increased knowledge and some immediate attitude change after receiving information didactically (Olson, 2002), behaviorally reinforcing the information resulted in more significant attitude change (Ragan & Bowen 2001).

Of the studies using traditional approaches, four out of the five used either a control or comparison group with only one study (Intrieri, Kelly, Brown & Castilla, 1993) using random assignment. Sample sizes for the studies ranged from 57 participants to 112 participants. The samples were homogenous: almost entirely female, aged 30 years or younger, Caucasian, and consisted entirely of either undergraduate or graduate students from various disciplines. All of the studies reported using some type of pre test and post test measure. The most common measures used were the Aging Semantic Differential (ASD), Kogan’s Old People Scale, the Facts on Aging Quiz-Revised (FAQ-R), the Marlowe-Crowne Social Desirability Scale, the Social Avoidance and Distress and the Fear of Negative Evaluation Questionnaire. In one study, the Kogan’s Old People Scale was modified to include 33 filler items which disguised the true nature of the questionnaire; no validity information was provided about the modified measure (Murphy-Russell, Die, Walker, Jr., 1986). The majority of studies failed to report
psychometric information for any of the measures used. Several study authors also reported developing a measurement tool, but excluded information regarding the content, scoring or validity. Qualitative measures used included videotaping and coding the content of discussion groups (Ragan & Bowen, 2001) and videotaping and coding the content of 15-minute student interviews with an older adult (Intrieri, Kelly, Brown & Castilla, 1993). The types of educational interventions (didactic methods) varied among the studies with the primary ones being traditional classroom lecture, small group discussion, and use of guest speakers or experts.

*Types of Educational Interventions Using Traditional Methods*

Murphy-Russell, Die, & Walker, Jr.’s (1986) study utilized traditional classroom lectures in the form of workshop sessions as the primary educational intervention. Each of the workshop sessions was one hour in length. During session A, participants completed the Palmore Facts on Aging quiz and then participated in a discussion led by a trained instructor. During Session B, an elderly non-stereotypical couple were interviewed by a trained instructor and then answered questions from participants. Session C consisted of a short film addressing the myths of aging and older adults. All of the experimental groups participated in all three sessions, but each group received the sessions in a different order. The control group did not participate in any of the sessions and it is unclear what this group received in place of the intervention. Study results found the mean scores of the experimental groups were lower than the control group indicating more positive attitudes toward older adults at the conclusion of the first workshop sessions. However, additional statistical analysis revealed the group which received the exposure to the elderly couple had the largest change in pre test scores. This
finding was also supported in the post test scores indicating that while aging knowledge
does improve positive attitudes, the exposure to non-stereotypical older adults has a
greater effect on attitude change.

Improving medical students’ attitudes toward and skills with the elderly was the
focus of a 1993 study which utilized a traditional information-only intervention with
small groups of medical students (Intrieri, Kelly, Brown & Castilla, 1993). Study
participants were third-year medical students rotating through a 6-week block of
psychiatry over the course of an academic year who were randomly assigned to groups;
none of the students reported prior training in geriatrics. The educational intervention
was developed and implemented in the form of a six-week intensive program.

• Week 1 consisted of assessment and completion of a set of questionnaires
  which both groups completed. The experimental group then participated
  in a 6-week program of geriatric training while the control group
  completed the standard psychiatric rotation. Each subsequent week
  consisted of 90-minute group sessions where aging-specific information
  was provided by medical school faculty experienced in geriatrics.

• Week 2 focused on the psychology of aging which was presented in a quiz
  show format to reduce the monotony of the material and presentation.

• Week 3 addressed experiential sensory-loss activities associated with
  normal development in aging; students participated in exercises to
  simulate loss of hearing, sight, mobility, etc.
• In Week 4, participants received information related to the sociodemographics of aging including physiological aging, policy issues, social services, and resources.

• During Week 5, participants received social interaction skills training with older adults including basic interviewing skills and dealing with sensory difficulties common in older adults.

Both groups were equivalent on the pre test ASD and FAQ-R measures with the experimental group developing more positive attitudes toward older adults, as predicted at the conclusion of the 6-week program. Experimental group participants were also more likely to use clarifying statements and the patients talked longer to the experimental group participants than the control group participants. These findings support a brief program to improve attitudes and skills toward older adults.

A similar study of undergraduate nursing students examined attitude change toward older adults before and after educational interventions (Haight, Christ, & Dias, 1994). Students were tested on two attitudinal measures prior to each educational intervention and then at the conclusion of each intervention resulting in six testing events. The educational interventions were year-based and consisted of both traditional classroom instruction and internships in a variety of health care settings.

• Year 1 focused on care of the well elderly during which students were introduced to the concepts of normative and non-normative aging. Students also interacted with older adults in settings such as primary health care; a faculty member with aging as his or her primary interest taught the course.
• During year 2 (care of the ill elderly) students completed an internship in a medical/surgical unit of a hospital and completed a nursing course taught by an experienced, but not aging-competent faculty member.

• During the final third year, students were instructed on care of the critically ill elderly taught by medical/surgical faculty with guest speakers who were experts on aging. During the internship students were caring for critically ill elderly people.

Results found a positive improvement in attitudes of the majority of students after the first year and maintained the positive gain after the second year. However, at the time of graduation in the third year students’ attitudes had become more negative, particularly as the students were exposed to more and more critically ill elderly people in the internship settings and lacked access and mentoring from strong faculty who had expertise in aging.

Ragan and Bowen (2001) implemented and evaluated an educational intervention combining didactic methods with behavioral reinforcement methods through group discussions over a period of time. The sample was divided into three groups who all viewed a videotape entitled Myths and Realities of Aging. Group One received this videotape as the sole intervention. Group Two viewed the videotape and discussed the contents immediately afterward and then again one week later; a trained facilitator used verbal enforcers when participants demonstrated understanding of the accurate information portrayed in the videotape. The third group also viewed the videotape and then participated in a discussion of college life and not aging issues immediately
afterward and again one week later with a trained facilitator who provided verbal reinforcement for comments related to college life and not aging.

The post test administration of the ASD was given to Group One immediately after the group viewed the videotape and then again four weeks later. Groups Two and Three completed the ASD after the conclusion of the second discussion group one week after viewing the videotape. Groups Two and Three also met again four weeks later and completed the ASD for the third time. To maintain the integrity of the intervention, the discussion groups were audio recorded and then coded for facilitator behaviors by trained research assistants. For all the groups, the mean score on the ASD was below the midpoint of 112 which supported the research hypothesis that participants would have negative attitudes toward older adults. For group One, their ASD scores immediately following the videotape viewing were much more positive, but their ASD scores four weeks later had decreased to pre-test levels. For group Two, their ASD scores also increased significantly following the videotape and discussion, but the four-week scores remained the same as the post-test scores. Group Three’s ASD scores also improved immediately after viewing the videotape and participating in the discussion but there was no change in their four week scores. The primary finding from this study revealed that information is an important element for attitude change, but some form of positive reinforcement is necessary to maintain long-term attitude change.

Olson (2002) also implemented and evaluated the effect of a brief (two and one half hours in length) four-part curriculum module on attitudinal change among social work students. The first part of the module addressed normative and non-normative aging, assessment of older adults and their families (Part 2), social work interventions
appropriate to older adults (Part 3), and overview of depression and dementia issues in older adults (Part 4). Both MSW and BSW students received the same content over two or three class sessions (the total length of the four-part module was two and half hours). The three measures were given prior to the intervention approximately five weeks into the semester and then after the intervention within approximately five or six weeks. Variables controlled for were current experience with elders, previous volunteer or work experience, current or previous meaningful relationship with an elderly person, quality of previous experiences with elderly people, and perceptions of social work role models’ attitudes toward social work with older adults. As expected, the experimental group which received the curriculum module demonstrated an increase in post test scores. These findings support earlier validation (Haight, Christ, & Dias, 1994) of the usefulness of a brief knowledge module or program to increase aging knowledge and improve perceptions of older adults.

**Summary of Outcomes from Traditional Educational Interventions**

The effect of all of the potential outcomes from these particular studies is significantly limited by the homogenous nature of all the samples. The four primary outcomes from the traditional educational interventions used in these studies are summarized as:

1. Providing information to increase knowledge on aging had a moderate effect on improving the attitudes of participants toward older adults.
2. However, this effect was short-term unless the information was followed with some type of positive reinforcement or experiential type of activity.
3. The use of faculty with expertise in aging as positive role models for students had some moderate effect on attitudes and perceptions.
4. Finally, the inclusion of experiential learning activities provides another means for students to learn and transmit knowledge and skills.

The overall limitations of these types of traditional educational interventions are:

- Didactic methods produce immediate attitudinal change that is usually short-term, and difficult to sustain over time without ongoing reinforcement methods.
- Didactic methods typically adhere to the traditional behaviorism view of learning which new research is suggesting may not be as effective with diverse groups of students (such as non-traditional students or students of color).
- Didactic methods traditionally do not emphasize student ownership of his or her own learning; the instructor is viewed as the expert and the student as the learner or non-expert.
- Didactic methods tend to rely on experiential types of learning in the classroom through the use of case studies or guest speakers instead of “situating” learning in the real world which enables students to more easily transfer knowledge and skills.

Interventions Incorporating Service Learning Methods

Service learning is emerging in higher education as holding the potential for significantly impacting the attitudes and perceptions of college students toward a variety of groups and populations, including older adults. However, one of the persistent methodological problems in the service learning literature is the absence of control...
groups and the tendency to use qualitative methods which result in findings with less statistical rigor and more validity issues. The studies were selected for this review based on the specificity of service learning as an intervention to change attitudes toward aging and to potentially increase interest in a career in aging. As a clarification, service learning interventions are not generally prescribed, structured or directly connected to classroom content or coursework. As Brown and Roodin (2001) observe, “students who have no previous experience working with older adults may actually benefit the most from service-learning in that they have the greatest potential for reducing negative stereotypes and clarifying personal identity” (p. 90).

The findings of the service learning studies included here were generally positive with the majority of respondents indicating decreased negative perceptions of older adults, positive attitudinal change and moderately increased interest in aging as a potential career choice. The qualitative studies and the quantitative studies are examined separately in this section.

Qualitative Studies

Three qualitative studies were included as the findings were similar in that the majority of participants in all three studies reported improved attitudes and more positive perceptions of older adults as a result of service-learning experiences (McGowan & Blankenship, 1994; Greene, 1998; Brown & Roodin, 2001). The 1994 study examined how the cognitive perceptions of 12 students toward older adults were changed over the course of a semester-long project which required the students to complete a Life History project with an older adult and maintain an extensive journaling of their interpersonal reflections on the experience. All the students who participated were simultaneously
enrolled in a seminar class with readings, lectures, and discussions about topics related to aging and the Life History Project.

Study participants were traditional students with a mean age of 20 while the mean age of the older adults was 84; all older adults were ambulatory and homebound and had self-reported being lonely and requesting to participate in the project. The students met an average of 16 hours with their respective older adult and completed an average of 27 handwritten journal entries about their experience. A content analysis of the journal entries found that for the majority of the students (N = 10) the self-narratives/life histories of the older adults revealed an aging experience the student had not anticipated. This incongruency then required the students to reconstruct their personal views of aging and older adults and resulted in an overall more positive view of aging by the students.

Greene (1998) similarly examined how face-to-face interaction with older adults could possibly alter the negative perceptions of aging held by students. The students in this study also had the option of interacting with community-dwelling disabled adults instead of nursing home-dwelling older adults. The sample consisted of 16 occupational therapy students who visited nursing home residents and 20 occupational therapy students who visited community-dwelling older adults during the course of a semester; students had a mean age of 24.8. Students were required to complete six visits with the same individual over the course of the semester; each visit lasted approximately one hour. During the visits, the student was to interview the subject for an oral history project. After each visit, the student was required to complete a journal entry of their reflections and perceptions; the course instructor reviewed the journal entries, but the data was not used in this study. A questionnaire developed by the researcher which consisted of both
open-ended and close-ended questions related to the service-learning experience was given to each participant at the conclusion of the project. A content analysis of the questions found that 58.7 percent of the student participants reported an increased awareness of the diversity within the aging population and a decrease in stereotypical perception of older adults as a result of the service-learning experience. While no specific questions were asked about career choice or intent, 35 percent of the student participants reported the service-learning experience had increased their awareness of the importance of appropriately trained professionals with adequate knowledge and skill in aging.

In a more recent study, Brown & Roodin (2001) examined the effect of a service-learning activity consisting of visitation with socially isolated older adults on undergraduate students’ perceptions of aging and older adults. The sample consisted of 104 students, 99 of whom were simultaneously enrolled in an aging-related course during the service-learning experience. The students selected from a number of approved sites including assisted living facilities, nursing homes, senior centers, Meals on Wheels programs, etc. A minimum of 20 visitation hours were required for the semester and students had to participate in a number of planned reflective activities including discussion of their experiences in class, lectures and readings that focused on relevant aging issues, directed small group discussions, weekly journal assignments, and assigned short papers on a variety of aging topics. A general questionnaire was given to all students prior to the experience to assess perceptions of service-learning; the concerns voiced by students in this questionnaire were addressed in class discussions at the beginning of the semester.
At the conclusion of the semester, students were asked to identify three things they gained from the service learning experience on the final course evaluations. A content analysis of these final evaluations found six theme categories. These categories are listed here with the number of student statements in each category: insights about aging (40 statements), personal growth and understanding (34 statements), service and volunteering (27 statements), long-term care (23 statements), career skills and consolidation (17 statements), integration of course work with service-learning experiences (10 statements). In the category of career skills and consolidation, students made statements such as, “I am now interested in a career as a recreational therapist with the elderly”, “I increased my abilities to relate to and understand the elderly,” and “I am a pretty good candidate to work with the elderly.”

The primary limitation of these three studies is their qualitative nature which, while providing rich content, insight, “lived experiences”, and feedback, does not empirically validate and support the effect of service-learning in the context of higher education. Additionally, like the previously reviewed studies of traditional approaches, the majority of the samples were female, young (less than 30 years in age), and Caucasian which limits the generalizability of the findings.

**Quantitative or Mixed Method Studies**

Bringle & Kremer (1993) used a mixed method design to evaluate a combination of didactic methods with an intergenerational service-learning project with undergraduates to increase positive attitudes toward aging and awareness of one’s own aging. They found no difference between the experimental and comparison groups on the variable of aging knowledge. The groups did differ somewhat on their perception of
themselves at age 70; the experimental group viewed themselves more positively than the comparison group. Qualitative data from the weekly progress reports indicated the majority of both student and older adult respondents perceived the service-learning experience as positive and mutually beneficial. Angiullo, Whitbourne, & Powers (1996) found that both aging knowledge and attitudes toward older adults positively increased after a course on aging, but the inclusion of a service learning project for a subgroup of the sample did not significantly effect knowledge or attitude. However, the service learning experience appeared to maintain the students’ positive attitudes longer than just the didactic classroom experience. A recent study (Bliesznar & Artale, 2001) examined the effect of service-learning on human services majors and found similar results; however no comparison or control group was used which significantly limits the findings.

Two out of the three studies using the service learning approach used some type of comparison or control group. The sample sizes for these studies ranged widely from 44 respondents in one study to 186 in another study. Similar to prior studies, the samples were again homogenous (female, younger than 30 years of age, Caucasian). All of the studies reported using some type of pre test and/or post test measure. The measures used were the Facts on Aging Quiz (FAQ), the Aging Semantic Differential (ASD), the Service Learning Participant Profile, and the Service Learning Evaluation. Psychometric information was reported only for the two service learning measures (Bliesznar & Artale, 2001). All three studies also used some type of qualitative measure including weekly progress reports, reflective journals, and process journals.
Angiullo, Whitbourne, & Powers (1996) implemented a two-part intervention consisting of a didactic component and a service learning component. The didactic portion consisted of traditional lecture and use of guest speakers who were positive role models of older adults. The service learning component consisted of three time and effort equivalent experiential activities students had to choose from: 30 volunteer hours in a local nursing home, weekly 1-hour discussion in small groups, or a life history paper based on a interview with an older adult which required a minimum of 1-2 hours of interviewing with an older adult. The experimental group consisted of students enrolled in an aging course; the control group consisted of students in a personality class taught by the researcher the subsequent semester. The courses were considered equivalent in nature except the control group did not participate in any service learning component. A third subgroup of students had taken the aging course with the service learning and then also took the personality course; the researcher identified this group as the post-post group.

The intervention group was administered the two measures on the first day of the course and at the conclusion of the course which was approximately four months later. Within the intervention group, the participants who selected the 30 hours of volunteer experience were required to maintain a process journal during the course. Data analysis of the quantitative data found that the majority of the intervention group had experienced an increase in their aging knowledge and positive attitudes toward older people at post test. The researchers had hypothesized the volunteer subgroup would demonstrate a more significant level of attitude change due to the nature of the service learning experience, but on the quantitative measures there was no significant difference between
this subgroup and the group as a whole. Additionally, no differences were found between the intervention and control group indicating the baseline knowledge and attitude levels were similar in both groups. A content analysis of journal entries by the volunteer subgroup found a significant positive attitude and perception change toward older adults during the course of the semester; this change was maintained over the four month time period.

The education intervention designed by Bringle & Kremer (1993) was implemented in student groups in three different ways. Students in group one enrolled in an intergenerational service-learning program were trained and then made weekly visits during an eight-week period. Students in group two were enrolled in a seminar course on aging which included a course requirement that students meet two times during the semester with an older adult for at least three hours per visit. Students in group three were enrolled in an upper division psychology course and were not exposed to aging content or visitation (service learning) experiences; this group was used as a comparison group. The students in groups one and two had two options for receiving training prior to making the required weekly visits with an older adult: either as part of a Senior Companion training program or as part of a seminar on adulthood and aging. Some students participated in both types of training which could have contaminated the intervention results.

The researchers felt that supervision was an important part of the intervention, so each student in groups one and two were required to submit weekly progress reports detailing the activities done during, between, and after the visits with older adults. Six weeks into the program and two weeks prior to the completion of the program, two
additional training/debriefing sessions were held for the study participants. Questionnaires were given to all three groups at the beginning (pre test) and at the conclusion of the program (post test). In order to analyze the data, the researchers combined group one and group two even though the type of intervention was different. The rationale for this decision was that both groups were receiving the same basic information on aging, even if it was presented in a different format. Statistical tests indicated these two groups were equivalent at pre test which the researchers felt further justified the combining of theses groups for data analysis purposes.

No difference was found between the experimental and comparison groups on knowledge of aging. The groups differed on their perception of themselves at age 70; the experimental group viewed themselves more positively than the comparison group. Qualitative data from the weekly progress reports indicated the majority of both student and older adult respondents perceived the service-learning experience as positive and mutually beneficial. These results provide some moderate support for the use of a service-learning activity to reinforce knowledge gained in a classroom setting. However, the statistical analysis was problematic due to the combination of the groups which prevented identification of which specific educational intervention was more effective.

Bliesznar & Artale’s (2001) recent study examined the effect of service-learning on human services majors and found similar results undergraduate students who selected service-learning instead of a research paper in a junior level course. These two assignments were considered equivalent in terms of time required, knowledge, and skills, and no comparison or control group was used. After selecting the service-learning course assignment, students chose a service-learning site from an approved list which included
senior centers, assisted living centers, adult day care, and nursing homes. After attending
an orientation, the students were expected to complete weekly visits with an older adult
for a total of 20 hours during the semester, discuss their individual service-learning
experiences in class and online through the class chat room, maintain a reflective journal,
and present the results of their experience at the end of the semester both orally in class
and in a poster session. Additionally, each student was evaluated by the course instructor
and the site supervisor or contact person.

The measure used for the pre test was based on the Service Learning Participant
Profile which was developed by the on-campus service learning center. The post test
measure was the Service-Learning Evaluation also developed by the on-campus service
learning center. Both measures were designed in a Likert scale format with ranges from
0 = strongly disagree to 4=strongly agree). Prior data analysis of these measures had
resulted in items loading on two factors: Personal Social Values & Civic Attitudes. The
data from this study supported this existing factor structure. Additionally, participants
were asked four open-ended questions, one of which had three parts.

Results found that all participants tended to rate helping others and other related
statements as very important; participants also generally agreed with statements regarding
civic participation. Most participants had indicated on the pre test they anticipated the
service-learning experience would be more useful than traditional coursework, however,
on the post test, most participants indicated the service-learning experience had been only
a little more useful than traditional coursework. The researchers identified this effect as a
possible regression to the mean. Analysis of the responses to the open-ended questions
found that 49 percent of participants reported the service-learning experience had helped
them personally overcome some misconceptions about aging. Additionally, 21 percent reported developing an increased appreciation of older adults as a result of the service-learning experience while 16 percent stated the experience had made them consider a career in gerontology. When asked, “what are the advantages and disadvantages of a course based on service-learning?” thirteen percent of participants stated that service-learning had provided the opportunity to experience services to older adults, had reinforced personal goals of working in aging, and had opened doors to future internship experiences in aging. The researchers did not provide data on what types of settings/sites the participants went to and the nature of the older adults visited. This would have been useful information as other studies have found that exposure to frail, ill older adults may reinforce negative attitudes of older people. It was also not clear from this study how the coursework related to or was reinforced by the service-learning experience.

**Summary of Outcomes from Service-Learning Studies**

The outcomes from the educational interventions used in these studies found that a combination of didactic methods and service learning activities generally increased aging knowledge and had a moderate effect on improving the attitudes of participants toward older adults. Service learning activities also provide participants with opportunities to explore career choices with populations not considered prior to the activity. Thirdly, service learning activities provide participants with exposure to “real world” persons and situations which potentially enrich the learning experience. Finally, these types of interventions provide support for the use of mixed methods of evaluation such as combining a knowledge measure with reflective journaling. However, like
previously reviewed studies, the effect of all of these potential outcomes from these particular studies is significantly limited by the homogenous nature of all the samples.

The overall limitations of these types of service learning interventions are:

- While most students view service learning and other experiential activities positively, these types of activities can be time and labor intensive which potentially reduce the perceived benefits.
- Incorporating some type of service learning activity into a course increases the possibility of positive change as compared to using only didactic methods. However, the tendency to indirectly link the activity with the course content weakens its overall immediate and long-term effect.
- Service learning activities require active involvement from course instructors which may be problematic in some institutions with limited resources.
- Service learning activities require adequate time for participants to process and reflect on their experience; this may be problematic in certain types of courses.
- If not carefully constructed, service learning activities may serve to reinforce stereotypes and perceptions of specific groups and situations.

_Experiential and Didactic Approaches Combined_

The third type of educational intervention discussed in this review, a combination of experiential and didactic interventions, is the focus of this group of studies. The majority of educational interventions using these approaches are found in the medical and
nursing literature with a few studies also in the allied health literature. The educational interventions are characterized by a structured, usually prescribed experiential component which is an essential and required element of a specific course or curriculum sequence. The experiential components tend to be directly linked to the course or curriculum objectives through the design of the experiential activities and the intentional use of faculty or clinical instructors who serve as role models in a specialized area (such as aging) for students.

A review of the available literature resulted in the selection of nine studies, based on the relevance of the interventions used, for inclusion in this review. The outcomes from these studies using this combined approach were generally positive and point to the great potential for significant and lasting attitudinal change and skill development in a specialized career area such as aging. In this section, these studies are grouped and examined by discipline (psychology, nursing, allied health, and medicine).

Psychology Study

In 2002, Hinrichsen and McMeniman evaluated the effects of geropsychology training (educational intervention) on graduate students’ knowledge of and attitudes toward older adults. The study used a pre test–post test comparison group design and assessed psychology interns at the beginning of the training year and then again nine months later over a four year period. The resulting sample consisted of 90 psychology interns and externs at a medical center. In the sample, 63.3 percent were in a PhD clinical psychology program, 27.8 percent were in a PsyD clinical psychology program with the remainder in neuropsychology, counseling psychology, or developmental psychology. Study participants were predominately female and Caucasian with a mean
age of 29.89 years. Forty-seven percent of the clinical placements were in settings which served older adults; assignment to geriatric clinical settings was not random but based on availability of sites and students. Participants in geropsychology settings were supervised by a doctoral level psychologist who had a professional identity in geropsychology.

Three measures were used: items from Palmore’s Facts on Aging Quiz and Mental Health Quiz were combined into a measure called the Aging Mental Health Quiz assessing the knowledge of geriatric mental health, Kogan’s Attitudes Toward Old People scale, and a measure of Interest in Geropsychology developed by the first author (Hinrichsen). This specific measure included seven statements with a 6-point Likert scale; a reported pilot reliability for this measure was .90. Regression analysis found that when the Aging Mental Health Quiz was used as the dependent variable, the geropsychology internship was significant. This finding was also significant when the Negative Attitudes score was used as the dependent variable. Additionally, those participants who had a geropsychology placement demonstrated a higher level of interest in geropsychology as a career choice than those who didn’t have the placement.

