DISSERTATION

LONG-TERM CARE RESIDENTS: THE RELATIONSHIP BETWEEN PERCEIVED JUSTICE AND QUALITY OF LIFE, SATISFACTION WITH STAFF, AND PSYCHOLOGICAL SENSE OF COMMUNITY

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WE HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER OUR SUPERVISION BY NATALIE BRESCIAN ENTITLED LONG-TERM CARE RESIDENTS: THE RELATIONSHIP BETWEEN PERCEIVED JUSTICE AND QUALITY OF LIFE, SATISFACTION WITH STAFF, AND PSYCHOLOGICAL SENSE OF COMMUNITY BE ACCEPTED AS FULFILLING IN PART REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY.

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ABSTRACT OF DISSERTATION

LONG-TERM CARE RESIDENTS: THE RELATIONSHIP BETWEEN PERCEIVED JUSTICE AND QUALITY OF LIFE, SATISFACTION WITH STAFF, AND PSYCHOLOGICAL SENSE OF COMMUNITY

The present study explored the relationship among justice perceptions and mental health-related quality of life (QOL), satisfaction with long-term care (LTC) facility staff, and psychological sense of community (PSOC) in LTC residents. The study was exploratory in nature because it examined the experience of living in LTC based on a new framework. One-hundred and seven participants completed a survey containing items measuring justice, PSOC, satisfaction with staff and QOL. Data was analyzed using correlational and hierarchical regression analyses. Results indicated that the three types of justice (interactional, procedural, and distributive) demonstrated positive correlations with mental-health related QOL, satisfaction with staff, and PSOC. Additionally, two separate hierarchical regression analyses revealed that the relationship between justice and satisfaction with staff, and PSOC were significant after controlling for functional status and physical health-related QOL. Physical health-related QOL emerged as the only predictor of mental health-related QOL. Implications for LTC residents and directions for future research are discussed.

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Long-Term Care Residents: The Relationship Between Perceived Fairness and Quality of Life, Long-Term Care Satisfaction, and Psychological Sense of Community

The United States has seen a proportional increase in the number of older adults relative to the general population during the last century (US Census Bureau, 2001). This population growth can be attributed to two factors: the aging of the baby boomers and an increase in average life span (Centers for Disease Control and Prevention, 2007). Birth rates declined in the 1920's and 30's, resulting in a proportionally smaller number of people reaching age 65 from 1990-2000. This trend is expected to reverse in 2011 as the baby boomers (born between 1946-1964) continue to age (US Census Bureau, 2001).

Life expectancy in the United States has increased dramatically over the last hundred years. Adults in the baby boomer cohort are expected to live into their 80s, 90s, and 100s. Those born in 1900, could expect to live until age 47, which is in stark contrast to an expectancy of age 77 for those born in 2001 (Centers for Disease Control and Prevention, 2007). In 1990, it was estimated that there were approximately 37,300 people living into their 100s; by 2000 there were approximately 50,550; by 2050 there will be approximately 1.1 million (US Census Bureau, 2001).

Older Adults Residing in Long-Term Care

Even though older adults will live longer lives, many will experience functional declines requiring full-time care and supervision that cannot feasibly be provided in the home or by family members (Olson, 2001). This is evidenced by the increasing number of older adults entering long-term care facilities (LTC). From 1985 to 1999, the number of older adults requiring nursing home stays rose from 1.3 to 1.5 million (Department of Health and Human Services Administration on Aging, 2004). In fact, individuals over age 65 have a 25 percent

chance of residing in a nursing home before death occurs, regardless of their gender, race, socioeconomic status or sexual orientation (Department of Health and Human Services Administration on Aging, 2004).

The goals of LTC have been described by the U.S. Senate Special Committee on Aging as differing from other areas of senior housing and healthcare because of a focus on optimizing functioning instead of curative medicine (Federal Interagency Forum on Aging-Related Statistics, 2008). To best optimize functioning, residents in LTC typically require more direct and comprehensive care on a day-to-day basis. They likely have lost the ability to complete some or all activities of daily living (ADLs) and all independent activities of daily living (IADLs) without assistance (Federal Interagency Forum on Aging-Related Statistics, 2008). The LTC staff is critical not only to the survival of the LTC resident, but in ensuring that the resident thrives in LTC. Care staff include nursing professionals, usually Licensed Professional Nurses (LPNs), Registered Nurses (RNs), and Certified Nursing Assistants (CNAs) (Olson, 2001). Non-care staff include activities directors and assistants, social workers, administrators, housekeeping, dieticians, and food service personnel.