Nursing Studies

A 1986 study by Eddy examined the attitudes of nursing students toward older adults before and after an undergraduate nursing program. The study design was a one group, pre test/post test with 56 participants in the group. The study participants were junior-level nursing students enrolled in a baccalaureate nursing program. Prior to the study, a major curriculum change had been undertaken at the university to introduce more aging content into the nursing curriculum. Specifically, the aging content was focused on positive, healthy images of aging. The pre test measure was the two-part questionnaire
by Tuckman-Lorge, *Attitudes Toward Old People*. This measure and a demographic questionnaire collecting data on age, race, gender, and the type of visitation site was given at the beginning of the semester; at the conclusion of the semester the Tuckman-Lorge questionnaire was given again.

The actual educational intervention consisted of nursing courses with a structured experiential component where students visited older adults during the course of a semester. During the nursing courses, methods of presentation of didactic material included lecture, small group discussions, and guest speakers. Prior to the implementation of the experiential learning aspect, representatives from six local agencies who provided services to older adults came and gave short presentations on their respective agency and the services offered. The actual population of older adults visited by the students during the semester ranged in age from 60 to 91 years. A minimum of five visits through each semester were required and students were assigned in pairs to an individual older adult. The first and last visits were made as a pair and the subsequent three visits were made by each student independently.

Structure for the experiential learning aspect of the courses was provided through three required seminars during the semester. The content of these seminars addressed interpersonal issues, relationship building and termination issues, and common psychosocial issues of aging. Additionally, students were required to maintain a journal of each visit, documenting the interactions which occurred. A final paper “analyzing both the interpersonal dynamics of this relationship and aspects related to the aging process” was required at the end of each semester.
The study results found that 42 percent of the participants showed no change in attitude scores at the end of the semester with only 35 percent showing a moderate increase in attitude change scores. The researcher attributes this finding with the fact that five visits may have been too few to affect real attitude change. Additionally, an analysis of subgroup data from students who visited well-elderly in independent apartment complexes, nutrition or senior centers, found these students’ attitude scores increased most consistently.

Dellasega and Curriero (1991) explored the effects of institutional and community experiences on nursing students’ intent to work with older adults through the use of a longitudinal study. Thirty-nine junior baccalaureate nursing students who were predominately female and young who were enrolled in a nursing course focusing on care of the elderly made up the study sample. The students were informed that participation in the study was voluntary resulting in an 83 percent participation rate. Given that one of the unanswered questions in aging research remains why certain individuals aren’t interested in working with older adults, it would have added significantly to the study if the researchers had also investigated the reasons why students elected not to participate. The study participants were assessed at three points: prior to any intervention, after an experiential component consisting of clinical work with older adults in an institutional setting, and then after an experiential component consisting of clinical work with older adults in a community setting.

The intervention consisted of a 15-week course which included 2 ½ hours a week of didactic content through lecture, discussion and an experiential component made up of structured clinical experiences. The first experiential component lasted for seven weeks
during which students participated in a clinical experience in a skilled nursing facility. The second clinical experience also lasted seven weeks and took place in an independent apartment complex in the community. The instructor for the course was a graduate-trained nurse with a certification in geriatric nursing. Clinical instructors for both clinical components of the course were selected because of their positive role modeling and for their enthusiasm for working with older adults. The researchers created a measure for the study by using items from two other measures: the Nursing Speciality Preference and the Work Preference Instrument. The combined measure resulted in six items in four categories designed to assess a student’s preference and intent to work with specific populations, including older adults. No reliability or validity information for this combined measure was provided. The measure was administered three times during the study: at the beginning of the semester prior to any course content or any clinical experiences (Phase 1), 2.) at the midpoint of the semester after the institutional clinical experience (Phase 2), and 3.) at the conclusion of the course, after the community clinical experience (Phase 3).

Study results found the majority of students at pre test reported a preference not to work with older adults and this lack of preference was not influenced by factors such as previous work experience with older adults. Secondly, at post test students reported no change in their work preferences resulting from the intervention. Approximately half of the study participants did self-report more positive attitudes toward older adults as a result of the intervention. These findings are consistent with other studies which have found no relationship between increased aging knowledge, improved attitudes toward older adults and the intent to seek a career in aging. The study also had a small sample
and the measure used apparently only had four items which is problematic for adequately measuring changes in attitudes and perceptions which are multidimensional constructs.

Sheffler (1995) also investigated whether or not clinical nursing experiences affect the attitudes of two-year degree nursing students toward older adults. The sample consisted of 140 associate degree nursing students from three NLN-accredited nursing programs; the mean age of the sample was 29.9 indicating a more non-traditional group from the previous 1986 study. Kogan’s Attitude Toward Old People’s scale and Palmore’s Facts on Aging Quiz were the measures used to assess attitudes and aging knowledge respectively. The researcher also included a demographic data form during the pre test administration of the two measures. Demographic variables collected included age, sex, race, previous work experience with older adults in nursing home or hospital settings, participant’s experience with grandparents and contact with well elderly. A clinical data form also collected information about the participant’s clinical sites and the age ranges of the client seen at these sites. The two measures and demographic and clinical forms were given to participants prior to any lecture content on aging and prior to implementation of the experiential component of the course. At the conclusion of the course, the two measures were administered again to all participants.

The intervention consisted of classroom lecture and small group discussion; the experiential component was a structured clinical experience in a nursing home or hospital setting, supervised by faculty or instructors. Unfortunately, this particular study failed to provide detailed information about the nature of the intervention (clinical experience) which impacts on the interpretation of the study findings and replicability.
The study results found a moderate improvement in students’ attitudes following the clinical experience in a hospital setting. Secondly, the study found that contrary to the researcher’s hypothesis, the attitudes of students after completing the nursing home clinical experience did not become more negative. In fact, the participants’ scores moderately increased from their pre test scores; this could have been an unintended consequence where the negative perceptions of the students were dispelled instead of reinforced. As expected, scores on the Facts on Aging Quiz improved for all the participants as a result of the course content and experiential component. These findings are limited by the lack of a comparison or control group, the heterogeneous nature of the sample, and the use of convenience sampling.

Allied Health Studies

A study of physical therapy students compared attitude change in students who participated in either a traditional clinical or a mock geriatric clinic (Brown, Gardner, Perritt, & Kelly, 1992). The study participants were 47 physical therapy students in the spring semester of the first professional year in the program. The participants were randomly divided into two groups, an experimental group (N = 23) and a control group (n=24). Kogan’s Attitudes Toward Old People scale was used as the pre test and post test measure; these testing administrations were 16 weeks apart.

To develop the intervention, the researchers met with an expert advisory panel of experienced practitioners for two 3-hour meetings to agree on study design and implementation. The older adult volunteers were recruited through the university’s Council on Aging program; the mean age of the older adult volunteers was 72.5 years. Prior to the experiential component of the study, all of the study participants had six
hours of lecture and discussion on problem-solving and patient management skills. Then
the control group participated in the traditional clinic experience of four hours per day,
one day per week for eight weeks at two local facilities. At the end of the first and last
four-week period, the control group met with the course instructor for a total of eight
hours of debriefing. Prior to the six hours of lecture and discussion on problem-solving
and patient management skills, the experimental group participated in two four-hour
sessions of mock geriatric clinic orientation and group discuss focusing on attitudes of
and perceptions toward older adults. These two four-hour sessions were led by the
researcher and a course instructor, both of whom had extensive experience and
knowledge in geriatrics. Each mock clinic session started with a 30-minute orientation
then students reviewed patient folders and then spent the remaining two and a half hours
working with individual patients. Each student had direct contact with three elderly
patients. In the first two mock clinic sessions, the students worked in pairs; during the
third mock clinic session the students worked independently with the clients. The fourth
hour of each mock clinic session consisted of a group debriefing experience led by
clinical instructors. The experimental group then participated in the traditional clinic
experience of four hours per day, one day per week for eight weeks at two local facilities.

The study found no significant differences between the two groups overall pre test
and post test attitude score with the positive attitude scores of both groups increasing
after the experiential component. The only difference between the groups was the
decrease in negative attitude scores of the experimental group after the intervention; the
control group’s negative attitude scores did not change. The researchers felt the reasons
why positive scores increased for both groups after the experiential component was due
to uncontrollable variables including positive role modeling by clinical instructors and
the orientation of the actual coursework and pre-experiential didactic component.
Additionally, the students in the control group were aware they were being compared to
the experimental group which could have resulted in a Hawthorne effect of the group
making a conscious effort to improve their scores. The groups may have also
contaminated the effect of the intervention as the students were very likely to interact
outside of the actual class experience.

Overall, while the sample size was small and heterogeneous, the study design was
more rigorous than previous studies reviewed in the nursing literature and the actual
interventions were discussed in great detail which makes replicability easier. The one
limitation of the study was the use of a single measure. Attitudes are complex constructs
with potentially numerous dimensions which should generally be measured using
multiple measures.

Gardner (1994) designed an interesting study which examined the effects of a
brief attitudinal intervention with occupational therapy students at the time of the actual
intervention and nine years post-intervention. The sample consisted of two groups: the
first group consisted of 226 occupational therapy students who had taken a two-hour
course session taught by the researcher between the years of 1982-1989. The second
group consisted of 208 senior occupational therapy students who had taken a two-hour
course session taught by the researcher between the years of 1982-1989 and who
completed and returned a mailed out survey. The measure used with the first group was
based on five questions in Likert scale format designed by the researcher as a brief
attitudinal inventory.
Prior to the measure being administered, the students participated in the two-hour course session (intervention) which began with a brief vignette of an older woman who was of a low socioeconomic class. After reading the vignette, students were instructed to complete the five-item attitudinal inventory discussed earlier. The second intervention then consisted of a short film entitled “The Shopping Bag Lady” which told the story about the older woman in the vignette. A discussion followed the viewing of the film and then students were again instructed to reread the vignette and respond a second time to the five-item attitudinal inventory. Students were then instructed to sum their responses to both exercises and provide any written comments regarding the nature of change which may or may not have occurred.

The second group was a sample of students who had participated in this intervention during the past nine years and who completed and returned a mailed out survey from. This mailed out survey consisted of 14 demographic items and 23 items specifically related to the film viewed during the actual intervention. The researcher also indicates he incorporated four dropout points in the survey: 1.) stop if the respondent had no practice experience with older adults, 2.) stop if the respondent saw older people in their practice but did not recall the content of the film, 3.) stop if the respondent’s perception of older people had not been influenced by the film at the time of the class, and 4.) stop if the respondent’s perception had been influenced at the time of the class, but had not been influenced since being a professional OT.

An analysis of the five-time attitudinal inventory used during the actual intervention found that only 73 percent of pre test responses were positive as expected while the number of post test positive responses increased to 95 percent as a result of the
intervention. For the second group, an analysis of the survey responses found that at the
time of the intervention, 52 students (26%) reported the intervention influenced them
positively to improve their attitudes. At follow-up nine years later, 90 students (61%)
reported the intervention had had a positive influence on their professional role as an OT.
The effect of time was also positive in that the more experience a respondent had as an
OT, the more likely he or she was to perceive the intervention as a positive influence.
This study supports the use of a brief intervention to facilitate attitude change and
provides evidence that the effect of time may potentially increase the actual intervention
effect.

Studies in Medicine

Medical education continues to be a leader in the field of developing educational
interventions to improve student knowledge, attitudes, and interest in the field of aging.
In 2001, through funding from the John Hartford Foundation, Alford, Miles, Palmer, and
Espino implemented and evaluated an educational intervention with an experiential
component as a mechanism for introducing geriatrics to first-year medical students. The
sample consisted of 203 first-year medical students who participated in an educational
intervention (curriculum module) created by the medical school faculty entitled Geri
Track.

This curriculum module was “based on the concept that introducing medical
students to relatively healthy, active older people early in their careers will give students
the experience necessary to overcome ageism and negative stereotypes” (2001, p. 5).
There were six Geri Track sessions incorporated into the curriculum and each session had
three parts: 1.) a 1-hour didactic presentation by a geriatrician, 2.) a visit to an assigned
older volunteer, and 3.) a response to reflection questions posted on a course Web site. The measure used was developed by the faculty and consisted of four constructs: attitudes and beliefs about providing medical care for older people, knowledge and beliefs about aging, interest in pursuing clinical geriatrics, and interest in pursuing aging research. No reliability or validity information was provided about the measure. The measure was given to the study participants at the beginning of the Geri Track intervention and at the conclusion. The researchers also administered the survey one time only to the preceding medical school class who did not participate in the Geri Track intervention; this group was used as a comparison group. Analysis of the measure resulted in a four factor structure: beliefs about physical decline in old age, experience and comfort with older people, beliefs about career opportunities in geriatrics, and interest in geriatrics as a career choice.

The study found the intervention group experienced more positive attitudes toward aging and increased comfort and experiences with older people. There was also a slightly positive increase in considering geriatric research. No change was found in beliefs about career opportunities in geriatrics even though a statistical comparison of this factor with the comparison group found a slightly positive trend toward a career choice in geriatrics.

Wilkinson, Gower, & Sainsbury (2002) also found that experience early in medical school had the potential for improving students’ attitudes toward older adults. This study examined a sample (N = 186) of second-year medical students who spent a week in pairs interviewing an individual from a specified population and then also visited
various community agencies who provided services to the specified population. This week is identified as the intervention in the study.

The researchers then re-assessed this same sample of students when they reached the fourth year of medical training and after completion of a five-week experiential clinical component in health care of the elderly. The researchers used the Rosencranz-McNevin semantic differential on aging to assess attitude change; lower scores on the measure indicate more positive attitudes. Study results found that all students showed positive attitude improvement after the completion of the initial week-long intervention, but a detailed examination revealed the most significant attitude change occurred only in students who interviewed community-dwelling older adults rather as compared to students who interviewed older adults living in institutions. The primary limitation of this study was the complete lack of specification regarding the nature of the educational and clinical intervention which limits the findings and results.

A more recent study evaluated the effect of a low-intensity intervention to introduce medical students to healthy older people (Bernard, McAuley, Belzer, & Neal, 2003). The sample consisted of an intervention (N = 108) and a control group (N = 117). The control group did not participate in any aspects of the intervention and only completed the measure at pre test and post test. The measure used was the Aging Semantic Differential which was administered in the fall of the first year and at the end of the second year of medical school. Higher scores on this measure indicate more positive attitudes toward older adults.

The intervention group was assigned a senior mentor in the first year of medical school through a program designed to provide students with the opportunity and context
to get to know an older adult in good health and to better understand the aging process. The student was required to complete a structured interview with the senior mentor once a semester for the first two years of medical school for a total of 12 hours of contact time over the two-year period. Each of the four interviews had a structured purpose: the first interview was to develop rapport and give the student an opportunity to practice their interviewing skills and to obtain a family and social history. The second interview required the student to determine the senior mentor’s position within the continuum of aging and functionality through the use of a functional assessment. During the third interview the student was expected to assess the risk of the older adult for one of the common syndromes seen in geriatrics; during the fourth and final interview the students and mentors were expected to “explore the mentors’ values, beliefs, and wishes as these values relate to their health and health care” (2003, p. 11). The students then discussed these interviews in small group format mediated by geriatrics faculty.

Students in the intervention group were not informed of the intent of the program, but were told the intervention was developed to introduce them to the concepts of normal aging processes. The older adults who volunteered as senior mentors were generally mobile, healthy and community-dwelling. Study results found both groups improved their ASD scores, but the intervention group experienced more significant change scores than the control group. Even when controlling for variables of gender, age, visits to a nursing home, prior work experience with older adults, and prior courses on aging, this significant change in the intervention group was maintained. The researchers felt this finding was primarily attributed to the low intensity of the intervention over a period of time instead of an intense, one-time only type of intervention.
Summary of Outcomes of Didactic & Experiential Studies

All of these studies using the combined approach demonstrated the generally positive but mixed results so common in the literature on perceptions of older adults and the effect of various types of interventions on altering these perceptions. Researchers have argued that methodological issues, problematic conceptual definitions, inadequate operationalization of key constructs, measurement limitations, and even ageism on the part of the researchers themselves have contributed to these mixed findings. However, some of the common findings from these studies which are relevant to this current study include:

- A combination of interventions which include both knowledge-building (didactic) and knowledge/skill testing (experiential) components appear to have a more lasting effect on attitude change
- Experiential components have the potential to reinforce changes in perceptions gained through didactic experiences
- Variables such as age, gender, prior work experience with older adults, grandparent relationship, and aging coursework have only a minimal or no effect on attitude change or career intent
- Intent to seek a career in aging remains a difficult construct to measure
- Increased knowledge about aging and more positive attitudes about aging do not generally correlate with an increased intent to seek a career in aging
- Practical experience with a population such as older adults may help students make meaningful and possibly long-term connections between experiential learning experiences
It is telling that in this review of studies, no study examining social work professionals or social work education was included. This omission is directly related to the fact that there are no studies which specifically examine the effects of educational interventions which include an experiential learning component on social work students’ perceptions of older adults and the intent to seek a career in aging. This current study seeks to address this gap in the literature by identifying and evaluating what type of educational interventions not only alter the perceptions of social work students toward older adults but also increase their intent to seek a career in geriatric social work.

*Interviews with Teaching Faculty*

Several qualitative interviews with social work faculty who were currently teaching found support for the constructivist framework, but also revealed limitations related to resources, time constraints, and teaching load (the interview guide is located in the appendix). The interview subjects (N = 6) had teaching experience ranging from six years to 33 years in social work education. Additionally, all of the interview subjects had clinical experience prior to teaching. The interview questions were developed from the literature on the constructivist framework and the work of Bruner (1962).

When asked to describe their teaching style in terms of how students learned, the most commonly used words were collaborative, facilitator, guiding, directing, lecturing, small group facilitator, and mentor. Most instructors used a combination of didactic and experiential methods, but not always intentionally, resulting in a variety of outcomes. Teaching faculty in professional programs like social work are clearly influenced by their years in practice prior to academia and by the context of the institution where they are employed. The nature of their professional socialization and doctoral program
experience also appear to be other potential influences on the nature of each faculty member’s view of the teaching, learning, and assessment process. The use of contextualization and multiple representations of reality seem to be common practices in social work education and are certainly positive influences on student learning. Because faculty are influenced by their former practice experiences which are usually diverse, it logically follows that social work faculty would unconsciously implement strategies using contextualizing and multiple representations of reality in their teaching. These influences identified in these six faculty are consistent with Pearson’s (1998) findings on the educational philosophies of graduate social work faculty.

When asked how they facilitate student learning, the majority of instructors reported structuring their classes from broad to specific knowledge and using small group discussion, projects, case studies, interview, guest speakers, and a other experiential methods. The interview subjects also discussed how they teach theory to students with most of them saying they usually try to teach the broad, fundamental aspects of the theory first and then use experiential methods to help students understand and apply the specifics of a theory. The terms faculty members used to describe their teaching style is important in understanding the philosophy of what they do as many of the faculty interviewed used terms that described both style and method. Commonly used terms by the faculty interviewed were: facilitation, guiding, collaborating, partnership, lecturing, discussion, small groups, teach from the text, use case examples, multiple assessments, reflection, interactive, and student presentations. One faculty member stated that due to time constraints in a small, two-person department, he/she tended to use more traditional
methods like lectures, quizzes, and exams as these were less time-consuming then group projects, reflective journaling, or service-learning.

Some type of philosophy to provide guidance in using instructional strategies in an intentional manner promotes the development of student self-determination, competency, and can closely resemble (model) and promote the actual intervention process with a client (Whitford, 2001; Spence & Kowalski, 1994). Furthermore, in accordance with the tenets of constructivism, students tend to perceive instructors who are effective as those who form reciprocal relationships and share power while encouraging autonomy and providing support to students (Solas, 1993). This type of instructor is a closer representation of Pearson’s (1998) mentor model instead of the master teacher model.

When asked how they address students’ individual learning styles, particularly intuitive versus analytical students, many of the instructors had difficulty answering this question and stated they really don’t spend too much time thinking about this dimension of the learning process due to time constraints, advisement, and other academic responsibilities. In summary, the instructors interviewed used a variety of teaching methods, but often reported using more traditional methods such as exams and quizzes when constrained by time because these types of assignments are easier and faster to grade than a reflective paper or a research paper. The instructors generally viewed a more constructivist framework positively and incorporated aspects of it into their teaching, but said they would have difficulty implementing the entire framework without support from their department head, dean and university administration.
The main characteristics of assessment within a constructivist framework are the assessment process must be collaborative, negotiated, and meaningful to the student (Jonassen, 1994). In social work education, assessment is crucial to the development, implementation, progression, and evaluation of the professional curriculum. What Holloway (2005) suggests in terms of program assessment is also true of student assessment, “it is important that the assessment plan be comprised of a complementary set of measures so the program [student] can demonstrate confidence that the findings from varying tools build on one another to provide comprehensive information on the program objective in question” (p. 13). From a constructivist framework, an emphasis should be placed on measures that are context dependent and multimodal with multiple perspectives (Jonassen, 1994).

When asked how they evaluated the performance of students, half said they use traditional quizzes, exams (either pen or pencil or take-home) and research papers. The other three instructors reported using a variety of methods that were more collaborative in nature and also dependent on some aspect of peer evaluation such as presentations, small group activities, group projects, or interviews with dyads. As a result, instead of discussing specific ways of knowing (measuring) student learning, the faculty tended to define how they help students learn in different ways by discussing specific teaching methods such as of mini-lectures, small group discussions, student presentations, service learning, and volunteer hours. These findings are similar to the ranking of educational interventions by students in this dissertation study.

Jonassen (1994) argues that alternative methods are more effective for assessing real student competence instead of students just learning content skills through
instructional sequences. He suggests assessment methods true to a constructivist philosophy would be inclusive of: goal free evaluation, authentic tasks, knowledge construction (no exams or quizzes), context dependent evaluation (i.e. field practicum), multiple perspectives, multimodal, and negotiated meaning. Obviously, these alternate assessment methods require a clear conceptualization and continuous feedback by both student and instructor. Because students tend to be socialized to the didactic methods of teaching and assessment, a shift to alternate assessment methods requires the instructor to trust the judgment of the student and for the student to have enough confidence and support to successfully participate in the process. In some educational settings, this type of assessment method is not practical or feasible; faculty and students may be uncomfortable with the fluidity of the process; and accrediting bodies may question the validity of certain alternate assessment method.

Summary and Research Questions

The earlier examination of the constructivism framework provides some direction and focus in examining the effects of the educational interventions implemented by various GeroRich Project sites. The main constructs of constructivism (the cognitive apprenticeship, scaffolding, multiple representations of reality, contextualization, and situated learning) provide the context for evaluating the effectiveness of the specific types of educational interventions used by the GeroRich Programs. Specifically, the effect of educational interventions which combined both didactic and experiential methods are examined in the context of Schon’s work on developing professional competence.

Specifically, this study focuses on evaluating the effectiveness of specific educational interventions developed and implemented in the undergraduate social work
curriculum, and the effect of the field practicum setting on altering students’ perceptions of older adults. The types of specific educational interventions are evaluated in terms of their potential to increase the intent to seek employment in an aging setting. Potential confounding factors that are controlled for include age, gender, race, academic year, prior volunteer experience, taken an aging course, social desirability, and the nature of the grandparent relationship. The following research questions and subsequent hypotheses will be examined in this study:

**Research Questions 1a:**

1. Do BSW students in a GeroRich funded BSW-only social work program who have had “aging-rich” practicums demonstrate more aging knowledge as compared with BSW students in a non-GeroRich social work program?

2. Do BSW students in a GeroRich funded BSW-only social work program with more aging knowledge demonstrate a higher intent to seek opportunities to interact with older adults in a practicum setting as compared with BSW students in a non-GeroRich social work program?

**H1a:** *GeroRich participation and an aging-rich practicum predicts more aging knowledge compared to non-GeroRich students, after controlling for the size of institution, type of institution, age, gender, ethnicity, academic standing, taken an aging course, the nature of the grandparent relationship, prior volunteer experience, and social desirability.*

**H1b:** *Participation in the GeroRich Project and aging knowledge predicts students seeking more opportunities to interact with older adults in a practicum setting as compared to non-GeroRich students after controlling for size of institution, type of*
institution, age, gender, ethnicity, academic standing, taken an aging course, the nature of the grandparent relationship, prior volunteer experience, and social desirability.

**Research Question 2:** Do BSW students in a GeroRich funded BSW-only social work program that integrated both non-experiential and experiential educational interventions into the curriculum demonstrate more positive perceptions of older adults as compared with BSW students in a non-GeroRich social work program?

**H2:** Participation in a GeroRich BSW program and a combination of experiential and non-experiential educational interventions predicts more positive perceptions of older adults compared to students in non-GeroRich BSW programs after controlling for size of institution, type of institution, age, gender, ethnicity, academic standing, taken an aging course, the nature of the grandparent relationship, prior volunteer experience, and social desirability.

**Research Question 3:** Are BSW students in a GeroRich funded BSW-only social work program that integrated both experiential and didactic educational interventions into the curriculum more likely to seek employment in aging settings as compared with BSW students in a non-GeroRich social work program?

**H3:** GeroRich participation and a combination of experiential and non-experiential educational interventions predicts a higher likelihood of seeking employment in an aging setting compared to non-GeroRich students after controlling for size of institution, type of institution, age, gender, ethnicity, academic standing, taken an aging course, the nature of the grandparent relationship, prior volunteer experience, and social desirability.
Research Question 4: Do BSW students in a GeroRich funded BSW-only social work program demonstrate increased aging knowledge, higher intent to seek out opportunities to interact with older adults, more positive perceptions of older adults, higher intent to seek employment in an aging setting, and a more positive perceived level of treatment potential and a higher perceived level of competence in ability to work with older adults?

H4a: GeroRich participation, aging knowledge, perceptions of older adults, and intent to seek employment in an aging setting predict positive perceptions regarding the perceived treatment potential of older adults compared to non-GeroRich students after controlling for the type of case study, size of institution, type of institution, age, gender, ethnicity, academic standing, taken an aging course, the nature of the grandparent relationship, prior volunteer experience, and social desirability.

H4b: Participation in the GeroRich project, aging knowledge, perceptions of older adults, and intent to seek employment in an aging setting predict a higher level of perceived competence in working with older adults compared to non-GeroRich students after controlling for the size of institution, type of institution, age, gender, ethnicity, academic standing, taken an aging course, the nature of the grandparent relationship, prior volunteer experience, and social desirability.
CHAPTER 4

Method

The elements of the constructivism framework provide some direction and focus in examining the effects of the GeroRich Project. Specifically, this study focuses on the effects of the project on aging knowledge, field practicum experiences, perceptions of older adults, intent to seek employment in an aging setting, perceived treatment potential of older adults and perceived level of competence in working with older adults.

GeroRich Project Definitions

The GeroRich Project funded BSW, MSW and combined programs for a three-year cycle with successful programs participating in a highly competitive review process to receive funds to plan, implement, evaluate, and disseminate pervasive and sustainable aging-enriched curriculum changes (www.gerorich.org). The scope of this study is limited to students in BSW-only programs as practicing BSWs currently represent the largest group of social workers who report practicing in aging settings (Gibelman & Schervish, 1997). The conceptual and operational definitions for the study variables are discussed in the following section.

Conceptual and Operational Definitions of Study Variables

Dependent Variables¹

The dependent variables in the study are: a.) knowledge about aging, b.) intent to seek opportunities to interact with older adults in a practicum setting, c.) perceptions of older adults, d.) intent to seek employment in an aging setting, e.) perceived treatment potential, and f.) perceived level of competence in working with older adults.

¹ Knowledge About Aging, Perceptions of Older Adults, and Intent to Seek Employment in an Aging Setting are also used as independent variables for H4a and H4b.
Knowledge about aging\(^2\) is conceptually defined as knowledge about the physical, social, psychological, cultural, and economic aspects of aging. This conceptual definition is operationalized by use of a modified version of the Facts on Aging Quiz (FAQ). This measure assesses knowledge about the physical and social aspects of aging; the original measure has 25 items which are measured by a dichotomous choice of true or false with higher scores indicating a greater degree of aging knowledge. Palmore (1998) reported that the majority of post test scores experience a 60 percent change. Generally, this finding has been true with the majority of studies identifying changes in scores after some type of educational or experiential learning experience. This measure has been modified several times since 1977 including the development of a multiple-choice version which the authors argued showed a substantial decrease in guessing, reduced measurement error, had greater internal consistency and reliability, and showed the potential for higher discriminatory power (Harris & Changas, 1994; Harris, Changas, & Palmore, 1996).

The original Facts on Aging Quiz was developed by Palmore in 1977 and has been used in numerous studies and with various populations including long-term care personnel (Huber, Reno, & McKenney, 1992), social service providers (Gibson, Choi, & Cook, 1993), continuing education participants (Shank & Lee, 1995; Stuart-Hamilton & Mahoney, 2003), ordained ministers and ministerial students (Knapp, Beaver, & Reed, 2002), undergraduate and graduate students of various disciplines (Harris & Dollinger, 2001; Knapp & Stubblefield, 2000; Richardson, Montemuro, Mohide, Cripps, & Macpherson, 1999), social work graduate students (Gellis, Sherman, & Lawrance, 2003),

\(^2\) Knowledge About Aging is also used as an independent variable for H4a and H4b
One of the most recent modifications of this measure was done by faculty at the Center on Aging Studies at the University of Missouri-Kansas City (http://iml.umkc.edu/cas/AgingFactsQuiz.htm). This updated version contains more items (50 instead of 25) which attempt to capture more dimensions of the physical, social, emotional, cultural, and economic aspects of the aging process (see Appendix, p.). This researcher requested psychometric information on this modified version from the primary developer and received email permission to use this version; the developer of the modified version gave permission for its use but stated there currently was no psychometric information available. This modified version was pilot-tested with a small group of undergraduate students (N = 32) taking an aging course in the fall of 2003. Analysis of this pilot data found a mean score of 79 with scores ranging from 66 to 88. The sample was predominately female with a mean age of 21, junior in academic standing and majoring in nursing. An alpha of .68 was reported for this pilot sample.

*Intent to seek opportunities to interact with older adults in a practicum* setting is conceptually defined as intentionally seeking out opportunities to interact with older adults in the field practicum setting. This conceptual definition is operationalized through the use of an item on the demographic section of the survey.

*Perceptions of older adults* is conceptually defined as the varied ways in which older adults as a group are perceived either negatively, neutrally, or positively by younger adults. This conceptual definition is operationalized by use of the *Aging Semantic Differential (ASD)* measure. The Aging Semantic Differential (ASD) was developed by
Rosencranz & McNevin in 1969 as a measure to test the attitudes and perceptions of the respondent towards an indicated social object, in this case, an older person. The measure consists of 32 bipolar adjective scales with seven response levels; summed scores can range from 0 to 100. Lower scores indicate a more positive attitude toward the object (older person). This measure has been used with a variety of samples including practicing physicians (Rikkert & Raud, 2004), medical students (Bernard, McAuley, Belzer, & Neal, 2003; Robinson & Rosher, 2001; Paris, Gold, Taylor, Fields, Mulvihill, Capello, & deBeer, 1997; Reuben, Fulteron, Tschann, & Croughan-Minihan, 1995), nurses (Hefner, 2003), graduate social work students (Gellis, Sherman, & Lawrance, 2003), college students (O’Hanlon & Brookover, 2002; Harris & Dollinger, 2001; Laditka, Fischer, Laditka, & Segal, 2004), and social service and healthcare employees (Waldrop & Cress, 2002; Kahana, Kinney, Kercher, Kahana, et al., 1996; Milligan, Prescott, Powerll, & Furchtgott, 1989).

**Intent to seek employment in an aging setting** is conceptually defined as the degree of intent demonstrated by BSW students to seek employment in an aging practice setting after obtaining either the BSW or MSW degree. This conceptual definition is operationalized by the use of the *Social Work Attitude Measure* which contains one subscale related to beliefs about career opportunities in an aging practice setting. The original measure was developed by a John Hartford Center of Excellence in Geriatrics Education at the University of Texas Health Science Center in San Antonio. The UT Health Science research project was detailed in an article entitled “An introduction to

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3 Perceptions of Older Adults is also used as an independent variable for H4a and H4b.
4 Intent to Seek Employment in an Aging Setting is also used as an independent variable for H4a and H4b.
The focus of the 2001 research study was to pilot-test the measurement tool and determine the impact of a new educational program and the use of a volunteer experience in addressing attitudes held by first-year medical students towards older adults. This was a pre test post test comparison group design with a sample of 204 first-year medical students in the intervention group and 200 second-year students in the comparison group. The overall measure, Geriatric Attitude Survey, consisted of four sections with 28 items in part one. These items are statements with 6-point Likert scale response categories (1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = A Little Disagreement (LD), 4 = A Little Agreement (LA), 5 = Agree (A), 6 = Strongly Agree (SA)).

The items in part two were statements related to the physiological aspects of aging with a dichotomous response category: “normal aging” or “disease related”. The items in part three were statements related to interest in a career in geriatric research with a 6-point Likert scale response categories ranging from “very negative” to “very positive.” The fourth part of the measure listed several areas of specialization in medicine and instructions to identify the top five choices and then rank from 1 to 5.

Initial analysis of the medical student sample only analyzed the 28 items in the first part. This analysis identified a four factor structure: beliefs about physical decline; comfort with older people; beliefs about career opportunities; and interest in geriatric research (this fourth factor was renamed beliefs about the nature of geriatric social work practice for this study). No alpha score from the medical student sample was reported in the article. The principal investigator, Cynthia Alford, was contacted to request
permission to modify a version of the measure she developed, *Geriatric Attitude Survey*, for pilot-testing with social work students. Permission was obtained and the measure was used in a research mentorship with Aloen Townsend during 2001-2002.

Modifications to the measure, renamed *Geriatric Attitude Survey-Social Work Version*, focused primarily on the first and fourth parts only with the fourth part renamed “part two” for continuity. The use of the term “old people” or “elderly” in various items was changed to the more neutral term “older adult(s)”. The term “social work” was substituted for “medicine” and the term “social worker” was substituted for “doctor” or “resident”; the Likert response categories were reduced to four instead of six.

Examples of modified items are as follows:

*Original items:*

Elderly patients do not appreciate health care delivery by physicians and nurses as much as younger patients. 1 2 3 4

As a physician, I would not be interested in treating elderly patients. 1 2 3 4

*Modified items:*

Older patients are much more demanding of a social worker than younger patients. 1 2 3 4

As a social worker, I would not be interested in working with older patients. 1 2 3 4

In part two of the modified measure, various areas of social work practice were listed such as adolescents, mental health, families and children, policy, administration, and so forth. Respondents were instructed to select their top five choices and then rank from first to last (1 to 5).
Perceived treatment potential is conceptually defined as the social worker’s perceived treatment potential of the client. This conceptual definition is operationalized by four summed items. This measure assessed the expectations of each individual respondent regarding the perceived treatment potential of a client (see Appendix for the measure with the two case scenarios – one young and one old). The researcher developed a draft of the case study and preliminary multiple choice questions and met for a 2-hour discussion session with a panel of experts (professional social workers both BSW and MSW with at least two years of aging practice experience) in November, 2003. The panel of experts was selected based on having a minimum of two years or more as a geriatric social worker, involvement in the community on aging-related issues, and involvement with the researcher’s social work field practicum program. The panel was asked to review the case study in the context of the five dimensions of aging (physical, social, emotional, cultural, and economic) and within the 10 aging competencies for all social workers as conceptualized by SAGE-SW. The panel was also asked to review the multiple choice questions to assess each question’s appropriateness in assessing entry-level social work assessment and intervention skills. Each expert made changes or recommendations and returned the case study and questions to the researcher for review.

The following items measuring perceived treatment potential of older adults were developed from this process:

1. Client’s ability to develop an adequate therapeutic relationship with you.

2. How appropriate a candidate for individual counseling or psychotherapy the client is.
3. How likely the client’s presenting complaint is related to an organic mental disorder.

4. How likely the client will attempt suicide in the near future.

To analyze this measure, a factor analysis was run to see how the items loaded. Items with eigenvalues of 1 or higher were renamed two subscales: 1. perceived treatment potential and 2. perceived level of competence in working with older adults. A reliability analysis was run and an overall summed score for each subscale was calculated.

*Perceived level of competence in working with older adults* is conceptually defined as the social worker’s perceived level of competence in working with older adults. This conceptual definition is operationalized by two summed items.

This measure assessed the expectations of each individual respondent regarding the perceived level of competence in working with an older client (see Appendix for the measure with the two case scenarios – one young and one old). The researcher developed a draft of the case study and preliminary multiple choice questions and met for a 2-hour discussion session with a panel of experts (professional social workers both BSW and MSW with at least two years of aging practice experience) in November, 2003. The panel of experts was selected based on having a minimum of two years or more as a geriatric social worker, involvement in the community on aging-related issues, and involvement with the researcher’s social work field practicum program. The panel was asked to review the case study in the context of the five dimensions of aging (physical, social, emotional, cultural, and economic) and within the 10 aging competencies for all social workers as conceptualized by SAGE-SW. The panel was also asked to review the multiple choice questions to assess each question’s appropriateness in assessing entry-
level social work assessment and intervention skills. Each expert made changes or recommendations and returned the case study and questions to the researcher for review.

The following items measuring perceived treatment potential of older adults were developed from this process:

1. Level of competence in treating client.
2. Level of comfort in treating client.
3. How open the client is to treatment recommendations.
4. How much to blame the client is for his or her problems.

To analyze this measure, a factor analysis was run to see how the items loaded. Items with eigenvalues of 1 or higher were renamed two subscales: 1. perceived treatment potential and 2. perceived level of competence in working with older adults. A reliability analysis was run and an overall summed score for each subscale was calculated.

Independent Variables

The independent variables in this study are: a.) program status (GeroRich vs. non-GeroRich BSW-only program, b.) educational interventions, c.) “aging-rich” field practicums, d.) knowledge about aging\(^1\), e.) perceptions of older adults\(^2\), and f.) intent to seeking employment in an aging setting\(^3\). The conceptual and operational definitions for the independent variables discussed in the following section.

\(^1\) This variable is also a dependent variable in this study and descriptive findings for this variable are included in the dependent variables section of this chapter.

\(^2\) This variable is also a dependent variable in this study and descriptive findings for this variable are included in the dependent variables section of this chapter.

\(^3\) This variable is also a dependent variable in this study and descriptive findings for this variable are included in the dependent variables section of this chapter.
Program Status (GeroRich vs. Non-GeroRich) is conceptually defined as a CSWE accredited undergraduate program who received funding from the GeroRich Project and which only provides a BSW degree and is not combined with an MSW degree program. A GeroRich program intentionally integrated aging content through the curriculum and the field practicum through a variety of methods. This conceptual definition is operationalized through an examination of the educational interventions used by the GeroRich Programs by examining reports of these curriculum change efforts submitted to GeroRich from each individual program in the intervention sample. A non-GeroRich BSW-only program is conceptually defined as a CSWE accredited undergraduate program which only provides a BSW degree and is not combined with an MSW degree program. The non-GeroRich Programs did not intentionally integrated aging content into the curriculum or field practicum.

Educational interventions are conceptually defined as interventions ranging from traditional lectures to simulated role plays to field experiences (excluding practicum experiences) which occur within an academic setting. This conceptual definition is operationalized through a list of eight non-experiential and eight experiential types of educational interventions which were listed in the questionnaire. Respondents were asked to select five from each type and then rank from one to five with one indicating most useful to the respondent's overall learning experience and five indicating less useful to the respondent's overall learning experience.

“Aging-rich” field practicums are conceptually defined as field practicums where students were actively exposed to older adults in a variety of settings and older adults
were the primary population served by the field agency. This conceptual definition is operationalized through two items on the demographic form.

**Control Variables**

The control variables in this study are: a.) size of institution, b.) type of institution, c.) age, d.) gender, e.) ethnicity, f.) academic standing, g.) taken an aging course, h.) nature of grandparent relationship, i.) prior volunteer experiences, and j.) social desirability. The conceptual and operational definitions for these control variables are as follows:  

a.) *Size of institution* is conceptually defined as the numerical student enrollment size at the college or university where the participating BSW program is housed; this information was collected from the website of each college or university by the researcher.  
b.) *Type of institution* is conceptually defined as the type of college or university where the participating BSW program is housed (private, public, faith-based); this information was collected from the website of each college or university by the researcher.  
c.) *Age* is operationalized as the age of the study participant’s last birthday and is collected on the demographic form.  
d.) *Gender* is conceptually defined as the sex a study participant defines themselves as. This conceptual definition is operationalized through a question on the demographic collection form.  
e.) *Ethnicity* is conceptually defined as the category of ethnicity or ethnicities study participants identify themselves as. This conceptual definition is operationalized through a question on the demographic collection form.  
f.) *Academic standing* is conceptually defined as the academic status currently held by a study participant. This conceptual definition is operationalized through a question on the demographic collection form.  
g.) *Having taken an aging course* is conceptually defined as any prior aging course a respondent has taken in a higher
education setting. This conceptual definition is operationalized by a question on the demographic collection form. h.) The *nature of the grandparent relationship* is conceptually defined as the type and nature of the relationship between a study respondent and a grandparent. This conceptual definition is operationalized a series of nine questions regarding the respondent’s relationship with a grandparent or other identified older adult. i.) *Prior volunteer experiences* is conceptually defined as any prior volunteer experiences a respondent has had in connection with a social work course. This conceptual definition is operationalized through a question on the demographic collection form. j.) *Social desirability* is conceptually defined as the positive bias respondents tend to have in responding to questionnaire data. This conceptual definition is operationalized through a summed score of the Crowne-Marlowe Social Desirability 13-item measure.

*Research Design*

The design of this study was a post test only quasi-experimental comparison group design. The first group was composed of students from BSW-only programs who participated in the GeroRich Project. This intervention group consisted of junior and senior social work students in BSW-only programs. The comparison (second) group was composed of junior and senior social work students from non-GeroRich BSW-only programs.

The experiment (intervention) was the GeroRich project. This design is considered quasi-experimental in nature with the primary limitation being without a pretest there is no evidence that the groups were equivalent to begin with and also prevents the researcher from ruling out a possible selection bias between the groups. The
variables of type of institution, size of institution, age, gender, ethnicity, academic standing, having taken an aging course, the nature of the grandparent relationship, prior volunteer experience, and social desirability were controlled for in an attempt to make the groups as equivalent as possible. The potential threats to validity common to this design include selection, maturation, testing, and instrumentation which were addressed through the use of control variables. Furthermore, most GeroRich programs participating in the study did not administer a pre-test measure such as the Facts on Aging Quiz during the first year of funding which prevented a comparison of the true effect of the GeroRich project.

Data was collected beginning in April of 2004 and concluded at the beginning of June, 2004. Social work faculty from participating programs in both groups administered the measures during one course period of a junior or senior-level social work course. The process to complete the measures took between 20 and 30 minutes to complete. All students were automatically assigned a numerical code. All data was collected anonymously.

The qualitative part of the study included phone interviews with teaching faculty during February and March of 2005 to look more in-depth at how social work faculty implement constructivist principles and methods. The purpose of this methodology was to obtain the lived experiences and perceptions of faculty to provide another dimension to the results of the quantitative data. The selection of phone interviews as the data collection method was based on “the assumption that the participants’ perspectives are meaningful, knowable, and able to be made explicit, and that their perspectives [may] affect the success of the project” (http://www.ehr.nsf.gov/EHR/REC/pubs/NSF97-
The interviews were conducted using an interview guide developed by the researcher consisting of six demographic items and six interview questions about the nature of teaching, student learning, and assessment; see p. ___ in Appendix. The six questions in the interview guide were developed from a literature review.

**Sampling**

The sampling frame for the GeroRich Projects was taken from the 60 BSW-only programs who received funding for all three years. The estimated number of students enrolled in these 60 programs was 400. Each of the project coordinators for these programs was individually contacted by the researcher in December, 2003 to invite them to participate; with a goal of 15-20 GeroRich programs agreeing to participate. The comparison group consisted of BSW-only non-GeroRich programs taken from a sampling frame of BSW-only CSWE accredited programs. The program directors from the comparison programs were recruited by the researcher posting an announcement on the Baccalaureate Program Director (BPD) listserv in March, 2004; this listserv is for BSW program directors and faculty members. Each program who volunteered to participate agreed to administer a set of the questionnaires in a junior or senior level social work course prior to the end of the current semester. The study sample was limited to students who were either a junior or senior in academic standing and had taken at least one social work practice course and one Human Behavior and the Social Environment course. Two $50 Barnes & Noble gift certificates and two 1-year subscriptions to the magazine, *The New Social Worker*, were offered via a lottery to students who participated.

**Data Analysis Plan**
After data collection was completed, the data was coded and entered in the SPSS for analysis. Frequencies and descriptives were run to examine the data for normal distribution and to look for missing data. All data was reported in aggregate form. To test for differences between the groups, t-tests were run on the dependent variables (knowledge about aging, practicum experience, perceptions of older adults, intent to seek employment in an aging setting, perceived treatment potential and perceived level of competence in working with older adults). T-tests were also run on the independent variables (GeroRich-funded BSW-only program, non-GeroRich BSW-only program, educational interventions, “aging-rich” field practicums, and intent to seeking employment in an aging setting) and on the control variables (type of institution, size of institution, age, gender, ethnicity, academic standing, having taken an aging course, the nature of the grandparent relationship, prior volunteer experience, and social desirability).

To answer part a of the first question a hierarchical regression model was used to predict scores on the Facts on Aging measure from GeroRich participation and an aging-rich practicum. For the first step, GeroRich participation and aging-rich practicum were entered. In the second step, the first set of control variables (size of institution, type of institution) were entered. In the third step, the second set of control variables (age, gender, ethnicity, academic year, taken an aging course, nature of the grandparent relationship, prior volunteer experience, and social desirability) were entered.

To answer part b of the first question a logistic regression model was used to predict opportunities to interact with older adults in the practicum setting from GeroRich participation and FAQ scores. For the first step, GeroRich participation and FAQ scores were entered. In the second step, the first set of control variables (size of institution, type
of institution) were entered. In the third step, the second set of control variables (age, gender, ethnicity, academic year, taken an aging course, nature of the grandparent relationship, prior volunteer experience, and social desirability) were entered.

To answer the second question a logistic regression model was used to predict perceptions of older adults from GeroRich participation and a combination of experiential and non-experiential educational interventions. For the first step, GeroRich participation and the five top-ranked educational interventions were entered. In the second step, the first set of control variables (size of institution, type of institution) were entered. In the third step, the second set of control variables (age, gender, ethnicity, academic year, taken an aging course, nature of the grandparent relationship, prior volunteer experience, and social desirability) were entered.

To answer the third question, a confirmatory factor analysis was used to test the robustness of the four factors within the Geriatric Social Work Attitude Survey as a measure of students’ intent to seek employment in aging settings. As a preliminary step to prepare the data for analysis, a bivariate correlation matrix was run to determine the strength and direction of relationships between items and to test the appropriateness of using a factor analysis with this dataset. The reliability of the survey was examined by analyzing the psychometric properties of the measure. The confirmatory factor analysis resulted in a new combined subscale named Career Choice. A logistic regression model was used to predict intent to seek employment in an aging setting (career choice) from GeroRich participation and a combination of experiential and non-experiential educational interventions. For the first step, GeroRich participation and the five top-ranked educational interventions were entered. In the second step, the first set of control
variables (size of institution, type of institution) were entered. In the third step, the
second set of control variables (age, gender, ethnicity, academic year, taken an aging
course, nature of the grandparent relationship, prior volunteer experience, and social
desirability) were entered.

To answer the first part of question four, a hierarchical regression model was used
to predict perceived treatment potential from GeroRich participation, aging knowledge,
perceptions of older adults, intent to seek employment in an aging setting. For the first
step, GeroRich participation, aging knowledge, perceptions of older adults, and career
choice were entered. In the second step, the first set of control variables (size of
institution, and type of institution) were entered. In the third step, the second set of
control variables (age, gender, ethnicity, academic year, taken an aging course, nature of
the grandparent relationship, prior volunteer experience, and social desirability) were
entered.

To answer the second part of question four, a hierarchical regression model was
used to predict perceived level of competence in working with older adults from
GeroRich participation, aging knowledge, perceptions of older adults, and intent to seek
employment in an aging setting. For the first step, GeroRich participation, aging
knowledge, perceptions of older adults, and intent to seek employment in an aging setting
were entered. In the second step, the first set of control variables (size of institution, type
of institution) were entered. In the third step, the second set of control variables (age,
gender, ethnicity, academic year, taken an aging course, nature of the grandparent
relationship, prior volunteer experience, and social desirability) were entered.
Protection of Human Subjects

This study obtained approval from the Case Institutional Review Board and then obtained the necessary approval from each participating program as required by each individual institution (see informed consent form in Appendix, p. 234-236). All the IRB approval was obtained prior to any data collection.