Culture Change in LTC

LTC facilities have historically operated under the medical model, which assumes that the primary function of LTC is to preserve the biological functioning of the older adult (Rahman & Schnelle, 2008). Accordingly, the appearance of most LTC facilities has traditionally resembled an institution or hospital, with long hallways, sterile, dreary interiors, and uninviting furnishings (Ragsdale & McDougall, 2008). Under the medical model, residents are viewed as patients with little choice about their care and daily routine and have little privacy (Rahman &

Schnelle, 2008). Additionally, improving resident QOL is not emphasized as a primary goal for staff (Kane, 2003).

In response to the low prioritization of resident needs under the medical model of LTC, the culture change movement emerged in 1997 (Rahman & Schnelle, 2008). The aim was to describe a process in which LTC facilities could move toward more holistic, resident-centered care by examining the assumptions and attitudes underlying the operation of LTC under the institutional framework (Rahman & Schnelle, 2008). By examining these assumptions, culture-change proponents hoped to create resident communities where QOL could increase for residents, and staff could feel empowered in meeting the needs of residents. This might take the form of creating a more homelike appearance and feel in LTC, emphasizing smaller resident communities, or "neighborhoods," within a larger facility, offering choice to residents in their daily routines, and conducting frequent team meetings to coordinate holistic care (American Health Care Association, 2005).

Traditionally, much of the research conducted in LTC has centered around *staff* views about what should be done to increase quality of care and to make LTC more like home. Conducting research about residents' preferences solely from a staff or caretaker point of view assumes that others are the best means of reporting on the beliefs and feelings of the residents, not the residents themselves. The culture change movement has prompted researchers to move away from this approach and to value the perspective of the resident, even when cognitive impairment is present (Kane et. al, 2003; Kane, Kane, Bershadsky, Degenholtz, Totten, & Jung, 2005). Utilizing the resident perspective in research preserves dignity and empowers residents to provide input on improving the LTC living experience.

Can LTC Really Feel Like Home?

Once referred to as nursing homes, this notion implies that the resident experience in LTC is most similar to that of living in one's own home. Home constitutes an environmental transaction that bonds person to place, through privacy, safety, refuge, ownership, and connection with others (Hammer, 1999; de Veer & Kerkstra, 2001). Although the culture change movement in LTC facilities has incorporated several facets important in the environmental transaction that comprises the experience of home, there are many aspects of living in LTC that continue to diverge from this notion. For example, the meaning of home for the resident may be effectively altered by moving to an LTC facility believed to symbolize a decline in autonomy and loss of purpose (Caouette, 2005). Further, the idea of home has been associated with one's identity (Leith, 2006), and residents may not shift their identity from other sources to include "resident of LTC." Additionally, structure and scheduling imposed on residents by LTC facilities may differ dramatically from a resident's daily routine while she or he was living at home. Overall, despite the important changes prompted by the culture change movement, living in LTC may never be akin to living in one's own home.

Living in Long-Term Care: Like Living in the Workplace?

To date, research has not examined the similarities between the workplace and living in LTC. The comparison between the two in the present study is novel and may add additional insight into the experience of the LTC resident by examining it from a new framework. Although LTC residents pay to live in LTC, there are several notable similarities between the experience of the LTC resident and the experience of an employee in the workplace (see Table 1). First, both environments require an individual to function according to a defined, daily schedule. In the workplace, employees arrive and leave work at a set time, attend scheduled meetings, and meet

deadlines. Residents of LTC also function on a set schedule (this is often designed by a care provider) for waking and grooming, and must report to breakfast, lunch, dinner, and activities at designated times, or they face questions from facility staff about why they were not in attendance (Cohn & Sugar, 1991; Lidz, 1992).

Additionally, employees and residents are held accountable by their immediate supervisor(s). Supervisors ensure that employees are completing the tasks of their job in a timely and complete fashion, and issue warnings when employees do not perform satisfactorily. In LTC, nursing staff are primarily in charge of residents (Olson, 2001), managing their daily activities in a way that is most efficient for the facility. The nursing staff serving in a supervisory role hold residents accountable with regards to tasks such as taking medication and complying with facility procedures.

Another area of similarity involves performance evaluation and feedback. At work, an employee's performance is monitored over time, and feedback is provided periodically through formal and informal performance evaluations. Employees may be remediated when work performance is not commensurate with expectations. In LTC, when consistent, problematic resident behavior is identified, care conferences are held to discuss how the resident can improve her/his "performance," often through behavior modification. If a resident is not present at the conference, s/he is notified about what was discussed and is given feedback on how to better comply with the rules of the facility.

Another similarity is that of removal or termination. In the workplace, an employee that exhibits counterproductive work habits or behaviors may be terminated from her/his position. Similarly, when residents do not exhibit appropriate behavior or are aggressive towards other residents or staff, they are often asked to leave activities. If problematic behaviors persist, the

resident may be asked move to another facility or even be given a 30-day notice, indicating that they must leave the facility.

With regards to rewarding positive behaviors, there are both formal and informal procedures for doing so in the workplace and in LTC. Employees may receive pay increases or positive feedback from supervisors if they excel at their job. They may be perceived more positively by other members of management and may receive special privileges, such as additional breaks or a key to the office, as a result. Although residents are not receiving pay for their completion of daily LTC activities and tasks, residents who display kindness, patience, and who are perceived as sociable or charming by staff may receive favors and more attention or support from care staff (Lorber, 1975). These residents are sometimes recognized as "resident of the month" or allowed special privileges within the facility, such as a favorite meal from a restaurant or participation in a requested activity. Good or desirable behavior from the resident is rewarded, while negative behavior is often remedied with feedback, confrontation, or withdrawal from staff.

A New Perspective

Examining the LTC resident perspective from a new framework is important in that it may highlight previously unknown processes by which the resident's care in LTC can be enhanced. Additionally, understanding these issues from the perspective of the LTC resident empowers the resident and adheres to the ideals promoted in the culture change movement (Kane et. al, 2003). Given the notable similarities between the experience of the LTC resident and the workplace employee, findings from the workplace literature may help to shed new light onto the experience of the LTC resident. In particular, in the workplace literature, there is a large, growing body of research on enhancing the mental health and satisfaction of the employee in

order to boost overall well-being and productivity. If it is true that workplace outcomes could be pertinent to LTC residents, future LTC research could benefit from examining and applying years of research conducted in the workplace.

The Present Study

Based on the premise that living in LTC may be less like living in one's home and more like living in a work environment, the present study addressed fairness or justice, a concept which has been studied extensively in the workplace. Specifically, the present study examined LTC residents' perceptions of justice (or fairness) and how this was related to residents' mental health-related quality of life (QOL), satisfaction with LTC staff, and psychological sense of community (PSOC). These outcomes were examined based on their demonstrated association with justice in the workplace and family conflict literature, and their relevance to the experience of the LTC resident.

These relationships were explored while holding constant physical health-related QOL and functional status because previous research has demonstrated that residents who were more functionally-dependent and reported a lower physical health-related QOL tended to be less satisfied with their overall experience in LTC (Kruzich, Clinton, & Kelber, 1992; Chong, 2003). Researchers reported similar findings in other settings, including transitional care (Castle, 2004) and respite care (Glynn, Byrne, & Murphy, 2004), and across cultures (Chong, 2003; Glynn, Byrne, & Murphy, 2004). Given that physical health-related QOL and functional status were associated with reported satisfaction, these two factors may be associated with other resident outcomes. Thus, in order to understand the relationship between justice and health-related quality of life (QOL), satisfaction with LTC staff, and psychological sense of community (PSOC), the effects of physical health-related QOL and functional status were controlled.

In the present study, three types of justice, including distributive, procedural, and interactional, were included and will be explored and defined in the next section of this paper. Next, existing justice models that guided the hypotheses in the present study were explored, and justice was examined in the context of LTC. It is important to note that justice was examined by eliciting resident *perceptions* of fairness regarding the distribution of privileges, facility procedures, and staff-resident interpersonal interactions. In this way, fairness was understood from the perspective of the LTC resident without making a judgment about what is "fair" based on a specific ideological value set (Greenberg, Colquitt, & Phelan, 2005).