All study participants signed a consent form prior to completing their responses to the measures for the study. This consent form outlined the benefits and risks to the participants, and addressed confidentiality. The benefits to the participants are they will have the opportunity to contribute to the knowledge base of social work education; the risks are minimal in that participants are not asked to reveal personal information, only information related to their learning experiences. Confidentiality was protected by assigning each participant a numerical code; no identifying information such as name, address, or contact information will be obtained. The data was stored electronically by the researcher; the data file was password protected.

The survey packet was priority-mailed to an identified contact faculty member in each GeroRich and comparison program. The contact faculty members agreed to distribute the survey packets in the appropriate junior and/or senior level social work courses. The time to complete the survey packet took no longer than 30 minutes. Each program had no longer than three weeks to distribute and return the survey packets. Each program mailed all of the completed surveys back to the researcher in a prepaid FedEx envelope. Each participant’s assigned number was entered into a lottery drawing for the gift certificates and magazine subscriptions.
CHAPTER 5
Results

Previous chapters have documented the psychosocial needs of the aging population, the lack of aging-savvy social workers, and reviewed the GeroRich Project as a potential change agent in the process to increase the interest of social work students in geriatric social work practice. Additionally, a review of the literature found support for the use of a constructivist framework and experiential educational interventions to affect cognitive and behavioral changes. This results chapter is organized in the following ways: a.) a description of the characteristics of the sample, b.) results for the dependent variables, c.) results for independent variables, d.) results for control variables, e.) testing of the four research hypotheses, and f.) a description of the findings from qualitative interviews with faculty members.

Characteristics of the Sample

The overall sample consisted of two hundred and forty-three junior and senior undergraduate social work students from seventeen accredited social work programs in the contiguous United States representing the states of Alabama, California, Illinois, Iowa, Kentucky, Maryland, Minnesota, Montana, New York, South Carolina, and Wisconsin. There were twenty-two accredited BSW programs in the sampling frame; seventeen schools returned usable questionnaires resulting in a program response rate of seventy-two percent (72%). The two subgroups in the sample consisted of seven programs who participated in the GeroRich Project (N = 90 students) and ten programs who did not participate in the project (N = 153 students). The percentage of the GeroRich subgroup in this study is greater than the percentage of CSWE-accredited
undergraduate and graduate social work programs (N = 67) who were selected to participate in the GeroRich project (67 programs out of 611 eligible programs results in an 11% participation rate as compared to the 41 percent participation rate for this study). This difference is due to the fact the GeroRich BSW programs were intentionally identified and actively recruited to participate in this dissertation study.

The overall student sample (N = 243) were primarily seniors in academic standing (57%), female (86%), reported a mean grade point average between 2.75 and 3.00 (SD = 1.28), and ranged in age from 19 years to 58 years with a mean age of 25 (SD = 8.61). The ethnic groups represented in the overall student sample were Caucasian (66.5%), African-American (18.2%), Latino (3.3%), Mexican-American/Chicano (2.5%), Asian (2.1%), and Puerto Rican (1.2%), American Indian (.8%), Other Hispanic (.4%), and Other (5%).

To determine whether there were differences between groups t-tests were computed for the sample characteristics variables. One significant difference was found between the groups on the academic standing variable (t = 6.100, p < .001). The GeroRich group had a statistically significantly higher likelihood of being seniors (Mdn = 2.00) than the non-GeroRich group (Mdn = 1.00) with 79% of the GeroRich group being seniors and 44% of the non-GeroRich group being seniors.

**Dependent Variables**

The dependent variables in the study are: a.) knowledge about aging, b.) intent to seek opportunities to interact with older adults in a practicum setting, c.) perceptions of older adults, d.) intent to seek employment in an aging setting, e.) perceived treatment

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5 Knowledge About Aging, Perceptions of Older Adults, and Intent to Seek Employment in an Aging Setting are also used as independent variables for H4a and H4b.
potential of older adults, and f). perceived level of competence in working with older adults.

**Knowledge about Aging (Facts on Aging Quiz (FAQ))**

The Facts on Aging Quiz (FAQ) measure was used to operationalize knowledge about aging. The updated version of the FAQ used in this study contains more items (50 instead of 25) which attempt to capture more dimensions of the physical, social, emotional, cultural, and economic aspects of the aging process. Higher scores indicate a greater degree of aging knowledge with a maximum score of 100 available.

The mean score for the entire sample was 63.84 ($SD = 10.13$) with scores ranging from 35 to 100. To determine whether there were differences between the groups on mean FAQ scores, t-tests were computed. The results found a statistically significant difference in mean scores between the groups ($t = 2.64, p < .01$). The GeroRich group had a statistically significantly higher likelihood of having a lower mean FAQ score ($M = 63.22, SD = 11.97$) than the non-GeroRich group ($M = 64.20, SD = 8.89$). The mean score for the GeroRich group was 63.22 ($SD = 11.97$) with scores ranging from 35 to 100. The mean score for the non-GeroRich group was 64.20 ($SD = 8.89$) with scores ranging from 38 to 85.

**Intent to Seek Opportunities to Interact with Older Adults in a Practicum Setting**

Two dichotomous items in the demographic section of the survey questionnaire were used to operationalize this dependent variable. Over three quarters (77%) of the entire student sample (N=243) reported their practicum experience was not located in an agency where older adults were the primary population served. Of those whose

---

6 Knowledge About Aging is also used as an independent variable for H4a and H4b.
practicum agency didn't primarily serve older adults, 54 percent indicated that the field
practicum setting they were in did provide opportunities and experiences for them to
interact with older adults.

To determine whether there were differences between the groups on these two
variables, t-tests were computed; there were no significant differences between the
groups.

*Perceptions of Older Adults (Aging Semantic Differential (ASD))*\(^7\)

To measure perceptions of older adults, the Aging Semantic Differential measure
was used. The Aging Semantic Differential (ASD) was developed by Rosencranz &
McNevin in 1969 as a measure to test the attitudes of the respondent towards an indicated
social object. In this study, the social object was the client described in the questionnaire
case study. The measure consists of 21 bipolar adjective scales with seven response
levels; summed scores can range from 0 to 100. Lower scores indicate a more positive
attitude toward the object (older person). To determine whether the type of case study
(older adult or younger adult) influenced the results, t-tests were computed. The findings
revealed no statistically significant differences among the scores meaning the type of case
study had no influence.

A reliability analysis of the measure for this study resulted in an alpha of .84 for
the entire sample, a .91 alpha for the GeroRich group, and a .74 alpha for the Non-
GeroRich group. For the group which received the older adult case study the alpha was
.79 as compared to an alpha of .88 for the group who received the younger adult case
study.

\(^7\) Perceptions of Older Adults is also used as an independent variable for H4a and H4b.
The mean ASD score for the entire sample was 63.55 ($SD = 11.37$) with scores ranging from 37 to 100. T-tests revealed no significant differences on mean ASD scores between the groups.

*Intent to Seek Employment in an Aging Setting (Social Work Career Choice Measure)*

In order to measure intent to seek employment in an aging setting, the Social Work Career Choice measure was used. The original measure (Alford, 2001) had four subscales; the intent was only to use the beliefs about career opportunities subscale (factor three) for the purposes of this study. A reliability analysis of this subscale resulted in a low alpha (.34). A factor analysis revealed that all the items from factor two (items 9, 10, 11) along with two of the items from factor three (items 5, 13) loaded consistently onto one factor and explained 43.47 percent of the variance (Table 5). These items were reviewed for face validity which was found to be acceptable.

To create the variable of career choice, two items from the beliefs about career opportunities subscale (items 5, 13) were combined with the experience and comfort with older people subscale (items 9, 10, 11) resulted in a new subscale (career choice) with item 13 reverse-coded and item 19 omitted as the factor loading for this item was less than .40. All the remaining items (5, 13, 9, 10, 11) were then summed to determine a total score for the subscale with higher scores indicating a higher intent to seek employment in an aging setting. Scores on this new subscale (career choice) ranged from six to twenty-three. A reliability analysis of this new subscale resulted in an alpha of .75 for the entire sample; an alpha of .82 for the GeroRich group; and an alpha of .70 for the non-GeroRich group.

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8 Intent to Seek Employment in an Aging Setting is also used as an independent variable for H4a and H4b.
The mean score for the entire sample was 15.98 ($SD = 2.76$) with a range of scores from six to twenty-three. T-tests found no significant differences on mean career choice scores between the groups.

Table 5

*Factor Loadings for the Career Choice Subscale (Varimax Rotation)*

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1 loading</th>
<th>Factor 2 loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. I am comfortable around older adults.</td>
<td>.72</td>
<td>-.04</td>
</tr>
<tr>
<td>10. I have had experience with older adults.</td>
<td>.78</td>
<td>-.13</td>
</tr>
<tr>
<td>11. My previous experience with older adults was positive.</td>
<td>.86</td>
<td>-.05</td>
</tr>
<tr>
<td>5. Social work practice with older adults will be very</td>
<td>.61</td>
<td>.22</td>
</tr>
<tr>
<td>rewarding.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. As a social worker, I would not be interested in</td>
<td>.60</td>
<td>.19</td>
</tr>
<tr>
<td>working with older adults.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. The career opportunities for a social worker in geriatrics are limited.</td>
<td>.008</td>
<td>.96</td>
</tr>
<tr>
<td>Eigenvalues</td>
<td>2.60</td>
<td>1.03</td>
</tr>
<tr>
<td>% of variance</td>
<td>43.47</td>
<td>17.28</td>
</tr>
</tbody>
</table>

Additional information was collected concerning Career Choice though data from this additional information was not used as a variable in the testing of any of the study hypotheses.
Respondents were asked to rank the top five areas of career choice from a list of 17 areas as illustrated in Table 6. To determine if there were differences between the groups, t-tests were computed for the top-ranked five variables. The results found one statistically significant difference between the mean ranking of the medical social work area of practice between the GeroRich group and the non-GeroRich group ($t = -2.750$, $p = .007$). The GeroRich group had a statistically significant likelihood of ranking medical social work as a more desirable area of social work practice ($M = 2.03$) than the non-GeroRich group ($M = 2.73$).

Table 6

*Ranking of Top Five Choices of Areas of Social Work Practice*

<table>
<thead>
<tr>
<th>Area of Practice</th>
<th>GeroRich Group</th>
<th>Non-GeroRich Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rank</td>
<td>Percentage</td>
</tr>
<tr>
<td>Child Welfare</td>
<td>1</td>
<td>48.7%</td>
</tr>
<tr>
<td>Medical Social Work</td>
<td>2</td>
<td>41.7%</td>
</tr>
<tr>
<td>International Social Work</td>
<td>3</td>
<td>38.5%</td>
</tr>
<tr>
<td>HIV and AIDS</td>
<td>4</td>
<td>30%</td>
</tr>
<tr>
<td>Administration</td>
<td>5</td>
<td>25%</td>
</tr>
</tbody>
</table>
Respondents were asked to rank their preference of populations served from one to five with one indicating top preference; these rankings are illustrated in Table 7. To determine whether there were differences between the groups, t-tests were computed for the top-ranked five variables. The results revealed one statistically significant difference between the mean ranking of older adults as the choice of populations served between the GeroRich group and the non-GeroRich group ($t = -1.147, p = .033$). The GeroRich group had a statistically significant likelihood of ranking older adults as a more desirable choice of populations served ($M = 3.10$) than the non-GeroRich group ($M = 3.62$).

Table 7

*Ranking of Top Five Choices of Populations Served*

<table>
<thead>
<tr>
<th>Population</th>
<th>GeroRich Group</th>
<th>Non-GeroRich Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rank</td>
<td>Percentage</td>
</tr>
<tr>
<td>Children</td>
<td>1</td>
<td>37%</td>
</tr>
<tr>
<td>Older Adults</td>
<td>2</td>
<td><strong>31.8%</strong></td>
</tr>
<tr>
<td>Adolescents</td>
<td>3</td>
<td>18%</td>
</tr>
<tr>
<td>Adults (18-64)</td>
<td>4</td>
<td>15.8%</td>
</tr>
<tr>
<td>Gays and Lesbians</td>
<td>5</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

*Perceived Treatment Potential*

This measure assessed the expectations of each individual respondent regarding the perceived treatment potential of an older client. The study participants were asked to respond to four questions related to the client’s potential treatment potential and presenting treatment issues on a semantic differential between 1 and 7. Higher means
indicate more negative treatment potential and presenting treatment issues. To determine whether the type of case study (older adult or younger adult) influenced the results, t-tests were computed for the variables of ability to form a therapeutic relationship, candidate for counseling, organic mental disorder, and probability of suicide attempt. The findings revealed no statistically significant differences among the variables.

Study respondents were then asked to rank order four different types of therapeutic interventions. To determine whether the type of case study (older adult or younger adult) influenced the results, t-tests were computed for the variables of short-term individual counseling, short-term family counseling, support group, and pharmacological intervention. The findings revealed no statistically significant differences among the variables; thus the type of case study did not influence the variables related to the therapeutic intervention.

For both scenarios, individual counseling ranked as the first choice of therapeutic intervention. For the older adult scenario, a support group was ranked as the second most appropriate choice for treatment. For the younger adult scenario, pharmacological intervention was ranked second. To create a score, a summed variable for perceived treatment potential was created through a factor analysis. A model of three factors was supported by a factor analysis of the entire sample. A varimax rotation resulted in a two factor solution with eigenvalues of 1 or higher explaining 43.86 percent of the variance. Three items (1, 2, 24) consistently loaded on the same factor during each rotation resulting in a subscale identified as perceived treatment potential; this factor explained 28.05 percent of the variance. A reliability analysis of this summed subscale resulted in
an alpha of .52. Scores on the perceived treatment potential measure ranged from one to twenty-one with higher scores indicating more positive perceived treatment potential.

The mean score for perceived treatment potential for the entire sample was 8.06 (SD = 2.86) with scores ranging from three to seventeen. T-tests revealed there were no significant differences on mean perceived treatment potential scores between the groups.

Perceived Level of Competence

In order to measure the respondents’ perceived level of competence in working with older adults, four items related to the case scenario were used. These four items assessed the individual respondents’ perception of their ability to work with the client in the case scenario on a semantic differential between 1 and 7 with higher means indicating a more positive perceived ability to work with the client. To determine whether the type of case study (older adult or younger adult) influenced the results, t-tests were computed for the variables of short-term individual counseling, short-term family counseling, support group, and pharmacological intervention. The findings revealed no statistically significant differences among the variables; thus the type of case study did not influence the perceived level of competence.

To create a score, a summed variable for perceived level of competence was created through a factor analysis. A model of three factors was supported by a factor analysis of the entire sample. A varimax rotation resulted in a two factor solution with eigenvalues of 1 or higher explaining 43.86 percent of the variance. Two items (22, 23) consistently loaded on the same factor during each rotation resulting in a subscale identified as perceived level of competence; this factor explained 15.36 percent of the variance. A reliability analysis of this summed subscale resulted in an alpha of .66.
Scores on the perceived level of competence measure ranged from one to fourteen with higher scores indicating more positive perceived level of competence.

The mean score for perceived level of competence for the entire sample was 6.00 ($SD = 2.16$) with scores ranging from two to twelve. To determine whether there were differences between the groups on mean scores, t-tests were computed. There were no significant differences on mean perceived level of competence scores between the groups.
Table 8

Scores for Dependent Variable Measures

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>Range</td>
</tr>
<tr>
<td>Knowledge about aging (FAQ)*</td>
<td>63.84</td>
<td>10.13</td>
<td>35 - 100</td>
</tr>
<tr>
<td>Perceptions of Older Adults (ASD)</td>
<td>63.55</td>
<td>11.37</td>
<td>37 – 100</td>
</tr>
<tr>
<td>Intent to seek employment in aging setting (Career Choice)</td>
<td>15.98</td>
<td>2.76</td>
<td>6 - 23</td>
</tr>
<tr>
<td>Perceived treatment potential</td>
<td>8.06</td>
<td>2.86</td>
<td>3 – 17</td>
</tr>
<tr>
<td>Perceived level of competence</td>
<td>6.00</td>
<td>2.16</td>
<td>2 – 12</td>
</tr>
<tr>
<td>Intent to Seek Opportunities to Interact with Older Adults in a Practicum Setting</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Yes</td>
<td>53.5%</td>
<td>46.5%</td>
<td></td>
</tr>
</tbody>
</table>

*Indicates significant differences on mean scores between the groups
Independent Variables

The independent variables in this study are: a.) program status (GeroRich vs. Non-GeroRich) b.) educational interventions, c.) “aging-rich” field practicums, d.) knowledge about aging⁹, e.) perceptions of older adults¹⁰, and f.) intent to seek employment in an aging setting¹¹.

Program Status (GeroRich vs. Non-GeroRich)

As noted earlier, the overall sample consisted of two hundred and forty-three junior and senior undergraduate social work students from fourteen accredited social work programs in the contiguous United States. The two subgroups in the sample consisted of programs who participated in the GeroRich Project (N = 7) and programs who did not participate in the project (N = 10). There were ninety GeroRich students and one hundred and fifty-three non-GeroRich students in the student sample.

The percentage of the GeroRich subgroup in this study is greater than the percentage of CSWE-accredited undergraduate and graduate social work programs total of 67 BSW and MSW programs selected to participate in the GeroRich project (67 programs out of 611 eligible programs results in an 11% participation rate). This difference is due to the fact the GeroRich BSW programs were intentionally identified and actively recruited to participate in this dissertation study.

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⁹ This variable is also a dependent variable in this study and descriptive findings for this variable are included in the dependent variables section of this chapter.

¹⁰ This variable is also a dependent variable in this study and descriptive findings for this variable are included in the dependent variables section of this chapter.

¹¹ This variable is also a dependent variable in this study and descriptive findings for this variable are included in the dependent variables section of this chapter.
Approximately 60 percent of the 67 BSW and MSW programs that participated in the GeroRich project reported changes in student exposure to aging content in the curriculum that ranged from a 2 percent change to a 100 percent change. Furthermore, a reported 66 percent of the total faculty participating in the project (N = 1000) implemented structural changes to syllabi in various core social work courses in order to integrate aging knowledge. The project reported an overall change in geriatric content of 52 percent in all the participating programs indicating there was a positive increase in aging content in all the programs.

The non-GeroRich BSW-only programs delivered the social work curriculum without intentionally infusing content on aging

**Educational Interventions**

For the variable of educational interventions eight non-experiential and eight experiential types of educational interventions were listed in the questionnaire and respondents were asked to select five from each type and then rank from one to five with one indicating most useful to the respondent's overall learning experience and five indicating less useful to the respondent's overall learning experience. The overall ranking of the top five educational interventions (both non-experiential and experiential) is illustrated in Table 9.

To determine whether there were differences between the groups on the non-experiential variables, t-tests were computed. The results found only one statistically significant difference on the variable of small group discussions ($t = 2.029, p = .044$). The GeroRich group had a statistically significant likelihood of ranking small
group discussions as a less-preferred type of non-experiential educational intervention ($M = 2.62$) than the non-GeroRich group ($M = 2.26$).

To determine whether there were differences between the groups on the experiential educational intervention variables, t-tests were computed. There were no significant differences between the GeroRich and non-GeroRich groups on the experiential educational intervention variables.

Ranking of non-experiential educational interventions is illustrated in Table 10 and ranking of experiential educational interventions is illustrated in Table 11. Starred items indicate that a similar intervention was also reported from the qualitative interviews with social work teaching faculty.

Table 9

*Overall Ranking of Top Five Educational Interventions by Entire Sample*

<table>
<thead>
<tr>
<th>Education Intervention</th>
<th>Overall Rank</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Volunteer or service learning experiences</strong></td>
<td>1</td>
<td>1.96</td>
<td>1.27</td>
</tr>
<tr>
<td>Classroom lectures by course instructor</td>
<td>2</td>
<td>2.30</td>
<td>1.36</td>
</tr>
<tr>
<td><strong>Small group discussions</strong></td>
<td>3</td>
<td>2.38</td>
<td>1.27</td>
</tr>
<tr>
<td><strong>Classroom lectures by a guest speaker</strong></td>
<td>4</td>
<td>2.70</td>
<td>1.34</td>
</tr>
<tr>
<td><strong>In-class structured activities</strong></td>
<td>5</td>
<td>2.99</td>
<td>1.37</td>
</tr>
</tbody>
</table>
Table 10
Ranking of Top Five Non-Experiential Educational Interventions

<table>
<thead>
<tr>
<th></th>
<th>Classroom lectures by course instructor</th>
<th><strong>Small group discussions</strong></th>
<th><strong>Classroom lectures by guest speaker</strong></th>
<th>Term or research papers</th>
<th>Classroom presentations by other students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Sample (N = 243)</td>
<td>2.30 1.36</td>
<td>2.38 1.27</td>
<td>2.70 1.34</td>
<td>3.54 1.21</td>
<td>3.50 1.08</td>
</tr>
<tr>
<td>GeroRich (N = 90)</td>
<td>2.16 1.31</td>
<td>2.62 1.37</td>
<td>2.56 1.25</td>
<td>3.53 1.25</td>
<td>3.74 1.02</td>
</tr>
<tr>
<td>Non-GeroRich (N = 153)</td>
<td>2.36 1.41</td>
<td>2.26 1.21</td>
<td>2.81 1.38</td>
<td>3.31 1.10</td>
<td>3.63 1.31</td>
</tr>
</tbody>
</table>

**Indicates a similar intervention was also reported from the qualitative interviews with social work teaching faculty.
Table 11

Ranking of Top Five Experiential Educational Interventions

<table>
<thead>
<tr>
<th></th>
<th><strong>Volunteer experiences</strong></th>
<th><strong>In-class structured activities</strong></th>
<th>Interview projects</th>
<th><strong>Case studies</strong></th>
<th>Field trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Sample</td>
<td>1.97 1.29</td>
<td>2.94 1.36</td>
<td>3.10 1.32</td>
<td>3.15 1.36</td>
<td>3.21 1.27</td>
</tr>
<tr>
<td>GeroRich (N = 90)</td>
<td>1.91 1.23</td>
<td>2.84 1.48</td>
<td>3.03 1.33</td>
<td>3.10 1.22</td>
<td>3.10 1.37</td>
</tr>
<tr>
<td>Non-GeroRich (N = 153)</td>
<td>2.01 1.32</td>
<td>2.98 1.31</td>
<td>3.14 1.32</td>
<td>3.18 1.45</td>
<td>3.28 1.21</td>
</tr>
</tbody>
</table>

**Indicates a similar intervention was also reported from the qualitative interviews with social work teaching faculty.**
“Aging-Rich” Field Practicums

The majority (77%) of the entire sample (N = 243) reported their practicum experience was not located in an agency where older adults were the primary population served. Of those whose practicum agency didn’t primarily serve older adults, 54% indicated that the field practicum setting they were in did provide opportunities and experiences for them to interact with older adults. To test for differences between the GeroRich and non-GeroRich groups t-tests were run; no significant differences were found.

Control Variables

As noted earlier, the overall sample consisted of two hundred and forty-three junior and senior undergraduate social work students from seventeen accredited social work programs in the contiguous United States. The two subgroups in the sample consisted of programs who participated in the GeroRich Project (N = 7) and programs who did not participate in the project (N = 10).

The control variables in this study are: a.) size of institution, b.) type of institution, c.) age, d.) gender, e.) ethnicity, f.) academic standing, g.) taken an aging course, h.) nature of grandparent relationship, i.) prior volunteer experiences, and j.) social desirability.

Size of Institution

One third (35.4 percent) of the overall sample reported attending an institution with 5,000 – 8,000 students; 19.3 percent reported attending an institution with 1,500 – 1,800 students while 19 percent reported attending institutions with 2,000 to 5,000 students. Approximately 14.4 percent reported attending an institution with less than 1,
500 students and 11.9 percent reported attending an institution with more than 10,000 students. To test for differences between the groups t-tests were run; the results found a statistically significant difference ($t = 4.01, p < .01$). The GeroRich group had a statistically significant higher probability of attending an institution with a student enrollment between 5,000 – 8,000 students ($Mdn = 6.00$) than the non-GeroRich group ($Mdn = 5.00$).

*Type of Institution*

Approximately 40.7 percent of students reported attending a private faith-based institution while 36.6 percent reported attending a state institution. Eighteen percent reported attending a private (non faith-based) institution. T-tests were run to determine whether there were differences between the groups. The results found a statistically significant difference between the groups ($t = 4.62, p < .01$). The GeroRich group had a statistically significantly higher likelihood of attending a faith-based institution ($Mdn = 2.50$) than the non-GeroRich group ($Mdn = 2.00$).

*Age*

The overall sample ranged in age from 19 years to 58 years with a mean age of 25 ($SD = 8.61$). To determine whether there were differences between the groups t-tests were run; the results found a statistically significant difference ($t = 1.198, p = .048$). The GeroRich group had a statistically significantly likelihood of being slightly older ($M = 27.27$) than the non-GeroRich group ($M = 25.03$).