In addition, the concept of QOL in the present study was defined using social productions functions theory as a framework for the physical and mental components of QOL. Furthermore, the utility of QOL as a measure of resident life satisfaction or mental well-being was examined. The link between justice perceptions and mental well-being was explored based on the transactional model of stress (Lazarus & Launier, 1978; Lazarus & Folkman, 1984; Lazarus, DeLongis, Folkman, & Gruen, 1985), using literature from the field of industrial/organizational psychology and family dynamics.

Additionally, the concept of resident satisfaction with LTC staff was defined, including a discussion on various satisfaction domains present in LTC. Research demonstrating the link between justice perceptions and satisfaction was examined with studies originating from the industrial/organizational psychology literature. Following this, psychological sense of community was defined and described, including the four factors important to a strong sense of community (e.g. membership, influence, integration and fulfillment of needs, shared emotional connection; McMillan & Chavis, 1984). The importance of a strong PSOC in adults was

described, followed by a discussion of research in LTC pertaining to sense of belonging, a concept similar to PSOC.

Justice in the Workplace

Over the last several decades, justice (used interchangeably with fairness) has been studied extensively in several contexts, including education (Tyler & Caine, 1981), interpersonal relationships (Barrett-Howard & Tyler, 1986), public policy (Ebreo, Linn, & Vining, 1996), athletics (Ben-Ari, Tsur, & Har-Even, 2006), the workplace (Cohen, 1986), and politics (Tyler & Caine, 1981). Researchers have examined justice as it is perceived by individuals, instead of focusing on justice as it should be (Greenberg & Colquitt, 2005). This allows researchers to examine individuals' perspectives without assuming a particular moral stance. Different individuals may define what is just or fair according to diverse belief systems, thus, understanding fairness from the perspective of the individual allows researchers to study the concept while limiting the impact of their own values in determining what is actually "fair." In general, justice is an overarching term comprised of three sub-forms: distributive, procedural, and interactional justice (Cropanzano & Greenberg, 1997; Colquitt, 2001).

Distributive Justice

Distributive justice concerns the fair exchange of contributions and rewards in comparison to referent others (Adams, 1963, 1965). In the workplace, this tends to take the form of an equitable exchange of work for pay or employee recognition (Cropanzano & Greenberg, 1997). In LTC, a resident might take extra care to adhere to facility rules or comply with staff requests in order to receive resources or privileges, such as additional television watching time, emotional support from main nursing assistant, or a special type of food that is not served at the facility. According to equity theory, the resident, presumably like any employee, will compare

her/his own input-output ratio to that of other residents in making an evaluation about the fairness of the exchange (Adams, 1963).

The belief that an outcome is either fair or unfair can lead to a cognitive, affective, or behavioral reaction (Adams, 1965). For example, in the workplace, distributive injustice perceptions have been associated with dissatisfaction with rewards, such as pay (Cropanzano & Greenberg, 1997), which in turn has been associated with increased turnover (Hulin, 1991) and retaliation (Starlicki & Folger, 1997). Similarly, an LTC resident who believes that the amount of personal attention provided by nursing staff was not fairly distributed may believe that the nursing staff is not competent, may feel sad or upset, or may aggress at one of the staff during their next encounter.

Procedural Justice

Procedural justice entails the perceived fairness of the procedures and methods used to arrive at a specific outcome (Thibaut & Walker, 1975). Thibaut and Walker (1975) added that perception of voice in the decision-making process leads to greater perceived procedural fairness. Leventhal (1980) expanded upon this notion, suggesting that six aspects of the decision-making process contribute to perceptions of fair process. First, the basis of a decision needs to be *consistent* across individuals and situations. The absence of personal biases in decision-making is referred to as *suppression of bias,* and is the second rule. The third rule, *accuracy*, entails the consideration of information by the individual making the decision that is both valid and precise. The *correctability* rule states that the opportunity for individual or group appeals should be available throughout a decision-making process. The fifth rule, *representativeness,* is similar to Thibaut and Walker's (1975) notion of voice; relevant parties should have their suggestions taken into account. Finally, *ethicality* refers to the idea that decisions be based on ethical and moral

grounds. In the workplace, the perception that a decision-making process is fair has been related to reduced turnover intentions (Dailey & Kirk, 1992) and increased organizational citizenship behavior (Organ & Moorman, 1993).

Leventhal's (1980) rules may apply to LTC, as residents are likely concerned with the fairness of the decision-making processes used in the facility. For example, an LTC facility might create an initiative to select meals that are more appealing to residents. It is likely that the decision-making process involved in choosing the meals would be as important to the resident as the actual meals selected; for example, he/she might perceive that process to be unfair if only two residents were allowed to choose the meals. The decision-making process might be perceived as fair by the resident if all residents' meal preferences are submitted, are considered based on financial capabilities of the facility, and can then be appealed after the final results are presented. Fair decision-making processes have been associated with positive outcomes, including well-being (Fondacaro, Dunkle, & Pathank, 1998) and job satisfaction (Mossholder, Bennett & Martin, 1998; Wesolowki & Mossholder, 1997).

Interactional Justice

Interactional justice, which consists of interpersonal and informational justice, is the perceived fairness of interpersonal treatment by others, particularly key authorities (Bies & Moag, 1986). In the workplace, an employee might view treatment by her/his manager or supervisor as fair or unfair, depending on factors such as kindness, consideration, and dignity present in typical interactions. In general, individuals perceive fairness when decision-making entities treat them with respect and dignity, and help them thoroughly understand decision-making rationale by providing relevant information (Colquitt, 2001). In LTC, key authorities might include administrators, administrative staff, activities staff, CNAs, registered and licensed

professional nurses, dieticians, and others. Respect and dignity have been identified as especially important in the treatment of the aging (Rubenstein, 2000), thus, residents may be especially concerned with interactional justice, although research has not yet examined fairness perceptions in LTC residents.

Justice Models

Several models examining the relationship between the justice dimensions and relevant outcomes have emerged in the literature (it should be noted that these models were examined in the context of the workplace). The distributive dominance model, initially suggested by Leventhal (1980), asserts that distributive justice is generally more important than procedural justice, that is, fair outcomes are valued more than a fair process. According to this model, distributive justice should explain more variance in outcomes than any other form of justice. This theoretical perspective has received equivocal evidence, with some studies lending support to this theory (Conlon, 1993), and others finding that procedural justice exerted more influence on outcomes (Alexander & Ruderman, 1987).

Sweeney and McFarlin (1993) suggested that distributive and procedural justice are distinct constructs, each demonstrating different effects. This model, termed the two-factor model, purports that procedural justice influences higher level outcomes (e.g. satisfaction with LTC facility), and distributive justice influences person-referenced outcomes (e.g. quality of life). Evidence exists in support of this model (Sweeney & McFarlin, 1993); however, several studies have uncovered an interactive effect between procedural and distributive justice (Bies & Shapiro, 1987; Tepper, 2001) It appears that if decision-making procedures are fair, negative reactions to distributively unjust outcomes can be reduced. Since fairness perceptions have not

been examined in LTC residents thus far, the present study was exploratory, examining all three types of fairness in relation to both person-referenced and higher level outcomes.

How Justice Fits Within LTC

LTC residents expend time and effort in an attempt to adhere to facility rules, follow their care plans, and comply with staff requests. In return, the staff exchange personal attention, emotional support, and special privileges. When this exchange takes place, the resident likely compares her/his own contributions and subsequent privileges (input to output ratio) to that of other residents of the facility. These ongoing distributive exchanges may be viewed as fair or unfair by residents. For example, if a particular resident expends more effort to follow facility procedure and receives less personal attention or privileges than other residents, s/he may believe that he has been treated unjustly.

Additionally, when an older adult enters an LTC facility, s/he inevitably relinquishes some independence previously achieved by living in the community (Parr & Green, 2002). With regard to independent decision-making, because the structure of LTC is hierarchical in nature, the staff has more decision-making authority than the resident (Parr & Green, 2002). In this respect, the older adult is no longer the primary decision-maker in several aspects of her/his life (e.g., when to visit with friends and family, what type of a schedule to follow, what type of pleasurable activities to engage in, and what type of meals to eat). Several of these decisions will be made, in part, by the LTC facility staff, and others will be made with minimal or no resident input. The procedures used to make these decisions may be seen as just or unjust by residents. For example, if the facility administrator decides to change the decor of the facility and does not elicit resident input in deciding what motif to choose, the residents may believe that facility procedures are unfair.