*Gender*

The overall sample was primarily female (86%). T-tests revealed no significant differences on gender between the groups.
**Ethnicity**

The ethnic groups represented in the overall sample were Caucasian (66.5%), African-American or Black (18.2%), Latino (3.3%), Mexican-American/Chicano (2.5%), Asian (2.1%), and Puerto Rican (1.2%), American Indian (.8%), Other Hispanic (.4%), and Other (5%). T-tests revealed no significant differences on ethnicity between the GeroRich and non-GeroRich groups.

**Academic Standing**

The overall sample were primarily seniors in academic standing (57%). To determine whether there were differences between the groups t-tests were run; the results found a statistically significant difference \( t = 6.100, p < .01 \). The GeroRich group had a statistically significantly higher likelihood of being seniors \( (Mdn = 2.00) \) than the non-GeroRich group \( (Mdn = 1.00) \).

**Taken an Aging Course**

The overall sample was evenly divided between students who had taken an aging course (49%) and those who had not (51%). The students who took an aging course reported the majority of the aging courses were offered in the social work department (65.4%), followed by the psychology department (23.4%), or another department such as religion or sociology (11.2%). For those students who reported not taking an aging course, they were asked to indicate if an aging course was available on campus and the majority (80%) indicated at least one aging course was available on their campus. To determine whether there were differences between the groups t-tests were run; the results found a statistically significant difference \( t = 3.716, p < .01 \). The GeroRich group had a
statistically significantly higher likelihood of having taken an aging course \((Mdn = 2.00)\) than the non-GeroRich group \((Mdn = 1.00)\).

**Nature of the Grandparent Relationship**

The nature of the respondent’s grandparent relationship was assessed through a series of nine questions regarding the respondent’s relationship with a grandparent or other older adult. The first item asked the respondent to identify the older adult with whom they have a close relationship. The second item in this section asked the respondent to rate the frequency they interact with this older adult. The remaining seven items asked the respondents to rate various areas of their relationship with this older adult on a 7-point semantic differential scale. T-tests were computed for the seven variables related to the areas of relationship with an older adult. The findings revealed no statistically significant differences between the GeroRich and non-GeroRich groups.

These seven items were then summed to create a new variable, grandparent score, to indicate the nature of the grandparent relationship with higher scores indicating a more positive relationship with a total score of 49 available. The mean score for this variable for the overall sample was 37.73 \((SD = 8.9)\) with scores ranging from zero to forty-nine. To test for differences between the groups on the grandparent score variable t-tests were run; there were no statistically significant differences between the GeroRich and non-GeroRich groups.

One half of the sample identified a maternal grandparent as the older adult with whom the respondent had the closest type of relationship (51.5%) followed by a paternal grandparent as the second type of close relationship (24.1%). Approximately 23.2 percent of the overall sample identified an aunt, uncle, or other individual as the older
adult with whom he or she had the closest type of relationship while 1.2 percent identified no older adult. For the variable measuring the frequency of contact with an identified older adult, the entire sample reported a mean of 4.55 ($SD = 2.07$) for a monthly frequency of contact. To test for differences between the groups on the frequency of contact variable t-tests were run; there were no statistically significant differences between the groups.

Prior Volunteer Experience

The majority of the overall sample (75.6%) reported prior volunteer experience as part of a social work course; 23.9 percent reported no prior volunteer experience. Of the students who had prior volunteer experience, 49.5 percent reported the volunteer experience was associated with a Human Behavior and the Social Environment course; 24.7 percent reported volunteer experience associated with a social work practice course, and 14.4 percent reported volunteer experience associated with a social work policy course. The remainder of respondents (11.4%) reported a volunteer experience associated with three or more social work courses rather than one specific course. T-tests revealed no significant differences on prior volunteer experience between the GeroRich and non-GeroRich groups.

Social Desirability

The overall sample had a mean score of 13.93 ($SD = 2.04$) on the social desirability variable; scores ranged from 10 to 24. Scores above the mean indicate a tendency towards positive self-presentation (Andrews & Meyer, 2003); that is higher scores represent more of a tendency toward providing socially desirable responses. T-
tests revealed no significant differences on the social desirability variable between the GeroRich and non-GeroRich groups.

Results of Hypothesis Testing

Hypothesis 1A

Research Question #1a: Do BSW students in a GeroRich funded BSW-only social work program who have had “aging-rich” practicums demonstrate a higher degree of aging knowledge as compared with BSW students in a non-GeroRich social work program?

H1a: GeroRich participation combined with an aging-rich practicum predicts more aging knowledge as compared to non-GeroRich students, after controlling for the size of institution, type of institution, age, gender, ethnicity, academic standing, taken an aging course, the nature of the grandparent relationship, prior volunteer experience, and social desirability.

To test this hypothesis a hierarchical regression model was used to predict scores on the Facts on Aging measure. For the first step, GeroRich participation and an aging-rich practicum were entered. In the second step, the first set of control variables (size of institution, type of institution) were entered. In the third step, the second set of control variables were entered (gender, ethnicity, academic year, taken an aging course, nature of the grandparent relationship, prior volunteer experience, and social desirability).

The results of these regressions are presented in Table 12. In the first step GeroRich participation and an aging-rich practicum did contribute significantly to aging knowledge, \( F(2, 225) = 4.720, p < .010 \); adjusted R square = .032. Aging knowledge was negatively influenced by GeroRich Participation. The model went from significant to
non-significant with the addition $F(2, 223) = .312, p < .732$). Adjusted R square = .026 and R square change = .06. The second set of control variables did not improve prediction, $F(8, 215) = 1.203, p < .298$. Adjusted R square = .033 and R square change = .03. The final model was not significant.

After controlling for size of institution, type of institution, gender, ethnicity, academic year, taken an aging course, nature of the grandparent relationship, prior volunteer experience, and social desirability, the effect of GeroRich participation ($t = -2.10, p < .037$) was found to be significant in predicting aging knowledge however this was a negative relationship with GeroRich participation resulting in lower aging knowledge scores. An aging-rich practicum ($t = -1.68, p < .093$) were not found to be significant. Thus, significance was in the opposite direction (negative) and the hypothesis was not supported.
Table 12 Hierarchical Regression Predicting Aging Knowledge from GeroRich Participation and an Aging-Rich Practicum

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
<th>Model 3</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>β</td>
<td>t</td>
<td>p</td>
<td>B</td>
<td>β</td>
<td>t</td>
<td>p</td>
<td></td>
</tr>
<tr>
<td>GeroRich Participation</td>
<td>-1.33</td>
<td>-.15</td>
<td>-2.36</td>
<td>.01</td>
<td>-1.57</td>
<td>-.18</td>
<td>-2.16</td>
<td>.03</td>
<td>-1.62</td>
</tr>
<tr>
<td>Aging-rich practicum</td>
<td>-1.46</td>
<td>-.11</td>
<td>-1.71</td>
<td>.08</td>
<td>-1.43</td>
<td>-.11</td>
<td>-1.66</td>
<td>.09</td>
<td>-1.47</td>
</tr>
<tr>
<td>Size of institution</td>
<td>-.13</td>
<td>-.07</td>
<td>-.69</td>
<td>.48</td>
<td>-9.67</td>
<td>-.05</td>
<td>-51</td>
<td>.60</td>
<td></td>
</tr>
<tr>
<td>Type of institution</td>
<td>-8.19</td>
<td>-.02</td>
<td>-.27</td>
<td>.78</td>
<td>-1.61</td>
<td>-.00</td>
<td>-.05</td>
<td>.95</td>
<td></td>
</tr>
<tr>
<td>Academic standing</td>
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<td>-.07</td>
<td>.93</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td>.13</td>
<td>.07</td>
<td>1.12</td>
<td>.26</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Gender</td>
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<td>-.12</td>
<td>-1.87</td>
<td>.06</td>
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<td></td>
<td></td>
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<tr>
<td>Age</td>
<td>-2.12</td>
<td>-.04</td>
<td>-.60</td>
<td>.54</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taken an aging course</td>
<td>-4.44</td>
<td>.06</td>
<td>-.91</td>
<td>.36</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Prior volunteer experience</td>
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<td>-.01</td>
<td>-.26</td>
<td>.78</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Nature of grandparent</td>
<td>-3.89</td>
<td>-.01</td>
<td>-.28</td>
<td>.77</td>
<td></td>
<td></td>
<td></td>
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<td>relationship</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social desirability</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2 \Delta$</td>
<td>.04</td>
<td>.01</td>
<td>.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>$F$ for change in $R^2$</td>
<td>4.72</td>
<td>.312</td>
<td>1.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**$p < .001$**
**Hypothesis 1B**

Research Question #1b: Do BSW students in a GeroRich funded BSW-only social work program with a greater degree of aging knowledge demonstrate a higher intent to seek opportunities to interact with older adults in a practicum setting as compared with BSW students in a non-GeroRich social work program?

**H1b: Participation in the GeroRich Project and aging knowledge predicts students seeking more opportunities to interact with older adults in a practicum setting as compared to non-GeroRich students after controlling for size of institution, type of institution, age, gender, ethnicity, academic standing, taken an aging course, the nature of the grandparent relationship, prior volunteer experience, and social desirability.**

A logistic regression was used to predict opportunities to interact with older adults in a practicum setting from GeroRich participation and FAQ scores. The variable of practicum opportunities was entered as the dependent variable. GeroRich participation and FAQ scores (coded as a dummy variable) were entered in the first block of covariates. The first set of control variables (size of institution, type of institution) were entered in the second block of covariates. For the third block of covariates, the second set of control variables were entered (gender, ethnicity, academic year, taken an aging course, nature of the grandparent relationship, prior volunteer experience, and social desirability).

A test of the full model versus a model with intercept only was statistically significant $\chi^2 (12, N=98) = 21.09, p <.049$. The model was able to correctly classify 73 percent of those who sought out opportunities to interact with older adults in a practicum setting and 65 percent of those who did not, for an overall success rate of 69 percent.
Table 13 shows the logistic regression coefficient, Wald test, and odds ratio for each of the predictors. Employing a .05 criterion of statistical significance prior volunteer experience, the nature of the grandparent relationship, and social desirability had significant partial effects. The odds ratio for prior volunteer experience indicates that when holding other variables constant, students with at least one prior volunteer experience were 4.1 times more likely to seek out opportunities to interact with older adults in a practicum setting than students with no prior volunteer experience. The odds ratio for nature of the grandparent relationship indicates that when holding other variables constant, students with a positive grandparent relationship were .9 times less likely to seek out opportunities to interact with older adults in a practicum setting. The odds ratio for social desirability indicates that when holding other variables constant, students with high social desirability scores were 1.3 times more likely to seek out opportunities to interact with older adults in a practicum setting than students with lower social desirability scores.

After controlling for size of institution, type of institution, gender, ethnicity, academic year, taken an aging course, nature of the grandparent relationship, prior volunteer experience, and social desirability, the effect of GeroRich participation and aging knowledge (FAQ scores) was found to be significant in predicting students seeking opportunities to interact with older adults in a practicum setting. Therefore, Hypothesis 1b was supported.
Table 13  Logistic Regression Predicting Opportunities to Interact With Older Adults in a Practicum Setting from GeroRich participation and Facts on Aging (FAQ) Scores

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$\beta$</th>
<th>Wald $\chi^2$</th>
<th>$p$</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>GeroRich</td>
<td>-.15</td>
<td>.05</td>
<td>.81</td>
<td>.85</td>
</tr>
<tr>
<td>FAQ score</td>
<td>.02</td>
<td>.21</td>
<td>.64</td>
<td>1.02</td>
</tr>
<tr>
<td>Size of institution</td>
<td>-.06</td>
<td>.16</td>
<td>.68</td>
<td>.93</td>
</tr>
<tr>
<td>Type of institution</td>
<td>-.32</td>
<td>1.23</td>
<td>.26</td>
<td>.72</td>
</tr>
<tr>
<td>Academic standing</td>
<td>-.17</td>
<td>.04</td>
<td>.83</td>
<td>.83</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>.10</td>
<td>.61</td>
<td>.43</td>
<td>1.10</td>
</tr>
<tr>
<td>Gender</td>
<td>.72</td>
<td>1.21</td>
<td>.27</td>
<td>2.06</td>
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<tr>
<td>Age</td>
<td>-.02</td>
<td>.62</td>
<td>.42</td>
<td>.97</td>
</tr>
<tr>
<td>Taken an aging course</td>
<td>.15</td>
<td>.09</td>
<td>.75</td>
<td>1.17</td>
</tr>
<tr>
<td>Prior volunteer experience</td>
<td>1.42</td>
<td>4.22</td>
<td>.04</td>
<td>4.14**</td>
</tr>
<tr>
<td>Nature of grandparent relationship</td>
<td>-.09</td>
<td>7.08</td>
<td>.01</td>
<td>.91**</td>
</tr>
<tr>
<td>Social desirability</td>
<td>.30</td>
<td>3.84</td>
<td>.05</td>
<td>1.35**</td>
</tr>
</tbody>
</table>

**$p < .05$**
Research Question #2: Do BSW students in a GeroRich funded BSW-only social work program that integrated both non-experiential and experiential educational interventions into the curriculum demonstrate more positive perceptions of older adults as compared with BSW students in a non-GeroRich social work program?

H2: Participation in a GeroRich BSW program combined with both experiential and non-experiential educational interventions predicts more positive perceptions of older adults compared to students in non-GeroRich BSW programs after controlling for size of institution, type of institution, age, gender, ethnicity, academic standing, taken an aging course, the nature of the grandparent relationship, prior volunteer experience, and social desirability.

A logistic regression was used to predict scores on the Aging Semantic Differential (ASD) measure from GeroRich participation combined with both experiential and non-experiential educational interventions. The variable for the summed ASD scores ($M = 63.55$) was dummy-coded. (Scores less than 63.55 were coded as 0 = negative perceptions and scores greater than 63.55 were coded as 1 = positive perceptions). The dummy-coded variable was entered as the dependent variable. GeroRich participation and the top five ranked educational interventions (volunteer or service-learning, lectures by course instructor, small group discussions, in-class structured activities, lectures by guest speakers) were entered in the first block of covariates. In the second block of covariates, the first set of control variables (size of institution and type of institution) were entered. In the third block of covariates, the second set of control variables were entered (gender, ethnicity, academic year, taken an
aging course, nature of the grandparent relationship, prior volunteer experience, and social desirability) were entered.

A test of the full model versus a model with intercept only was not statistically significant $\chi^2(16, N=228) = 21.45, p < .162$. The model was able to correctly classify 79.8% of those who had positive perceptions of older adults and 48.1% of those who had negative perceptions of older adults, for an overall success rate of 65.4%.

Table 14 shows the logistic regression coefficient, Wald test, and odds ratio for each of the predictors. Employing a .05 criterion of statistical significance, in-class structured activities and age had significant partial effects. The odds ratio for in-class structured activities indicates that when holding other variables constant, students who participated in in-class structured activities were 3.1 times more likely to have positive perceptions of older adults than students who did not. The odds ratio for age indicates that when holding other variables constant, older students were .96 times less likely to have positive perceptions of older adults than younger students. The age of the student did not make a difference in terms of positive perceptions of older adults.

After controlling for size of institution, type of institution, gender, ethnicity, academic year, taken an aging course, nature of the grandparent relationship, prior volunteer experience, and social desirability, the effect of GeroRich participation combined with both experiential and non-experiential educational interventions was not found to be significant in predicting positive perceptions of older adults. Therefore, Hypothesis 2 was not supported.
Table 14 Logistic Regression Predicting Positive Perceptions of Older Adults from GeroRich Participation and a Combination of Experiential and Non-Experiential Educational Interventions

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$\beta$</th>
<th>Wald $\chi^2$</th>
<th>$p$</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>GeroRich</td>
<td>.32</td>
<td>.62</td>
<td>.42</td>
<td>1.38</td>
</tr>
<tr>
<td>Volunteer experience</td>
<td>.23</td>
<td>.65</td>
<td>.41</td>
<td>1.26</td>
</tr>
<tr>
<td>Instructor lectures</td>
<td>-.02</td>
<td>.00</td>
<td>.94</td>
<td>.97</td>
</tr>
<tr>
<td>Small group discussions</td>
<td>-.07</td>
<td>.03</td>
<td>.85</td>
<td>.93</td>
</tr>
<tr>
<td>In-class structured activities</td>
<td>1.12</td>
<td>4.8</td>
<td>.02</td>
<td>3.07**</td>
</tr>
<tr>
<td>Guest lectures</td>
<td>.27</td>
<td>.41</td>
<td>.51</td>
<td>1.31</td>
</tr>
<tr>
<td>Size of institution</td>
<td>.13</td>
<td>1.82</td>
<td>.17</td>
<td>1.14</td>
</tr>
<tr>
<td>Type of institution</td>
<td>.11</td>
<td>.46</td>
<td>.49</td>
<td>1.11</td>
</tr>
<tr>
<td>Academic standing</td>
<td>-.52</td>
<td>3.25</td>
<td>.07</td>
<td>.59</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>-.07</td>
<td>1.01</td>
<td>.31</td>
<td>.93</td>
</tr>
<tr>
<td>Gender</td>
<td>.28</td>
<td>.38</td>
<td>.53</td>
<td>1.32</td>
</tr>
<tr>
<td>Age</td>
<td>-.03</td>
<td>3.70</td>
<td>.05</td>
<td>.96**</td>
</tr>
<tr>
<td>Taken an aging course</td>
<td>.43</td>
<td>2.81</td>
<td>.09</td>
<td>1.55</td>
</tr>
<tr>
<td>Prior volunteer experience</td>
<td>-.32</td>
<td>1.06</td>
<td>.30</td>
<td>.72</td>
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<tr>
<td>Nature of grandparent relationship</td>
<td>-.01</td>
<td>.74</td>
<td>.38</td>
<td>.98</td>
</tr>
<tr>
<td>Social desirability</td>
<td>.02</td>
<td>.08</td>
<td>.77</td>
<td>1.02</td>
</tr>
</tbody>
</table>

**$p < .05$**

**$**p < .05**
Hypothesis 3

Research Question #3: Are BSW students in a GeroRich funded BSW-only social work program that integrated both experiential and didactic educational interventions into the curriculum more likely to seek employment in aging settings as compared with BSW students in a non-GeroRich social work program?

H3:  *GeroRich participation and a combined with both experiential and non-experiential educational interventions predicts a higher likelihood of seeking employment in an aging setting compared to non-GeroRich students after controlling for size of institution, type of institution, age, gender, ethnicity, academic standing, taken an aging course, the nature of the grandparent relationship, prior volunteer experience, and social desirability.*

A logistic regression model was used to predict employment in an aging setting from Career Choice scores. The mean score for Career Choice was 15.98 (SD = 2.76) with scores ranging from six to twenty-three. Higher scores indicate a higher likelihood of seeking employment in an aging setting. To create a binary variable, the summed scores were recoded into a dummy variable with scores less than 15 coded as 0 (lesser likelihood) and scores 15 and higher coded as 1 (higher likelihood). The dummy variable of Career Choice was entered as the dependent variable. GeroRich participation and the top five ranked educational interventions (volunteer or service-learning, lectures by course instructor, small group discussions, in-class structured activities, lectures by guest speakers) were entered in the first block of covariates. In the second block of covariates, the first set of control variables (size of institution and type of institution) were entered. In the third block of covariates, the second set of control variables were entered (gender,
ethnicity, academic year, taken an aging course, nature of the grandparent relationship, prior volunteer experience, and social desirability) were entered.

A test of the full model versus a model with intercept only was statistically significant $\chi^2 (11, N=228) = 40.68$, $p < .000$. The model was able to correctly classify 75.6% of those who did seek employment in an aging setting and 56.4% of those who did not, for an overall success rate of 67.1%.

Table 15 shows the logistic regression coefficient, Wald test, and odds ratio for each of the predictors. Employing a .05 criterion of statistical significance age, nature of grandparent relationship, and social desirability had significant partial effects. The odds ratio for age indicates that when holding other variables constant, older students were 1.07 times more likely to seek employment in an aging setting than younger students. The odds ratio for nature of the grandparent relationship indicates that when holding other variables constant, students with a positive grandparent relationship were 1.06 times more likely to seek employment in an aging setting than students with a negative grandparent relationship. The odds ratio for social desirability indicates that when holding other variables constant, students with higher social desirability scores were .81 times less likely to seek employment in an aging setting than students with lower scores.

After controlling for size of institution, type of institution, academic standing, ethnicity, gender, age, taken an aging course, prior volunteer experience, nature of grandparent relationship, and social desirability, the effect of GeroRich participation combined with both experiential and non-experiential educational interventions did not significantly predict students seeking employment in an aging setting. Therefore, Hypothesis 3 was not supported.
Table 15  Logistic Regression Predicting Intent to Seek Employment in an Aging Setting from GeroRich Participation and a Combination of Experiential and Non-Experiential Educational Interventions

<table>
<thead>
<tr>
<th>Predictor</th>
<th>β</th>
<th>Wald $\chi^2$</th>
<th>$p$</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>GeroRich participation</td>
<td>.17</td>
<td>.16</td>
<td>.68</td>
<td>1.19</td>
</tr>
<tr>
<td>Volunteer or service-learning</td>
<td>.52</td>
<td>2.92</td>
<td>.08</td>
<td>1.69</td>
</tr>
<tr>
<td>Lectures by course</td>
<td>.09</td>
<td>.06</td>
<td>.80</td>
<td>1.09</td>
</tr>
<tr>
<td>Small group discussion</td>
<td>.55</td>
<td>1.76</td>
<td>.18</td>
<td>1.73</td>
</tr>
<tr>
<td>In-class structured activities</td>
<td>-.57</td>
<td>1.34</td>
<td>.24</td>
<td>.56</td>
</tr>
<tr>
<td>Lectures by guest speakers</td>
<td>.42</td>
<td>.82</td>
<td>.36</td>
<td>1.52</td>
</tr>
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<td>Size of institution</td>
<td>-.09</td>
<td>.80</td>
<td>.36</td>
<td>.91</td>
</tr>
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<td>Type of institution</td>
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<td>.03</td>
<td>.84</td>
<td>.96</td>
</tr>
<tr>
<td>Academic standing</td>
<td>.49</td>
<td>2.57</td>
<td>.10</td>
<td>1.63</td>
</tr>
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<td>Ethnicity</td>
<td>.11</td>
<td>2.27</td>
<td>.13</td>
<td>1.11</td>
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<tr>
<td>Gender</td>
<td>.18</td>
<td>.13</td>
<td>.71</td>
<td>1.19</td>
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<tr>
<td>**Age</td>
<td>.06</td>
<td>7.39</td>
<td>.01</td>
<td>1.07</td>
</tr>
<tr>
<td>Taken an aging course</td>
<td>.40</td>
<td>1.66</td>
<td>.19</td>
<td>1.49</td>
</tr>
<tr>
<td>Prior volunteer experience</td>
<td>-.08</td>
<td>.06</td>
<td>.80</td>
<td>.92</td>
</tr>
<tr>
<td>**Nature of grandparent relationship</td>
<td>.06</td>
<td>10.70</td>
<td>.01</td>
<td>1.06</td>
</tr>
<tr>
<td><strong>Social desirability</strong></td>
<td>-.20</td>
<td>5.49</td>
<td>.01</td>
<td>.81</td>
</tr>
</tbody>
</table>

**p < .05**
Hypothesis 4a

Research Question #4: Do BSW students in a GeroRich funded BSW-only social work program demonstrate increased aging knowledge, higher intent to seek out opportunities to interact with older adults, more positive perceptions of older adults, higher intent to seek employment in an aging setting, and a more positive perceived level of treatment potential and a higher perceived level of competence in ability to work with older adults?

H4a: GeroRich participation, aging knowledge, perceptions of older adults, and career choice predict positive perceptions regarding the perceived treatment potential of older adults compared to non-GeroRich students after controlling for the type of case study, size of institution, type of institution, age, gender, ethnicity, academic standing, taken an aging course, the nature of the grandparent relationship, prior volunteer experience, and social desirability.

To test this hypothesis a hierarchical regression model was used to predict scores on the summed variable for treatment potential. For the first step, GeroRich participation, aging knowledge (FAQ scores), perceptions of older adults (ASD scores), and Career Choice scores were entered. In the second step, the first set of control variables were entered (size of institution, type of institution). In the third step, the second set of control variables were entered (gender, ethnicity, academic year, taken an aging course, nature of the grandparent relationship, prior volunteer experience, and social desirability).