Furthermore, residents have numerous interpersonal interactions with several staff on a daily basis. Long-term care researchers often write about the importance of treating residents with dignity, and avoiding demeaning or condescending interpersonal treatment (Olson, 2001). Through this and other means, the goal of LTC has been focused on empowering the residents to retain as much autonomy as is possible in the care environment (American Health Care Association, 2005). Fair and just interpersonal treatment by staff includes treating residents with dignity, kindness, and honesty, and respecting residents' rights as human beings. Accordingly, residents likely perceive the interpersonal interactions encountered with staff to be fair or unfair (just or unjust). When a resident believes that a member of the staff has not shown concern for her rights as a resident, and has interacted without regard for kindness or consideration, she may believe that she has been treated unfairly by that staff member.

If a resident believes that resident-staff effort-reward exchanges, facility decision-making processes, and interpersonal treatment by staff are fair, the resident may be better off than a resident who believes that decisions, processes, and interpersonal treatment are unfair. The belief that procedures, exchanges, and interpersonal treatment are just or fair may be associated with a better mental-health related quality of life, higher levels of satisfaction with facility staff, and a stronger perception of psychological sense of community.

Outcomes Associated with Justice Perceptions in LTC Residents

Quality of Life

Quality of life (QOL) is a multidimensional concept that broadly refers to an individual's well-being and life satisfaction (Ory, Cox, Gift, & Abeles, 1994), often encompassing different domains and elements for different individuals (Lawton, 1997). Components of quality of life vary based on age and gender, as well as an individual's living situation (e.g., LTC vs.

community-residing; Fernandez-Ballesteros, 1998). Thus, QOL is a concept that is highly individualistic, subjective, and variant across different domains of one's life; because of this, it has historically been difficult to pinpoint and to assess (Fletcher, Dickinson, Philip, 1992; Wood-Dauphinee & Williams, 1987). Despite this, there is consensus that the measurement of QOL should reflect physical, emotional, and social domains (Halvorsrud & Kalfoss, 2007). Although defining and measuring QOL has led to disagreement among researchers, the majority support the need for QOL to be measured from the perspective of the individual, with the understanding that the individual is the most valid source of information (Gerritsen, Steverink, Ooms, deVet, & Ribbe, 2007).

Social production functions theory. The aforementioned goals of LTC (as discussed by the U.S. Special Senate Committee on Aging; Federal Interagency Forum on Aging-Related Statistics, 2008) included focusing on the optimization of functioning, especially given difficult medical issues and/or care dependence. Accordingly, this discussion of QOL will be based on the theory of social production functions (Lindenberg, 1986; 1991; Lindenberg & Frey, 1993), which asserts that people try to achieve well-being by optimizing achievement of universal needs given the circumstances or constraints that they are facing. The theory assumes the following: 1) well-being is tied to the realization of needs, 2) universal needs are distinct from instrumental goals, which can be achieved through activities and endowments, and 3) instrumental goals can be substituted for other goals according to cost-benefit consideration. Physical and mental or social well-being are the two universal needs central to social production functions theory, and they determine overall QOL (Ormel, Lindenberg, Steverink, and Vonkorff, 1997).

Physical well-being is comprised of three instrumental goals: activation/stimulation, external comfort, and internal comfort. Additionally, social (or mental) well-being is comprised

of three instrumental goals: status, behavioral confirmation, and affection. The means to achieving these goals can vary based on the constraints the individual faces. For example, an LTC resident may have lost the affection of her partner when s/he passed away; therefore, she can substitute another affection activity or means of mental well-being, such as connecting emotionally with other residents, to fulfill this need. Gerritson, Steverink, Ooms, and Ribbe (2004) argued that social production functions theory (as opposed to several other perspectives) provides the best theoretical basis upon which to guide the study of QOL, thus, the physical well-being and social or mental well-being framework is utilized in the present study as the theoretical underpinnings for the current definition and measurement of mental health-related QOL.