The results of these regressions are presented in Table 16. In the first step GeroRich participation, aging knowledge, perceptions of older adults, and Career Choice
scores did contribute significantly to positive perceptions regarding the perceived
treatment potential of older adults, $F(4, 223) = 9.96, p < .000$; adjusted R square = .13.
The addition of the first set of control variables did not improve prediction, $F(2, 221) = 1.21, p < .29$). Adjusted R square = .13 and R square change = .00. The addition of the second set of control variables also did not improve prediction, $F(8, 213) = .98, p < .45$). Adjusted R square = .13 and R square change = .03. The final model accounted for 19.1% of variance in treatment potential scores. Inspection of the squared semi-partial corrections in the prediction of positive treatment potential of older adults revealed that ASD scores ($t = 4.73, p < .000$) and Career Choice scores predicted significant unique variance ($t = -2.79, p < .006$).

After controlling for size of institution, type of institution, gender, ethnicity, academic year, taken an aging course, nature of the grandparent relationship, prior volunteer experience, and social desirability the effect of GeroRich participation ($t = -1.30, p < .193$), aging knowledge ($t = 4.160, p < .110$), perceptions of older adults ($t = 4.73, p < .000$) and Career Choice scores ($t = -2.79, p < .006$) was not found to be significant for predicting greater perceived treatment potential of older adults. Thus, the hypothesis was not supported.
Table 16  Hierarchical Regression Predicting Perceived Treatment Potential

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Model 1</th>
<th></th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
<th></th>
<th>Model 3</th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
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<td></td>
<td>( B )</td>
<td>( \beta )</td>
<td>( t )</td>
<td>( p )</td>
<td>( B )</td>
<td>( \beta )</td>
<td>( t )</td>
<td>( p )</td>
<td>( B )</td>
<td>( \beta )</td>
<td>( t )</td>
<td>( p )</td>
</tr>
<tr>
<td>GeroRich participation</td>
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<td>-.36</td>
<td>.71</td>
<td>-.54</td>
<td>-.09</td>
<td>-1.20</td>
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<td>-.11</td>
<td>-1.30</td>
<td>.19</td>
</tr>
<tr>
<td><strong>ASD scores</strong></td>
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<td>4.96</td>
<td>.01</td>
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<td>.31</td>
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<td>7.56</td>
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<td>.01</td>
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<td>.01</td>
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<td>-.18</td>
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<td>-.14</td>
<td>-.18</td>
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<td>.01</td>
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<td></td>
<td></td>
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<table>
<thead>
<tr>
<th></th>
<th>Gender</th>
<th>Age</th>
<th>Taken an aging course</th>
<th>Prior volunteer experience</th>
<th>Nature of grandparent relationship</th>
<th>Social desirability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>- .16</td>
<td>- .01</td>
<td>- .29</td>
<td>.76</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.58</td>
<td>.01</td>
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<td>.87</td>
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<td>1.42</td>
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<td></td>
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<td></td>
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<td>.01</td>
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<tr>
<td></td>
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<td>7.91</td>
<td>.05</td>
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</tr>
<tr>
<td>$R^2 \Delta$</td>
<td>.15</td>
<td>.01</td>
<td>.03</td>
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<td></td>
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</tr>
<tr>
<td>$F$ for change in $R^2$</td>
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<td>.98</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p < .001**
Hypothesis 4b

H4b: Participation in the GeroRich project, aging knowledge, perceptions of older adults, and career choice predict a higher perceived level of competence in working with older adults compared to non-GeroRich students after controlling for the size of institution, type of institution, age, gender, ethnicity, academic standing, taken an aging course, the nature of the grandparent relationship, prior volunteer experience, and social desirability.

To test this hypothesis a hierarchical regression model was used to predict scores on the summed variable for perceived level of competence. For the first step, GeroRich participation, aging knowledge (FAQ scores), perceptions of older adults (ASD scores), and Career Choice scores were entered. In the second step, the first set of control variables were entered (size of institution, type of institution). In the third step, the second set of control variables were entered (gender, ethnicity, academic year, taken an aging course, nature of the grandparent relationship, prior volunteer experience, and social desirability).

The results of this regression analysis is presented in Table 17. In the first step GeroRich, aging knowledge, perceptions, of older adults, and career choice scores did positively contribute significantly to a higher perceived level of competence in working with older adults, $F(4, 223) = 5.97, p < .000$; adjusted R square $= .07$. In the second step, the first set of control variables was entered, $F(2, 221) = .43, p < .64$). Adjusted R square $= .00$ and R square change $= .07$ but the model was no longer significant. The addition of the second set of control variables also slightly improved prediction, $F(8, 213) = 1.10, p < .36$ but the model was no longer significant. Adjusted R square $= .07$
and R square change = .03. The final model accounted for 13.6% of variance in perceived level of competence scores.

Inspection of the squared semi-partial corrections in the prediction of perceived level of competence in working with older adults revealed that only Career Choice scores predicted significant unique variance ($t = -2.95, p < .004$). After controlling for size of institution, type of institution, gender, ethnicity, academic year, taken an aging course, nature of the grandparent relationship, prior volunteer experience, and social desirability the effect of GeroRich project ($t = .10, p < .91$), aging knowledge ($t = .26, p < .79$), perceptions of older adults ($t = 2.56, p < .01$), and Career Choice scores ($t = -2.95, p < .00$) were not found to be significant in predicting a greater perceived level of competence in working with older adults. Thus, the hypothesis was not supported.
Table 17 Hierarchical Regression Predicting Perceived Level of Competence

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B$</td>
<td>$\beta$</td>
<td>$t$</td>
</tr>
<tr>
<td>GeroRich participation</td>
<td>.10</td>
<td>.02</td>
<td>.36</td>
</tr>
<tr>
<td>ASD scores</td>
<td>3.24</td>
<td>.16</td>
<td>2.62</td>
</tr>
<tr>
<td>**Career choice scores</td>
<td>-.14</td>
<td>-.24</td>
<td>-3.74</td>
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<tr>
<td>FAQ scores</td>
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<td>Prior volunteer experience</td>
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<td>.03</td>
<td>.46</td>
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<tr>
<td>Nature of grandparent</td>
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<tr>
<td>Social desirability</td>
<td>5.83</td>
<td>.05</td>
<td>.83</td>
</tr>
</tbody>
</table>

$R^2 \Delta$  

|               | 0.09 | 0.01 | 0.03 |

$F$ for change in $R^2$  

|               | 5.97 | 0.43 | 1.10 |

**$p < .01$**
Chapter 6
Discussion

Overview

This exploratory study examined factors contributing to the empirically documented lack of aging-trained social work professionals, specifically BSW students, (CSWE, 2001; Tan, Hawkins, & Ryan, 2001) to meet the psychosocial needs of a diverse, aging population (Scharlach, Damron-Rodriguez, Robinson, & Feldman, 2000). This study was further motivated by the fact that this lack of aging-trained professional social workers has continued despite the fact that the National Association of Social Workers (NASW) has identified geriatric social work as one of the fastest growing specialty areas in social work practice (Klein, 1995).

The study contributed to the growing knowledge base of this area of social work education and practice by using primary data to examine the influence of an aging-rich curriculum on the ways in which social work students learn. It also examined the relationship between an aging-enriched field practicum and aging knowledge. Constructivism framed the theoretical discussion of the relationship between ways of knowing and learning and the impact of this relationship on aging knowledge, perceptions of older adults, career choice, perceived treatment potential, and perceived level of competency in working with older adults.

The main findings of the study include:

- 72% of GeroRich respondents reported participating in a volunteer experience associated with a social work course as compared with 74% of the non-GeroRich respondents
- 15% of GeroRich respondents reported a field practicum in a setting where older adults were the primary population served as compared with 9% of non-GeroRich respondents
- 27% of GeroRich respondents reported opportunities available within their practicum setting to seek out older adults as compared to 19% of non-GeroRich respondents
- GeroRich participation and an aging-rich practicum contributed negatively to the degree of aging knowledge
- Students with prior volunteer experience were four times more likely to seek out opportunities to interact with older adults in a practicum setting
- GeroRich participation and a combination of experiential and non-experiential educational interventions did not increase the likelihood of seeking employment in an aging setting
- Perceived treatment potential of older adults and perceived level of competence in working with older adults was predicted by perceptions of older adults and the likelihood of seeking employment in an aging setting

The focus of this study was to evaluate the effectiveness of a curriculum change effort (GeroRich), the effectiveness of specific types of educational interventions (experiential or non-experiential), and the impact of an aging-rich apprenticeship experience (field practicum) on student aging knowledge, perceptions of older adults, career choice, perceived treatment potential, and perceived level of competency in working with older adults. Qualitative data from social work faculty interviews was used to provide further insight into the results of the hypotheses testing.
This chapter will discuss the implications of the results presented in Chapter 5. It is organized in the following way. First, some observations about the general fit of the data to the theoretical framework will be presented. Secondly, the findings of the main and supplemental analyses will be discussed. Possible explanations of the findings and their relationship to the reviewed literature and theoretical framework will be examined. The social work faculty interviews will be used to provide further insight into the main findings. Thirdly, limitations of the study will be discussed and considered. Fourthly, implications for education and research, social work education curricular changes, and teaching methods (pedagogy) will be discussed. Finally, implications for social work practice and future research will be reviewed followed by study conclusions and summary.

General Fit of the Data to the Theoretical Framework

This study was implemented and data collected during the third and final year of the GeroRich project. The project itself did not utilize a specific theoretical framework or model but rather provided broad guidelines to various participating schools in terms of curriculum design, activities, and evaluation methods. Selecting a framework that would help to explain the data for this study was challenging and it could be argued, one of the weaknesses of the study. Furthermore, evaluating the project through the lens of the selected framework was difficult. While the theoretical framework was not utilized or implemented as a whole by the GeroRich project, some of the key constructs of the framework had explanatory value in evaluating project results.

The constructivism framework was selected for this study because of its consideration of both experiential and non-experiential learning components. The
growing prominence of service-learning and other forms of experiential learning as viable educational interventions further provided support for the use of constructivism as relevant for this current study. The unique facets of constructivism such as authentic learning environments, student-centered learning processes, collaboration, and multiple perspectives lend themselves well to the tenets of social work education.

The most critical aspects of the constructivist framework for this study are the key constructs of contextualization, situated learning, multiple representations of reality, accommodation/assimilation, and apprenticeship. They provide some indications as to what types of learning situations have the potential to most affect a student’s perception of the world. Specifically, the framework identifies particular type of experiences that allow the individual students to explore their own socialization and learning experiences prior to creating new knowledge and developing effective practice skills.

Results of the study supported the key constructs of this framework to a modest degree. Students with prior volunteer experience in a social work course were more likely to seek out opportunities to interact with older adults in a field practicum setting (contextualization). However, students who experienced an aging-rich curriculum and an aging-rich field practicum did not demonstrate more aging knowledge (situated learning). Rather, aging knowledge was negatively impacted by the GeroRich project. Students who experienced an aging-rich curriculum were more likely to seek out older adults to interact with in a field setting. Finally, students who experienced an aging-rich curriculum were more likely to have an aging-rich field practicum (apprenticeship); these students also demonstrated a lower level of treatment bias and more positive perceptions toward older adults (accommodation/assimilation).
Thus, the general key constructs of the constructivist framework used in this study are a promising starting point for future research exploring the complex relationship between ways of knowing and learning and the impact of this relationship on aging knowledge, perceptions of older adults, career choice, perceived treatment potential, and perceived level of competency in working with older adults. While this framework is explanatory rather than predictive in nature, further refinement of the framework including the inclusion of more variables related to instructor characteristics and specific field practicum site characteristics should yield additional insights into the nature of this relationship.

The Effect of the GeroRich Project

Hypothesis 1

The primary goal of the study was to evaluate the degree of effectiveness of the GeroRich Project curriculum change effort. The first part of the research hypothesis asked whether GeroRich participation and an “aging-rich practicum” were predictors of aging knowledge. This hypothesis was not supported by the results; the results were in the opposite direction.

The second part of the research hypothesis asked whether GeroRich participation and aging knowledge predicted that students would be more likely to seek opportunities to interact with older adults in a practicum setting. This hypothesis was supported by the results. There are several possible explanations for the lack of significant relationship found in the first part of the research hypothesis.

1. The GeroRich group and the non-GeroRich group did not differ significantly in terms of aging content/course taken and the field practicum experiences were not
constructed in a way that allowed the groups to be compared and contrasted which may have had a negative effect on aging knowledge.

2. The field practicum experiences were not constructed in a way that provided meaningful structured opportunities for students to explore all the dimensions, both positive and negative, of aging knowledge thus lessening the possible effect.

3. Other factors (type of practice setting, field instructor characteristics, and the influence of peers) may have had a stronger influence on aging knowledge than the GeroRich Project but these factors were not measured in this study.

First, the GeroRich group and the non-GeroRich group did not differ significantly in terms of having taken and aging course and participation in an aging-rich field practicum. This level of similarity between the groups may be that as a result of the focus on aging content in social work education due to the high profile of the GeroRich Project. As a result of this overall increased focus on aging content, it is highly likely that social work programs which did not participate in the project began to also address aging content in both curriculum and field. Thus, a large group of social work students outside the project may have received similar content and experiences which resulted in the two groups being more similar than different. Furthermore, the field experiences were not designed in a way that allowed the groups to be compared and contrasted in terms of the effect of the specific field experience on aging knowledge.

Since the development of the Facts on Aging (FAQ) measure in 1977 and the many versions since, research has found that aging knowledge usually shows a statistically significant increase after some type of educational intervention (Palmore, 2005; Olson, 2002). A recent study with MSW students (Scharlach & Robinson, 2005)
found only modest increases in post test FAQ scores. The researchers attributed this finding to the nature of the educational intervention used which was mostly experiential in nature and not didactic. Several studies have shown that scores on the FAQ tend to moderately increase after clinical exposure to older adults, but these scores are not necessarily maintained without long-term positive reinforcement (Hinrichsen & McMeniman, 2002; Sheffler, 1995; Gardner, 1994). All of these studies fail to address one of the primary limitations of the FAQ - the lack of consensus on what constitutes a “passing score.” Unfortunately, there are few studies which examine this measurement limitation and the long-term effect of an increase in aging knowledge.

Secondly, this relationship between the educational process and the application of knowledge in a real world setting is at the core of professional education programs. In social work education the field practicum experience is where this relationship is fully explored, tested, validated or invalidated. Bruner (1962) explored this relationship between education and professional socialization. He proposed that the basic underlying principle of any learning process involves the student understanding fundamental or basic ideas and then applying these ideas to real life situations (i.e. field practicum experiences) and through this process, recognizing that the new skills developed are really variations on basic foundational practice knowledge.

Constructivism proposes that if learning occurs in an environment where students can actively participate in testing the validity of their assumptions and biases (in this case, aging knowledge), the potential for changing negative assumptions and biases is greatly enhanced. Schon (1987) termed this process professional artistry or reflection-in-action. The student is expected to move beyond the basics, “not only by devising new
methods of reasoning, as above, but also by constructing and testing new categories of understanding, strategies of action, and ways of framing problems” (1987, p. 39). The GeroRich Project clearly had elements of this approach to teaching and learning. It is possible that the field experience (reflection-in-action) had a positive effect on the degree of student aging knowledge among non-GeroRich students. However, among GeroRich students the field experiences may have had a negative effect on aging knowledge indicating that perhaps the field experience was “situated” in an environment which reinforced the negative aspects of aging practice settings and older adults. This unexpected negative effect may also be related to the incomplete conceptualization and implementation of curriculum and field experiences across programs who participated in the project and the absence of a model “gold standard”.

This negative finding supports one of the key tenets of the constructivist approach which suggests that simply being exposed to new knowledge about a group does not necessarily result in a change in perceptions or behaviors unless this new knowledge is reinforced often and consistently. Furthermore, obtaining meaningful and long-term outcomes means this new knowledge must be integrated into existing knowledge, preferably through various “situated experiences” that provide positive reinforcement. For example, field experiences that reinforce the positive aspects of a professional career in an aging practice setting are an ideal environment for creating meaningful “situated experiences”.

Furthermore, incorporating service learning or volunteer activities into a course are generally beneficial. However, if the activity is not directly linked to the course content its effect becomes limited (Brown & Roodin, 2001; Blieszner & Artale, 2001;
Greene, 1998; McGowan & Blankenship, 1994; Bringle & Kremer, 1993). In this study, volunteer or service-learning experiences were ranked by students first in the top five educational interventions. Interviews with social work faculty revealed that they also ranked service-learning experiences high in their personal choice as effective educational interventions. Furthermore, respondents who had at least one prior volunteer experience were four times more likely to seek out opportunities to interact with older adults in a practicum/internship setting. The crucial role of social work faculty as both designers of course content/methods and as role models of professional skills has received scant attention in the empirical literature. The lack of attention to this potentially important predictor variable in terms of the effect on educational interventions illustrates the need for future empirical exploration.

Thirdly, aging-rich practicums have been found to influence students’ aging knowledge in a variety of areas but are generally not the only influence (Hinrichsen & McMeniman, 2002). Other influences may be an instructor’s positive attitude and modeling of aging-positive clinical behavior and skills or the effect of peers who are also positive about aging (Brown, Gardner, Perritt, & Kelly, 1992). Additionally, aging-rich practicums may unintentionally reinforce aging stereotypes if the practicum setting is with frail, ill older adults instead of community-dwelling adults (Dellasega & Curriero, 1991). In this study GeroRich participation was a less positive predictor of aging knowledge; the negative aspects of aging were unintentionally reinforced through GeroRich participation. One possible reason for this finding may be that interactions with certain types of older adults (frail, depressed, institutionalized, etc.) unintentionally reinforce stereotypes and myths related to aging knowledge and understanding. A
significant number of GeroRich students in this study (77%) did not have an aging-rich practicum; however, over half reported that opportunities to interact with older adults were available in the scope of their field practicum experience. This study did not obtain data specifying the type of practicum settings. However, the negative association between GeroRich participation and aging knowledge scores and the failure of support for the first part of the hypothesis could be an outcome of practicum settings where a large percentage of older adults were frail and dependent. Furthermore, individual faculty members and field instructors may have unintentionally reinforced negative aging knowledge through interactions with students and the use of course content/methods that did not provide students with adequate opportunity to explore the various dimensions of aging knowledge.

There are several other factors that may have contributed to this finding. The effect of extraneous variables was not precisely measured. These included if the practicum instructor was positive about aging, the teaching approach of the field instructor (coach vs. didactic instructor) and if scaffolding, reflection and exploration were used in field instructor-student interactions. The type and context of the actual aging population in the “aging-enriched” practicum (frail, ill older adults may reinforce negative stereotypes) may have influenced the outcome as well. These extraneous variables were not measured in this study so their potential influence could not be determined.

*Hypothesis 2*

Hypothesis 2 stated that GeroRich participation and a combination of experiential and non-experiential educational interventions predict more positive perceptions of older
adults as compared to students in non-GeroRich BSW-only programs. This hypothesis was not supported by the results. Presented and discussed below are several alternative explanations for this lack of significant relationship.

1. The dimensions of the selected educational interventions were not fully measured in terms of selection, application, and evaluation.

2. The degree of measurement used to operationalize the educational interventions was not precise enough to detect differences between the groups.

3. Teaching is perhaps more of an art than a science resulting in continuing empirical challenges and limitations.

First, operationalizing experiential and non-experiential educational interventions continues to be a difficult empirical challenge and the findings can be contradictory. For example, Angiullo, Whitbourne, & Powers (1996) found that while an aging course positively increased attitudes toward older adults, including a service learning project did not have a statistically significant impact on attitude change. The constructivist framework further suggests that a situated learning experience (service learning or volunteer experience) must provide an opportunity for reflection and exploration on the part of the student. If this opportunity is not adequate operationalized (explicitly linked to the course content), then the situated experience may not go far enough in facilitating the assimilation/accommodation of new knowledge for the participating student.

There is a growing body of studies evaluating the effect of different types of educational interventions such as didactic approaches (Olson, 2001; Murphy-Russell, Die, Walker, Jr., 1986; Ragan & Bowen, 2001; Intrieri, Kelly, Brown, & Castilla, 1993; Haight, Christ & Dias, 1994). The second type of intervention focuses on an experiential

Experiential learning experiences have qualitatively been found to contribute to the development and maintenance of positive attitudes toward older adults. However, many of these studies were cross-sectional in design, had very small samples and no comparison group. These factors reduce the generalizability of the findings and the ability to measure the effect of the interventions over time (Brown & Roodin, 2001; McGowan & Blankenship, 1994; Greene, 1998). One study also found that while students initially perceived an experiential learning component (service learning activity) as more beneficial than a non-experiential activity (research paper), at the conclusion of the course students indicated the service-learning experience was only minimally more useful (Blieszmar & Artale, 2001). Findings like this may hint that the lack of perceived usefulness was directly related to the type of experience and the opportunity for reflection and exploration by the student as discussed earlier.

A combination of experiential and non-experiential educational interventions has stronger empirical support and appears to be better able to predict or influence the variables of aging knowledge, perception of older people, and career choice (Hinrichsen
& McMeniman, 2002; Eddy, 1986; Dellasega & Curriero, 1991; Sheffler, 1995). The effects of an educational intervention combining both approaches over time instead of an intense, one-time experience like a seminar seems to have a more predictive influence (Bernard, McAuley, Belzer, & Neal, 2003).

Furthermore, while the hypothesis was not supported, the results did reveal that students who participated in in-class structured activities had a higher likelihood of having positive perceptions of older adults. It is through the process of dialogue and problem-solving in a structured setting like a class that students have the opportunity to test, change, and adjust their beliefs and perceptions (contextualization and multiple representations of reality). Kaufman (2003) emphasizes the need for instructors to create learning experiences for students that lead the student to examine inconsistencies between his or her current understanding and new experiences. Several of the faculty members interviewed stated they regularly bring in practitioners from various areas of social work practice to guest lecture and lead discussions with students about the myths and truths of that particular area of practice.

A qualitative study using focus groups of older adults to expose BSW students to the dimensions of aging found that students’ post intervention journal entries reflected a positive change in their perceptions of older adults and aging service providers (Cohen, Sandel, Thomas, and Barton, 2004). Kane (2003) also found that an in-class simulation portraying individuals experiencing dementia assisted students with exploring and adjusting personal beliefs and perceptions of social work practice with a specific population group. Interviews with teaching faculty similarly revealed a common usage of experiential activities (contextualization and multiple representations of reality).
including videos to illustrate different theories, case studies, original works instead of textbooks, service-learning with reflection papers, small group exercises, and film clips to illustrate different theories. Findings from the interview data suggest that implementing educational interventions inclusive of the components of contextualization (using a wide variety of reference materials and resources for constructing-not reproducing-knowledge) and multiple representations of reality has the potential for assisting students with testing their perceptions of certain groups and situations. However, faculty must be oriented to the process of developing and implementing these types of educational interventions; this dimension was not evaluated in this study.

Although this hypothesis was not statistically significant, participation in the GeroRich project did have an influence on student perceptions of older adults. The GeroRich students ranked older adults second as a population of choice to work with; the non GeroRich students ranked older adults fifth as a population of choice to work with. Additionally, the results found that older students were more likely to have slightly less positive perceptions of older adults than younger students. This finding has been supported in other studies (Rupp, Vodanovich, & Crede’, 2005; Hatchett, Holmes, & Ryan, 2002; Tan, Hawkins, & Ryan, 2002; Chasteen, 2000; Hawkins, 1996).

Secondly, this study’s measurement of the educational intervention variables which were measured using a rank order process from a pre-determined list may have been a methodological limitation. The central limitation to this type of measurement is that the successive points are not separated by equal intervals. Thus it is impossible to accurately measure the importance of the items ranked. For example, volunteer experience was ranked first by the majority of respondents but it is impossible to know
“how much more” it was ranked above the second highest choice (classroom lectures by course instructor). As a result, this level of measurement results in data that has severe restrictions in the type of statistical analysis can be performed resulting in low-level, imprecise findings or lack of findings.

The lack of support for this hypothesis is also likely related to the limitation of the study to create a criterion standard for experiential and non-experiential educational interventions given the vast differences in interventions used by the GeroRich projects. Additionally respondents were not asked for specific types of educational interventions they had experienced in their courses; they were asked to rank a pre-determined list of interventions. The interviews with faculty found a wide-ranging use of various educational interventions, but the faculty interviewed were not asked specific questions related to the process of selection, application, and evaluation of the educational interventions used most frequently.

Despite this, three findings from the interview data do provide further insight: a.) All but one of the faculty members, while teaching the required material, did not have a clear philosophical orientation which is a key component of a constructivist framework. Using some type of philosophy to provide guidance in developing instructional strategies in an intentional manner, promotes the development of student self-determination, competency, and can closely resemble (model) and promote the actual intervention process with a client, (Whitford, 2001; Spence & Kowalski, 1994). b.) The teaching tools used by instructors were not necessarily selected for their value in terms of assessing real learning and knowledge construction. Due to time constraints, limited resources, and other uncontrollable factors, teaching tools were sometimes selected for
their convenience and familiarity instead of their efficacy. c.) Faculty tended to use a wide range of both types of educational interventions with no consensus on a “gold standard.” This further points to the lack of empirical evidence in this area of research and the challenge of operationalizing and testing the efficacy of educational interventions in general.

**Hypothesis 3**

H3 stated that GeroRich participation and a combination of experiential and non-experiential educational interventions predict a higher likelihood for students to seek employment in an aging setting as compared to students in non-GeroRich programs. This hypothesis was not supported by the results. There are several alternative explanations for this lack of significant relationship between the variables as presented and discussed below.

1. The sample was over-represented by younger, traditional-aged students; research has found that older students are more likely to seek employment in an aging setting.

2. Identifying and operationalizing variables which may influence or predict career interest in an aging setting is an emerging area of empirical study.

3. The use of a student’s life experiences is an overlooked method of educational instruction in social work education and was not precisely measured in this study.

While the results did not support the hypothesis, a close examination of the results revealed that older students and students with a positive grandparent relationship were more likely to seek employment in an aging setting. A study of MSW students (Cummings & Galambos, 2003) also found that aging knowledge, frequency and contact
with older adults, aging internships, and aging courses were significant predictors of aging-related work. Similarly, a more recent study of MSW students (Curl, Simons, & Larkin, 2005) found that age and personal or professional experiences with older adults predicted interest in seeking employment in aging settings. A cross-national study of graduating BSW students (Weiss, 2005) found that interest in working in an aging setting was low but that age (students aged 25 and older) and marital status (students who were married) positively predicted an increased interest in working with older adults. One could assume that older students have had more life experiences, possibly with older adults, which may influence their perceptions of older adults and their families. Within a constructivist framework, it would be logical for these older students to then incorporate these life experiences into their classroom and field learning and through this process, test the validity of these perceptions and life experiences.

This finding is in contrast to the finding in Hypothesis 2 in which older students had slightly less positive perceptions of older adults than younger students; this finding was not statistically significant. Some reasons for this contradictory finding might be that older students may unconsciously project their own fears and anxieties about aging on older clients. Younger students have fewer life experiences to use as a context for understanding the aging process. Furthermore, in this study sample there were more students who had field experiences in an aging setting than those who did not; the type of aging setting may have reinforced negative perceptions of older adults. This study did not measure what type of aging setting students experienced in field so it is not possible to know whether or not the field experience itself had a negative effect on perceptions of older adults. Finally, research does support the fact that older students are more likely to
seek a career in an aging setting. Thus, one could theorize that older students have more life experience, knowledge, and skills to deconstruct these negative perceptions about older adults than younger students which lessens the potential of these negative perceptions on career choice.

Secondly, identifying and operationalizing which variables may influence or predict an interest in a career in aging continues to be studies and discussed in the literature. Two recent studies examined the effect of curricular infusion projects on aging knowledge, aging career interest, and perceptions of older adults (Freriksen-Goldsen, Bonifas, & Hooyman, 2006a; Lee & Waites, 2006b). The curricular infusion model which used extensive experiential learning activities to supplement in-class lectures (2006b) found that students demonstrated increased positive attitudes toward older adults and an increased perceived level of competence in working with older adults after participating in the project. The other project (2006a) infused readings on multigenerational aging content into a variety of social work courses and also developed a concentrated course on aging; students who participated in that project demonstrated increased multigenerational aging skills and an increased interest in aging as a career choice. The primary limitation of both these studies is the fact that the long-term effect of the educational interventions was not measured so one can not assume the positive effect was maintained.

Service-learning activities appear to have a generally positive influence on exposing students to the possibilities of a career working with the older adult population (Bliesznar & Artale, 2001). Professional training programs combining both an in-classroom component and a field/experiential experience had a moderately positive
influence on students who had experienced an aging field experience. These students were more likely to select a career in aging than students in non-aging field experiences (Hinrichsen & McMeniman, 2002; Alford, 2001; Gardner, 1994). However, other studies have found that a combination of in-classroom learning and aging-rich field experiences had a negative influence on students’ career choices and reinforced negative aging stereotypes (Dellasega & Curriero, 1991). Furthermore, increased knowledge about aging and more positive perceptions of older adults does not necessarily correlate positively with an increased intent to seek a career in aging (Hinrichsen & McMeniman, 2002; Alford, Miles, Palmer, & Espino, 2001; Dellasega & Curriero, 1991; Eddy, 1986).

Thirdly, one of the most important aspects of modifying current knowledge and creating new knowledge in a constructivist framework is the use of one’s own life experiences. In social work education, this particular educational intervention may be overlooked as a method for opening students up to new career areas such as aging as evidenced by the faculty interviews. The faculty interviewed all stated they included students’ past and current experiences when appropriate into classroom discussion and projects. However, this was not an intentional teaching method. The under utilization of this potentially important student learning variable represents the more traditional, didactic (behavioral) philosophical orientation of faculty in the role of master teacher instead of mentor or coach (constructivist). This finding also fits with the outcome of many types of traditional teaching methods which tend to rely on experiential types of learning in the classroom through the use of case studies or guest speakers rather than creating “situated learning” experiences in the real world which enable students to more easily transfer knowledge and skills (Olson, 2002; Ragan & Bowen, 2001; Haight, Christ,

These contradictory findings in the current literature illustrate the complexity of identifying and operationalizing specific predictors of seeking employment in an aging setting among social work students and the developing status of this area of aging research and education.

**Hypothesis 4**

H4a stated that GeroRich participation, aging knowledge, perceptions of older adults, and career choice predict positive perceptions regarding the perceived treatment potential of older adults. This hypothesis was not supported by the results. Other research studies have also found that perceptions of older adults and career choice were negative predictors of treatment potential. Kane (2004) found that social work students tended to perceive older clients as less deserving of more intervention and psychosocial support. Thus, they performed psychosocial assessment and intervention through the filter of age.

H4b stated that GeroRich participation, aging knowledge, perceptions of older adults, and career choice predict a higher perceived level of competence in working with older adults. This hypothesis was also not supported by the results. There are several alternative explanations for this lack of significant relationship between the variables as presented and discussed below.

1. The two groups in the sample did not differ significantly in terms of aging content/course taken and aging-rich field practicum experiences which were not designed in a way that allowed comparing and contrasting of the two groups.
2. Aging knowledge was lower in the GeroRich Group which may have had a negative effect on the other predictor variables.

3. Specific faculty teaching methods and attitudes, which may have had an effect on the results, were not measured in the GeroRich Project or in this study.

First, the GeroRich group and the non-GeroRich group did not differ significantly in terms of having taken an aging course and participation in an aging-rich field practicum. This level of similarity between the groups may be that as a result of the focus on aging content in social work education due to the high profile of the GeroRich Project. It is highly likely that even social work programs who did not participate in the project began to also more intentionally address aging content in both curriculum and field. Thus, a large group of social work students outside the project received similar content and experiences which resulted in the two groups being more similar than different. Furthermore, the field experiences were not designed in a way that allowed the groups to be compared and contrasted in terms of the effect of the specific field experience on aging knowledge.

Secondly, this is similar to the finding in Hypothesis 1a. There may have been an unintentional negative effect on aging knowledge related to specific field experiences among GeroRich students. If the field experience was “situated” in an environment which reinforced the negative aspects of aging practice settings and older adults, then the negative instead of the positive aspects of aging knowledge may have been reinforced. Furthermore, if there was no mechanism in place for students to deconstruct these negative experiences and integrate new knowledge into existing knowledge, the positive effect of any new knowledge gained would not have been sustained.
This unexpected negative effect may also be related to the imperfect implementation of curriculum and field experiences across programs who participated in the project and the absence of a model “gold standard” for curriculum change and implementation. This negative finding supports one of the key tenets of the constructivist approach which suggests that simply being exposed to new knowledge about a group does not necessarily result in a change in perceptions or behaviors unless this new knowledge is reinforced often and consistently. Furthermore, obtaining meaningful and long-term outcomes means this new knowledge must be integrated into existing knowledge, preferably through various “situated experiences” that provide positive reinforcement. For example, field experiences that reinforce the positive aspects of a professional career in an aging practice setting are an ideal environment for creating meaningful “situated experiences”.

Thirdly, the effect on student knowledge of specific faculty teaching methods and attitudes towards aging was not measured in this study. The cognitive apprenticeship construct is generally considered a key defining principle of the constructivist framework. A cognitive apprenticeship is a type of learning process which focuses on developing both cognitive and metacognitive skills. In other words, this type of learning differs from the physical processes of a traditional apprenticeship by requiring the student to focus on the internal and external cognitive development needed to develop professional problem-solving skills (Conway, 1997). The role of the instructor in the cognitive apprenticeship differs in several significant ways from traditional teaching methods. This alternative method requires the application of the following teaching strategies: modeling, coaching, articulation, reflection, and exploration. The type of teaching methods used by social
work faculty were not assessed in this study so it is impossible to know how the types of
teaching methods used by faculty (traditional vs. experiential) could have impacted on
the results of this study. For example, the constructivist instructor is viewed as a coach
and expert who models a task so students can “observe and build a conceptual model of
the processes required to accomplish the task” and then offers encouragement, feedback,
and hints to the students attempting to perform the task. As a result, it could be theorized
that instructors who were more constructivist in nature could have had a potentially more
positive effect on the study results related to aging knowledge.

A recent study (Fredriksen-Goldsen, Bonifas, & Hooyman, 2006) found that a
curricular infusion model not only resulted in students gaining more aging knowledge
and skills but students self-reported level of confidence in their practice skills also
increased after participating. Kane (2003) found that utilizing a simulated group
experience to teach social work students how to work with individuals with Alzheimer’s
disease improved students’ self-reported levels of confidence in their own practice skills
with this population group. The constructivist instructor focuses on articulation (moving
students toward clearly articulating their knowledge, reasoning, or problem-solving
processes). The use of reflection and exploration is also considered key to helping the
student examine his or her own problem-solving, particularly if applying Schön’s
reflection-in-action model (1997). Constructivism suggests that if reflection and
exploration are not used consistently as a mechanism for students to explore and test all
the dimensions (both positive and negative) of an existing body of knowledge (in this
case, aging), then integrating this new knowledge into existing knowledge will be less
likely which may have been the case here.
The literature on treatment bias has found that poor health is one of the most predictive factors of negative treatment bias (James & Haley, 1995). Perceptions of older people which influence treatment bias are multidimensional and can include variables such as the therapist’s age, years in practice, gender, clinical orientation, and prior diagnosis of the client (Danzinger & Welfel, 2000; Kite & Johnson, 1988; Meeks, 1990). Scenarios which compare younger and older targets tend to result in the older target being rated more negatively (Madey & Chasteen, 2004; Kite & Johnson, 1988). Unfortunately, there are very few studies in social work education and practice which examine perceived treatment potential and perceived level of competency in working with specific population groups. This lack of empirical evidence in this area is related to the difficulty in operationalizing treatment potential, perceived level of competency, and treatment bias in the context of social work practice.

*Study Limitations*

The primary limitation of this study was the quasi-experimental design which is less rigorous than an experimental design and more prone to threats to validity. The most significant threat to validity in this particular study was selection bias, i.e. there may be post test differences among respondents in both groups that are not accounted for due to the design of the study. The study was cross-sectional in design. The sample was self-selected and can not be said to be representative of all students in accredited BSW programs in the United States. The sample was also predominately White which may not accurately reflect the diversity of the current practicing social work practitioner population. The sample size (N = 243) possibly resulted in low power during statistical analysis which could be why some of the results were approaching statistical significance.
instead of actually being significant. Secondly, evaluating a project designed and implemented by someone else can be challenging and limit options for analysis. However, the majority of project evaluations are done by someone other than the project designer. This approach provides greater objectivity in the evaluation process.

Thirdly, all the measures were self-reported and social desirability may have affected the way in which the respondents answered the items. The level of measurement of the variables, in particular the educational intervention variables, was not as precise as needed for advanced statistical analysis. A final limitation of this study was the inattention given to other factors that may have influenced the dependent variables such as characteristics of instructors (classroom and field) and specific information about the nature of “aging-rich” field practicum sites.

Implications for Education, Research and Practice

This study has several implications for social work education in general. Improving the outcomes in gerontological education is dependant on more rigorous operationalization, implementation, and evaluation of educational interventions (both non-experiential and experiential). Damron-Rodriquez & Lubben (1994) and Damron-Rodriquez, Villa, Tseng, & Lubben (1997) found that a multidisciplinary approach to the aging curriculum was the only predictor of successful gerontological curriculum development in higher education. This current study further supports some of their findings in 1994 and 1997 of the need to operationalize gerontological social work curricula and to identify and adhere to a standard set of criteria when evaluating social work curriculum in terms of BOTH content and process (pedagogy). Since the 1997 study, no other efforts are underway to explore the process for developing empirically
supported criteria to evaluate the effect of the social work curriculum design, content, and
teaching methods on student outcomes, career choice, or successful graduate school or
employment.

One could theoretically argue that the Educational Policy Standards developed by
the Council on Social Work Education are one possible set of criteria for evaluating
curriculum and indeed, that is the foundation on which social work programs are
accredited. However, these standards are content-based, not pedagogically-based. There
is no clear theoretical framework which guides the use of these standards as evaluative
criteria of the process not just the content of social work education. The effect of the
GeroRich project on student outcomes would have been much easier to measure in a
reliable and valid way if a standard set of empirically supported evaluative criteria
specific to curriculum content and pedagogy had been developed and implemented by the
project and then disseminated to each participating program. Indeed, true curriculum
transformation is a combination of rich content and excellence in the pedagogy of
teaching and assessment.

The most difficult empirical issue emerging from this study was the lack of a
conceptual framework for curriculum development, implementation, and evaluation
within the GeroRich project. This in turn made it quite challenging to accurately evaluate
the true effects of the project on student participants. For example, the degree of
implementation within each school in the GeroRich sample was difficult to accurately
assess given there was no “gold standard” with which to compare each individual
program. There was a similar challenge with evaluating the field practicum experience
because no criterion was determined by the GeroRich project to assess how “aging-rich”
a specific practicum site was. For example, were older adults the majority of clients served, or was there just one program in the agency for older adults and other populations such as children and families were the primary groups served? There was also no indication if field practicum instructors, besides participating in an inservice on aging content, received specialized training and support to ensure the practicum setting was indeed “aging rich.”

None of the GeroRich programs in the study had baseline data (pre-test) of student knowledge of aging, perceptions of older adults, career choice, treatment potential, or level of competence. Clearly, this type of data would have allowed a truer examination of the effect of the GeroRich project and reduced the selection bias threat.

Other issues to consider would be the challenges of operationalizing and measuring the variable of career choice. There are no clearly reliable and valid measures available specific to social work. The Social Work Attitude Survey used in this study was generally reliable and a new subscale emerged as a potential measurement of career choice. However, the validity of this new measure would need to be evaluated with other samples.

*Social Work Education Curricular Changes*

One of the most obvious implications for both social work education and practice is the need for more aging-savvy social workers in all areas of social work practice. This includes the re-training and upgrading of current practicing BSW’s and MSW’s. In addition, social work students continue to generally perceive geriatric social work as one of the least popular career choices which has significant implications for practice. In this study, non-GeroRich students ranked aging as the fifth choice out of five for populations
to work with; the GeroRich students ranked aging second indicating the potential benefits of an aging-enriched curriculum. Social work education should use this opportunity to implement empirically valid curricular change efforts and develop, implement, and evaluate innovative teaching methods. These methods should specifically focus on designing empirically supported educational interventions that can be evaluated in reliable and valid ways using multimodel and multidimensional approaches. These educational changes should also incorporate methods that address the strengths and learning needs of non-traditional, adult learners. By intentionally incorporating these types of methods, social work education has the potential to influence the design and implementation of continuing education models for practicing social workers that are truly representative of their “situated experiences.” Woven into this model should be specific methods that utilize adult learners’ life experience, practice knowledge and skills to deconstruct stereotypes and perceptions of older adults. This in turn would create more aging-savvy social workers who could function as field instructors and role models for students.

**Teaching Methods (Pedagogy)**

As several of the faculty interviewed suggested, teaching is both an art and a science, but there is no “teaching academy” for practicing professionals to train at prior to entering the teaching profession. Social work educators are influenced by their own personal and practice experiences, the nature of their doctoral training, and the context of the program and institution they teach in and don’t tend to function within a specific theoretical framework or perspective. When resources (time, personnel, financial) are limited, educators rely on more traditional methods of teaching (lecture, research paper)
and assessment (quizzes, exams). Many of these words used by the faculty members interviewed suggest a mixed approach to teaching which combines elements of constructivism (facilitation, collaboration, multiple assessments, reflection, interactive) with more traditional methods (lecturing, teaching from the text). In my study, the five top-ranked educational interventions (volunteer/service learning, classroom instruction by instructor, small group discussions, in-class structured activities, and classroom lectures by guest speaker) are reflective of this mixed teaching approach which combines experiential with didactic methods.

Most of the faculty interviewed perceived education as the transmission of knowledge from teacher to student with some emphasis on a mutual collaboration in the learning process. This finding is again consistent with Pearson’s 1998 study identifying two types of teaching philosophy and strategy: master teacher (transmission of knowledge from teacher to student) or mentor (collaborating with student). The faculty in Pearson’s study (1998) also identified themselves primarily as master teachers rather than mentors. This finding is somewhat disappointing given the nature of the social work practice environment where collaboration, coaching, and mentoring are generally perceived and supported as effective therapeutic strategies. However, it is reflective of the challenging environment in academia where resources are limited, an emphasis is placed on assessment of program objectives and student outcomes, and innovative and creative teaching strategies can be time-consuming and may not necessarily be viewed as effective or measurable. The one faculty member who was clearly constructivist in her philosophy and who did not use quizzes and exams in any of her courses, admitted that
while the outcomes in her students were generally positive, her teaching load was much more time-consuming than her colleagues.

Professional social work education, while continuing to remain focused on curriculum content, needs to consider prioritizing the actual process (pedagogy) of teaching. By doing this, resources could be developed to assist faculty in not just ensuring all the content in a course was covered, but also with developing more intentional and empirically-based effective teaching methods and skills. As the constructivist framework clearly proposes, the pedagogy of this approach is a significant shift from traditional, didactic methods. For faculty willing to explore this approach and consider implementing it, support, feedback, and coaching would be critical to making this shift a positive experience for the faculty member.

Research Implications

There are also research implications related to the need for more rigorous studies to control for the many variables in the social work education environment influencing career choice, perceptions of older adults, and treatment bias. Future studies in higher education should also include a well-articulated conceptual framework and well-operationalized educational interventions that are both experiential and non-experiential and possibly interdisciplinary in nature. The settings for this type of research should closely resemble the “situated experience” of the work environment. For example, field instructors could be trained in the constructivist model of assessment and also in the more traditional model of assessment of student performance. Field instructors could then be divided into two groups for a semester with one group instructed by the field coordinator to use a constructivist approach while the other group uses a traditional, behavioral
approach. A comparison of student outcomes could then be done as well as an evaluation of the field instructors’ implementation of a specified model. An experimental study could assign students to sections of the same course where different pre-determined educational interventions are used to achieve a desired outcome.

Future research should also consider studying current practicing social workers in aging settings and evaluating the dimensions of that experience including how it impacts on their personal and professional perceptions of older adults and level of treatment bias. A very interesting study would compare and contrast current practicing social workers with students in their field practicum experience in terms of their use of theory. As several of the faculty interviewed mentioned, when practicing professionals were invited to be guest speakers in practice or HBSE courses where theory was emphasized, the faculty member usually had to spend time with the professional discussing how practice is linked with theory. In the field practicum setting, a study could examine the decision-making process of both students and field instructors in terms of how a certain theoretical model informs assessment, intervention, and evaluation. Some possible research questions include:

- What strategies do teaching social work faculty utilize when selecting specific types of educational interventions? What factors may influence this process?
- What specific factors predict the selection of specific theoretical frameworks in a practice environment?
- How is an “aging-rich” practicum operationalized, developed, implemented, and evaluated?
• What methods are used to facilitate the development of “aging-rich knowledge” in students in field placements and in field instructors?

• What guidance does the content of the Educational Policy standards developed by the Council on Social Work Education provide in terms of the pedagogy of teaching?

Implications for Social Work Practice

The need to upgrade the aging knowledge and aging competency skills of practicing professionals will continue to grow in the next few years as more and more agencies and organizations will need to develop strategies for addressing the needs of older adults and their families. From this study and the review of literature, it appears that just upgrading the aging knowledge of professionals will not be adequate. There is a clear difference between having aging knowledge and also being practice-competent to work with older adults. The development of innovative continuing education programs which incorporate the constructs of constructivism in the development, implementation, and evaluation process will be essential. As mentioned before, these professional education programs must consider incorporating the unique needs of adult learners in order to be most effective.

Furthermore, all practicing social work professionals need to be exposed to aging knowledge and aging-competent practice skills. Ideally and theoretically, the best training approach would be experiential (simulated practice experiences, small group discussion, short-term field rotations). However, this approach is very difficult to develop and implement in a way that is appealing and feasible to working professionals. There are several initiatives underway through the Geriatric Social Work Initiative
(www.gswi.org) and through the Institute for Geriatric Social Work at Boston University (http://www.bu.edu/igsw/) which recently launched an online certificate in aging program. While online programs are growing in popularity with professionals because of convenience and self-directed learning, these types of continuing education models may only increase knowledge about aging but won’t necessarily change perceptions or increase practice competency.

Aging content and exposure to older adults at various life stages needs to be more intentionally incorporated into continuing education programs and curriculum so professionals and students begin to become socialized to viewing aging as part of the human experience, regardless of chronological age.

The research implications for social work practice include ensuring that older adults, when appropriate, are included in population samples in social work research. More research needs to be done on the level of burnout, job satisfaction, and treatment bias of social workers practicing in a variety of aging settings. Some possible research questions include:

- How do different types of continuing education models (online, self-study, workshop, etc.) compare in terms of increasing knowledge, changing perceptions, and increasing practice skill competency?
- How does the experience of burnout in an aging setting differ from burnout in a child welfare setting?
- How does the age of the client influence the development of an assessment, intervention, and evaluation plan?
• How does geriatric social work practice differ and how is it similar from social work practice with children and families?

• Do social service delivery systems tend to be age-segregated or age-integrated?

Summary and Conclusions

Results of this study support the facts stated in Chapter 1, that is, there continues to be an inadequate number of social work students interested in careers in geriatric social work. This study provides some empirical support to the theorized idea that experiential learning activities including volunteer experiences and field practicum have the potential to positively influence perceptions of older adults and career choice.

Three key conclusions were drawn from this study. First, students with aging-infused curriculums have a likelihood of developing more positive perceptions of older adults and an increased interest in aging as a career choice. Secondly, students in an aging-infused curriculum had higher rates of aging-rich practicum participation and reported more opportunities to interact with older adults in a practicum setting. Thirdly, factors such as prior experience and comfort with older adults along with a belief that social work practice with older adults will be rewarding may positively predict career choice in geriatric social work. Finally, older students who also reported a positive relationship with either a grandparent or another older adult had more positive perceptions of older adults and a higher likelihood of seeking employment in an aging setting.

The findings from this study show limited support for the GeroRich project as a model for curriculum change efforts. The project had a modest effect on students in
terms of perceptions of older adults, career choice and perceived level of competence in working with older adults. Finally, the project had a less positive influence on students in terms of unintentionally reinforcing negative aging knowledge possible as a result of the lack of consistency related to conceptualization and implementation of curriculum and field experiences across programs who participated in the project and the absence of a model “gold standard”. These mixed outcomes illustrate the complexity of curriculum change efforts, the challenge in measuring the efficacy of educational interventions, the recognition of the generally unmeasured but potentially significant effect of faculty teaching strategies and attitudes, and the opportunity and need for ground-breaking, innovative research efforts in higher education.
APPENDIX
INFORMED CONSENT FORM

STUDY NAME
The effect of integrating both experiential and didactic educational interventions into the BSW curriculum: A comparison of perceptions toward older adults, aging knowledge, treatment bias, and intent to seek a career in geriatric social work among GeroRich students and non-GeroRich students.

You are being asked to participate in a research study about the effect of specific types of educational methods on students’ aging knowledge, treatment bias, and intent to seek a career in geriatric social work. You were selected as a possible participant because you are a student in an undergraduate social work program that received funds from the GeroRich Project. Please read this form and ask any questions that you may have before agreeing to be in the research.

Researchers at Case Western Reserve University are conducting this study.

Background Information
The purpose of this research is explore the differences among BSW students in a GeroRich funded BSW-only social work program and BSW students in a non-GeroRich social work program in terms of the effect of didactic and experiential educational interventions including “aging-rich” practicums on aging knowledge, the likelihood of seeking employment in aging settings, and the level of treatment bias toward older adults. GeroRich programs are BSW programs which applied for and received funding and technical support from the Council on Social Work Education during 2001-2004 to strengthen the content on aging in the curriculum.

Procedures
If you decide to participate in the study, then you will need to decide if you want to participate in the optional lottery drawing. If you want to be included in the lottery drawing, please fill out the lottery entry card attached to the introduction/recruitment letter and then put your lottery entry in the envelope marked “lottery” provided by your course instructor.

After all the students who wish to participate in the lottery have completed their entries and placed them in the envelope, the course instructor will then hand out the informed consent forms. After signing the consent forms, you will receive a packet containing three paper and pencil surveys. The first survey, Social Work Practice Skills Evaluation, will take approximately 8-10 minutes to complete. The second survey, Geriatric Attitude Survey-Social Work Version, will take approximately 8-10 minutes to complete. The third survey you will be asked to complete is the Facts on Aging Quiz which will take approximately 5-8 minutes to complete.

All completed surveys must be put in the envelope provided by the course instructor. The course instructor will seal and mail the envelope back to the researcher. (The researcher is providing pre-paid Fed Ex envelopes to the course instructors in which to return all surveys).

Completing these three measures will take about 30 minutes of your time.

Risks and Benefits to Being in the Study
There are no significant or major risks associated with this study.
While there are no direct benefits, the secondary benefits of participation are to provide feedback regarding the types of educational interventions in social work education that were both positive and negative as a mechanism for improving the quality of social work education. Secondly, the feedback will provide both researchers and educators with knowledge regarding reasons why social work students may or may not be interested in a career in geriatric social work.

**Compensation**
All study participants have the option of entering his or her name into a lottery and will be eligible to receive one of three yearly subscriptions to the *New Social Worker Magazine* (worth $15 per subscription) or a $50 gift certificate to Amazon. The chances of winning one of the prizes is estimated at .016 (four prizes divided by 250 participants). To enter your name in the lottery, complete the lottery entry card attached to the information/recruitment letter and then place your card in the envelope provided by the course instructor labeled “lottery”.

**Confidentiality**
The records of this research will be kept private. Each study participant will be assigned a numerical code from a master list kept by the researcher. The only identifying attribute for each participant will be the institution he or she is currently attending. The original data collection forms and informed consent forms will be kept in a locked file and any report we publish will not include any information that will make it possible to identify a participant. Access to research records will normally be limited to the researchers. However, the University’s Institutional Review Board (IRB) and other regulatory agencies, and sponsors and funding agencies may review the research records to ensure that the rights of human subjects are being adequately protected.

If you decide to participate in the lottery, your lottery entry card will not contain the numerical code assigned to your consent form. This protects your identity from being linked with your consent form and your information on the lottery card.

**Voluntary Nature of the Study**
Your participation is voluntary. If you choose not to participate, it will not affect your current or future relations with the University or with the undergraduate social work program you are currently enrolled in. There is no penalty or loss of benefits for not participating or for discontinuing your participation.

You will be provided with any significant new findings that develop during the course of the research that may make you decide that you want to stop participating.

**Contacts and Questions**
The contact person at _______ (institution) is _______ in the Social Work Department. ___ can be reached by phone at (   ) or via email:  _________.

The researchers conducting this study are M.C. “Terry” Hokenstad and Valerie L. Radu. You may ask any questions you have now. If you have any questions later, you may contact them at (216) 368-2323 or (423) 503-2318. Email contact is via the following addresses: mch2@po.cwru.edu or vlradu@southern.edu.

If you would like to talk to someone other than the researcher(s) about; (1) concerns regarding this study, (2) research participant rights, (3) research-related injuries, or (4) other human subject issues, please contact Case Western Reserve University’s Institutional Review Board at (216)
You will be given a copy of this form for your records.

Statement of Consent
I have read the above information. I have received answers to the questions I have asked. I consent to participate in this research. I am at least 18 years of age.

Signature of Researcher: ___________________________ Date: ____________

Print Name of Participant: ____________________________

Signature of Participant: ___________________________ Date: ____________

Signature of Person Obtaining Consent: ___________________________ Date: ____________
SCRIPT FOR SOCIAL WORK COURSE INSTRUCTORS DISTRIBUTING SURVEY PACKETS:

The junior and senior social work majors in our social work program here at _____ (institution name) have been invited to participate in a study being conducted by a social work doctoral student, Valerie Radu, in fulfillment of the dissertation requirements at Case Western Reserve University in Cleveland, OH.

This study focuses on exploring the how social work students perceive different types of teaching methods and field experiences and the impact of these experiences on student learning.

As your course instructor, I am responsible for distributing the information/recruitment letters, obtaining the signed informed consent forms, distributing the survey packets, and collecting and mailing back the completed surveys. I can also answer general questions about completing the surveys.

First, I will be handing out the information/recruitment letter which will tell you more about the study and will help you decide whether or not to participate. I want to emphasize that participation is strictly voluntary and your grade in this course will in no way be affected by your decision to participate or not participate. Your privacy will be protected and no names are any of the questionnaires; the only identifying attribute is the school you are attending. After you finish reading the letter, please complete the attached lottery card if you would like to be entered in the lottery drawing. I will be passing around an envelope marked “lottery” for you to put your completed cards in.

The lottery drawing is for one of 3 1-year paid subscriptions to the New Social Worker magazine OR a $50 gift certificate to Amazon.com. If your name is drawn, you will be notified over the summer via the email address you provide on the lottery entry card.

(AFTER ALL OF THE LOTTERY ENTRY CARDS HAVE BEEN COLLECTED, PLEASE SEAL THE ENVELOPE).

At this point, those of you who do not want to participate may be excused.

For those who are participating in the study, next, I will be handing out the informed consent forms for you to read and sign along with the questionnaire packets. Please raise your hand if you have any questions about the consent form and I will respond to your questions. I will be passing around an envelope marked “informed consent forms” for you to place your signed consent forms in.

Please do not begin the questionnaire packet until you have signed your consent form and placed in the envelope.

(AFTER ALL THE CONSENT FORMS ARE COLLECTED, SEAL THE ENVELOPE).
Please carefully read the instructions for each section on each form in the questionnaire packet before responding to the statements or questions. If you decide to change a response, please clearly mark through the incorrect response so your correct response is obvious.

Please place all of your completed questionnaires in this envelope marked “Questionnaires.”

(AFTER ALL THE SURVEYS HAVE BEEN COMPLETED, PLEASE SEAL THE ENVELOPE).
The purpose of the questionnaires in this packet is to evaluate how BSW students perceive the impact of various types of teaching and learning methods on their overall social work knowledge.

The data collected from these questionnaires will be used to provide feedback regarding the types of educational interventions in social work education that were both positive and negative as a mechanism for improving the quality of social work education. Secondly, the feedback will provide both researchers and educators with knowledge regarding reasons why social work students may or may not be interested in a career in geriatric social work. This data may also be submitted for publication in the form of journal articles.

Enclosed is the questionnaire packet which contains three different measures.

Please read the instructions carefully for each section before you begin to select your responses.

If you decide to change a response, please clearly mark through or erase the incorrect response so your correct response is obvious.

If you have any questions during the course of completing these measures, please raise your hand and your course instructor will assist you.

After you have completed the all the measures in the questionnaire packet, please place your completed packets in the envelope provided by your course instructor marked “questionnaires.”
1. Please identify the institution where you are currently enrolled as a social work major:

☐ Azusa Pacific University  ☐ North Carolina Central University
☐ Belmont University  ☐ North Carolina State University
☐ College of Mt. St. Joseph  ☐ Oakwood College
☐ Concordia College  ☐ Olivet Nazarene University
☐ Dordt College  ☐ Richard Stockton College of NJ
☐ Eastern Kentucky University  ☐ Southeastern Louisiana University
☐ Frostburg State University  ☐ Univ. of NC at Wilmington
☐ Hawaii’i Pacific University  ☐ University of Montana
☐ Hood College  ☐ University of Northern Texas
☐ LaSierra College  ☐ University of Sioux Falls
☐ Lehman College  ☐ Walla Walla College
☐ McDaniel College  ☐ Warren Wilson College
☐ Midwestern State University  ☐ Whittier College
☐ Mount Mary College  ☐ Winthrop University

2. Please indicate your current academic standing: ☐ Junior  ☐ Senior

3. Please indicate which category best represents your ethnicity:

☐ Asian  ☐ Mexican American/Chicano
☐ Black or African American  ☐ Puerto Rican
☐ Native Hawaiian & Other Pacific Islander  ☐ Cuban American
☐ White  ☐ Latino
☐ American Indian & Alaska Native  ☐ Other Hispanic
☐ American Indian  ☐ Other
☐ Other

4. Please indicate your gender: ☐ Female  ☐ Male

5. Please indicate your age as of your last birthday: _____

6. Please indicate the range of your current cumulative GPA: ☐ Less than 2.0  ☐ 2.0 - 2.25  ☐ 2.25 – 2.50  ☐ 2.50 – 2.75  ☐ 2.75 – 3.00  ☐ 3.25 – 3.50  ☐ 3.50-4.0

   NOTE: If your institution does NOT grade on a 4.0 scale, please indicate your GPA here: ______ and what type of grading scale your institution uses here: __________________________

7. Have you taken a course for academic credit where the primary focus was on aging? ☐ No  ☐ Yes
   If you answered yes, in what discipline area was the course offered?
   ☐ Social work  ☐ Psychology  ☐ Sociology  ☐ Nursing
   ☐ Religion  ☐ Other: ________________
   If you answered NO, is there an aging course offered at your institution? ☐ Yes  ☐ No

8. Please indicate which of the following courses you are either currently taking OR have already taken:
   ☐ HBSE  ☐ Social work practice course  ☐ Policy course

9. Have you participated in at least one volunteer experience as was part of a social work course? ☐ Yes  ☐ No
   If Yes, Please state the course name: ________________________________

10. FOR SENIORS ONLY: Was your practicum located in an agency where older adults were the primary population served? ☐ Yes  ☐ No
If NO, did your field practicum setting provide opportunities and experiences for you to interact with older adults even though they were not the primary population served?  
☐ Yes ☐ No
PART I

For the first part of the survey, you are being asked to respond to questions related to the brief case study described below. Please read the case study description carefully before responding to the questions.

Ms. Brown is a 70 year old African-American female who arrives at your social services agency for an appointment. After reviewing the client information sheet she completed while waiting for her appointment, you note that Ms. Brown’s medical history is remarkable for congenital heart disease which has necessitated several hospitalizations over the past five years. This severely limits the activities in which she can participate. You notice that her face is flushed and she appears out of breath as she shuffles to your office. You learn from her that she is recently widowed and that her presenting complaint is depression secondary to her husband’s death approximately 8 months ago. Ms. Brown is casually dressed and presents with a somewhat flat affect. She appears to respond to your questions openly, with little hesitation. She becomes tearful as she recounts her husband’s death, a prolonged battle with cancer. She indicates that she has lost all interest in activities which formerly gave her pleasure, that she frequently awakens at 2:00 a.m. and is unable to return to sleep, and that she has recently lost 15 pounds. Ms. Brown also states that she has begun to wonder if life is worth living anymore.

Section A

INSTRUCTIONS: Please mark an X above the number which best represents your response.

1. How do you view the client’s ability to develop an adequate therapeutic relationship with you?
   - Excellent
   - Very poor
   ![Mark Your Choice](1 2 3 4 5 6 7)

2. How appropriate a candidate for individual counseling or psychotherapy do you see the client as being?
   - Very appropriate
   - Very inappropriate
   ![Mark Your Choice](1 2 3 4 5 6 7)

3. How likely do you feel the probability of Ms. Brown’s presenting complaint being related to an organic mental disorder?
   - Very likely
   - Very unlikely
   ![Mark Your Choice](1 2 3 4 5 6 7)

4. How likely do you rate the probability of the client attempting suicide in the near future?
   - Very likely
   - Very unlikely
   ![Mark Your Choice](1 2 3 4 5 6 7)

5. Please rank order your treatment recommendations for the client (1=first and 4=last):
   - ___ short-term individual psychotherapy or counseling
   - ___ short-term family counseling
   - ___ support group facilitated by a professional
   - ___ pharmacological intervention (medication)
Section B

INSTRUCTIONS: Listed below are a series of polar adjectives accompanied by a scale. You are asked to place a check mark along the scale at a point which in your judgment best describes the client in the case example for items #1 through #5. Make each item a separate and independent judgment.


Section C

22. How would you rate your subjective level of competence in treating Ms. Brown’s presenting complaint?

   Very competent __ __ __ __ __ __ __
   No competence

   1 2 3 4 5 6 7

23. How comfortable would you feel in treating Ms. Brown’s presenting complaint?

   Very comfortable __ __ __ __ __ __ __
   Uncomfortable

   1 2 3 4 5 6 7
24. How open to your treatment recommendations do you see Ms. Brown as being?

| Completely open | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Completely closed |

25. How much do you think Ms. Brown is to blame for her problems?

| Completely to blame | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Completely blameless |

**PART II**

*For the second part of the survey, I’d like to ask you some questions about the different aspects of social work practice.*

**Section A**

Read each item carefully, then select and circle one of the following response choices:

SD = Strongly Disagree  D = Disagree  A = Agree  SA = Strongly Agree

1. There is something different about most older adults: it's hard to figure out “what makes them tick”.
   SD  D  A  SA

2. Most older adults get set in their ways and are unable to change.
   SD  D  A  SA

3. Working with older people primarily involves maintenance and not much with improving their functioning.
   SD  D  A  SA

4. Social work intervention with older adults takes too long.
   SD  D  A  SA

5. Social work practice with old adults will be very rewarding.
   SD  D  A  SA

6. Older patients do not appreciate health care delivery by social workers
   SD  D  A  SA

7. Older patients are much more demanding of a social worker than younger patients.
   SD  D  A  SA

8. The medical finance system does not reward social workers for services
   SD  D  A  SA

9. I am comfortable around older adults.
   SD  D  A  SA

10. I have had experience with older adults.
    SD  D  A  SA

11. My previous experience with older adults was very positive.
    SD  D  A  SA

12. Working with older patients would be rewarding.
    SD  D  A  SA

13. As a social worker, I would not be interested in working with
    SD  D  A  SA

14. All five senses tend to decline in old age.
    SD  D  A  SA

15. Most older adults have no interest in, or capacity for sexual relations.
    SD  D  A  SA

16. Lung capacity tends to decline in old age.
    SD  D  A  SA

17. Physical strength tends to decline in old age.
    SD  D  A  SA
18. The majority of older adults (over 70 years of age) live in long-term institutions (e.g.: nursing homes, mental hospitals, group homes, etc.).

19. The career opportunities in practice for a social worker in geriatrics are limited.

20. Most medical practitioners tend to give low priority to older adults.

21. The health and socioeconomic status of older people (compared to younger people) in the year 2030 will probably be about the same as now.

22. It is important for social workers to know the unique aspects of treating and diagnosing older adults.

23. Social workers need to be comfortable interacting with older adults.

Section B

24. At the present time, what areas of social work practice are you most interested in specializing in when you finish your undergraduate (BSW) degree? (Please indicate your five top choices ONLY below by ranking them with numbers from 1 to 5 with 1 being your first choice.) **Please number (1-5).**

   1. Administration
   2. Case management
   3. Child welfare
   4. Community organization
   5. Developmental disabilities
   6. Domestic violence
   7. HIV and AIDS
   8. Home health
   9. Hospice
   10. International social work
   11. Medical social work
   12. Mental health
   13. Physical disabilities
   14. Policy and/or advocacy
   15. Research
   16. School social work
   17. Substance abuse/addictions

25. At the present time, what populations are you most interested in working with when you finish your undergraduate (BSW) degree? (Please indicate your five top choices ONLY below by ranking them with numbers from 1 to 5 with 1 being your first choice.) **Please number (1-5).**
Section C
Now I’d like to ask you to think back to your academic experiences within the social work program at your institution. Please review the following types of educational methods and then rank the top five in each box that you personally found to be the most useful to your learning experience.

<table>
<thead>
<tr>
<th>Rank from 1 to 5 (most useful to least useful)</th>
<th>Rank from 1 to 5 (most useful to least useful)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom lectures by the course instructor</td>
<td>Projects (i.e. oral history, group projects)</td>
</tr>
<tr>
<td>Classroom lectures by a guest speaker</td>
<td>Videos and/or films</td>
</tr>
<tr>
<td>Classroom presentations by other students</td>
<td>Interview projects with a specific population</td>
</tr>
<tr>
<td>Written assignments</td>
<td>(i.e. interviewing a disabled person)</td>
</tr>
<tr>
<td>Small group discussions</td>
<td>Volunteer experiences or service-learning</td>
</tr>
<tr>
<td>Quizzes and tests</td>
<td>experiences</td>
</tr>
<tr>
<td>Term papers or research papers</td>
<td>Field trips</td>
</tr>
<tr>
<td></td>
<td>In-class structured activities (i.e. role-playing)</td>
</tr>
<tr>
<td></td>
<td>Use of case studies</td>
</tr>
</tbody>
</table>

Section D
Now I’d like to ask you some questions about your relationship(s) with your grandparents or other older adults who are or were important to you. Read each question carefully and select the answer which best represents your current situation.

26. Please identify an older adult (aged 65 or older) with whom you have or have had a close relationship with by checking the appropriate response (please select only one response).

- [ ] maternal grandparent
- [ ] paternal grandparent
- [ ] aunt
- [ ] uncle
- [ ] cousin
- [ ] other (such as teacher, church member, community member)

27. Please circle the number which best represents the frequency of contact either by phone, email, or personal visits, that you have with this older adult during the past year:

<table>
<thead>
<tr>
<th>Frequency</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not in the Past year</td>
<td>Once or twice per year</td>
<td>Every few Months</td>
<td>Monthly</td>
<td>Several times a month</td>
<td>Weekly</td>
<td>More than once a month</td>
<td>Daily</td>
<td></td>
</tr>
</tbody>
</table>

28. Taking everything into consideration, how close do you (did you) feel the relationship between you and this older adult currently is (was)?

Not at all close | Very close
down | 1 | 2 | 3 | 4 | 5 | 6 | 7

29. How do you (did you) rate the communication between you and this older adult?

Very poor communication | Excellent Communication
down | 1 | 2 | 3 | 4 | 5 | 6 | 7
30. How well can you (could you) exchange ideas or talk about things that really concern(ed) you with this older adult?

<table>
<thead>
<tr>
<th>Very poorly</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Very well</th>
</tr>
</thead>
</table>

31. How well do you (did you) feel this older adult understands (understood) you?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Very well</th>
</tr>
</thead>
</table>

32. How well do you (did you) feel you understand (understood) this older adult?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Very well</th>
</tr>
</thead>
</table>

33. Generally, how well do you (did you) and this older adult get (got) along?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Very well</th>
</tr>
</thead>
</table>

34. How similar are your (were your) views about life to those of this older adult?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Very similar</th>
</tr>
</thead>
</table>
PART III
For the third and last part of the survey, I’d like to ask you to respond to some statements related to the biopsychosocial aspects of human development.

Instructions: Read each statement carefully and then circle either T for True or F for False for your response.

T.     F.     1. The majority of old people (past 65 years) have Alzheimer's disease.
T.     F.     2. As people grow older, their intelligence declines significantly.
T.     F.     3. It is very difficult for older adults to learn new things.
T.     F.     4. Personality changes with age.
T.     F.     5. Memory loss is a normal part of aging.
T.     F.     6. As adults grow older, reaction time increases.
T.     F.     7. Clinical depression occurs more frequently in older than younger people.
T.     F.     8. Older adults are at risk for HIV/AIDS.
T.     F.     9. Alcoholism and alcohol abuse are significantly greater problems in the adult population over age 65 than that under age 65.
T.     F.    10. Older adults have more trouble sleeping than younger adults do.
T.     F.    11. Older adults have the highest suicide rate of any age group.
T.     F.    12. High blood pressure increases with age.
T.     F.    13. Older people perspire less, so they are more likely to suffer from hyperthermia.
T.     F.    14. All women develop osteoporosis as they age.
T.     F.    15. A person's height tends to decline in old age.
T.     F.    17. Most old people lose interest in and capacity for sexual relations.
T.     F.    18. Bladder capacity decreases with age, which leads to frequent urination.
T.     F.    19. Kidney function is not affected by age.
T.     F.    20. Constipation increases in more people as they get older.
T.     F.    21. All five senses tend to decline with age.
T. F. 22. As people live longer, they face fewer acute conditions and more chronic health conditions.

T. F. 23. Retirement is often detrimental to health--i.e., people frequently seem to become ill or die soon after retirement.

T. F. 24. Older adults are less anxious about death than are younger and middle-aged adults.

T. F. 25. People 65 years of age and older make up about 20 percent of the U.S. population.

T. F. 26. Most older people are living in nursing homes.

T. F. 27. The modern family no longer takes care of its elderly.

T. F. 28. The life expectancy of men at age 65 is about the same as that of women.

T. F. 29. Remaining life expectancy of blacks at age 85 is about the same as whites.

T. F. 30. Social Security benefits automatically increase with inflation.

T. F. 31. Living below or near the poverty level is no longer a significant problem for most older Americans.

T. F. 32. Most older drivers are quite capable of safely operating a motor vehicle.

T. F. 33. Older workers cannot work as effectively as younger workers.

T. F. 34. Most old people are set in their ways and unable to change.

T. F. 35. The majority of old people are bored.

T. F. 36. In general, most old people are pretty much alike.

T. F. 37. Older adults (65+) have higher rates of criminal victimization than adults under 62 do.

T. F. 38. Older people tend to become more religious as they grow older.

T. F. 39. Older adults (65+) are more fearful of crime than are persons under 65.

T. F. 40. Older people do not adapt as well as younger age groups when they relocate to a new environment.

T. F. 41. Participation in voluntary organizations (churches and clubs) tends to decline among older adults.

T. F. 42. Older people are much happier if they are allowed to disengage from society.

T. F. 43. Geriatrics is a specialty in American medicine.

T. F. 44. All medical schools now require students to take courses in geriatrics and gerontology.
Abuse of older adults is not a significant problem in the U.S.

Grandparents today take less responsibility for rearing grandchildren than ever before.

Older persons take longer to recover from physical and psychological stress.

Most older adults consider their health to be good.

Older females exhibit better health care practices than older males.

Research has shown that old age truly begins at 65.

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally; please circle your choice.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>F</td>
<td>1. I never hesitate to go out of my way to help someone in trouble.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>2. I have never intensely disliked anyone.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>3. There have been times when I was quite jealous of the good fortune of others.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>4. I would never think of letting someone else be punished for my wrong doings.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>5. I sometimes feel resentful when I don’t get my way.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>6. There have been times when I felt like rebelling against people in authority even though I knew they were right.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>7. I am always courteous, even to people who are disagreeable.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>8. When I don’t know something I don’t at all mind admitting it.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>9. I can remember “playing sick” to get out of something.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>10. I am sometimes irritated by people who ask favors of me.</td>
</tr>
</tbody>
</table>
INTERVIEW GUIDE

School Name:  
Years Teaching SW Courses:  

Highest Degree Earned:  
GeroRich School:  

Courses Taught:  
Date of Interview:  

1. How would you describe your teaching style in relationship to how students learn (specific descriptive words)?

1a. How do you facilitate student learning?

2. Do you view teaching as a broad or specific structuring of knowledge? By that, I mean how do you organize the content of your classes? Do you start broad and go narrower or visa versa?

2a. How do you use theory in your classes? How do you develop and apply theory? What are your expectations for students in terms of developing and applying theory?

3. Do you use case studies as a teaching tool? If yes, how do you construct a case study exercise (specific steps)?

3a. If no, what other types of teaching tools do you use (guest speakers, small groups, projects, videos/films, interviews, volunteer/service-learning, field trips, in-class activities)?

4. Describe the methods you use to evaluate student performance in your courses (quizzes, exams, major projects, papers, presentations, etc.):

5. Instructors need to understand student dynamics, especially how students bring their past experiences into the classroom. How do you utilize a student’s past and current experiences in the learning environment?

5a. Does the student’s style of learning (intuitive vs. analytical) impact on how you develop your courses? Why or why not?

6. How do you teach specific practice skills to students such as cultural competency, aging competency, etc.? What specific methods or techniques do you use?
Bibliography


Association of Active Retired Persons (AARP). [www.aarp.org](http://www.aarp.org)


Retrieved May 15, 2003 from


Zucchero, R. A. A unique model for training mental health professionals to work with older adults. *Educational Gerontology, 265-278.*