For the purposes of this study, QOL will be conceptualized as *mental health-related* QOL, (vitality, social functioning, emotional role, and well-being; Ware, Kosinski, & Keller, 1996). This definition reflects the aim of the mental well-being aspect of social production functions theory. Patrick and Erickson (1993) originally proposed the concept of health-related QOL in an attempt to integrate the biomedical and psychosocial views of "health." Included in this strategy were both mental and physical health-related domains of QOL. The two domains of health-related QOL have gained popularity for use with older adults (Halvorsrud & Kalfoss, 2007), and are especially relevant for LTC residents who may be impacted by functional difficulties or psychological concerns (Resnick & Nahm, 2001). For the remainder of the present study, the term "QOL" will be used to represent the concept of mental health-related QOL.

Strengths of using QOL as an outcome measure with older adults. For older adults who have lost some functional capacity, QOL reflects the optimization of physical and mental status, rather than total life satisfaction (Rabins & Black, 2007). Not only does QOL focus on the optimization of an older adult's life given physical decline, QOL reflects a movement created by

hospice and palliative care towards recognizing the whole health of the individual, not just a change in disease progression. This concept is an increasingly important outcome of study in LTC facilities, as the care goal of many residents is whole health rather than curative medicine.

Relationship between justice and QOL

Research examining the link between perceptions of injustice and stress is rooted in Adams' (1963) equity theory, which, as previously noted, indicates that people compare their own input-output ratio with that of others' who are similar. Adams purported that individuals who perceive inequity experience tension that is alleviated only by restoring equity. On this basis, researchers have investigated the link between fairness perceptions and tension, more recently referred to as stress or its opposite, psychological well-being.

It is helpful to first examine the transactional model of stress (Lazarus & Launier, 1978; Lazarus & Folkman, 1984; Lazarus, DeLongis, Folkman, & Gruen, 1985) in understanding how a psychological state, such as stress or well-being, might arise from a perceived injustice. This model purports that an event itself cannot be inherently stressful; instead, it is the individual's appraisal of the event that determines whether or not an event is stress-provoking or benign. Stated differently, for an event to be stressful, an individual must decide that the environmental demands of that event outweigh his/her own capabilities. An event is appraised in two phases, termed primary and secondary appraisal. During primary appraisal, an individual considers the environmental demands of a situation, whether those demands are relevant to her/him, and if those conditions are potentially stress-inducing.

Following primary appraisal, an individual will consider whether or not she/he has the personal resources or capabilities of dealing with the demands of the environment. For an event to be considered stressful, and individual must first perceive an environmental threat to be

relevant and potentially harmful, and then must decide that she/he cannot cope with the demands of that event. This theory provides an explanation of why an event in itself is not stressful; the primary and secondary appraisal processes are key in determining whether or not an event will be perceived as stressful by an individual.

Lazarus and Folkman's (1984) model has been used by industrial and organizational psychologists to establish this link between injustice and stress, also known as the injustice-as-stressor perspective. Using depression symptoms as an indication of employee health, Tepper (2001) and Spell and Arnold (2007) found that employees who perceived more injustice at work reported more depressive symptoms. This was true for distributive, procedural, and interactional justice perceptions. Employees who perceived injustice in the workplace also reported more stress (Riolli & Savicki, 2006) and strain (Francis & Barling, 2005). Other outcomes have been associated with injustice perceptions at work, including an increased risk for psychiatric disorders (Kivimaki, Elovainio, Vahtera, Virtanen, & Stansfeld, 2003) and an increase in sickness absence (Elovainio, Kivimaki, & Vahtera, 2002). Overall, employees who believe that outcomes and decisions at work are unfair are more likely to experience stress reactions and other negative health consequences.

Additionally, the link between fairness and well-being has been established by family conflict and health-care decision-making researchers (Fondacaro, Dunkle, & Pathank, 1998; Murphy-Berman, Cross, & Fondacaro, 1999). Fondacaro, Dunkle, and Pathank (1998) examined the impact of procedural fairness on family cohesion, conflict, psychological well-being, and psychological distress. Results of the study indicated that adolescents who believed that family decision-making processes were fair also felt that their family had a strong emotional bond and reported that they felt at ease with and enjoyed life. Conversely, adolescents who saw decision-

making processes as unfair were less likely to feel a sense of cohesion in the family and more likely to feel inner turmoil or distress. In a health-care context, Murphy-Berman, Cross, and Fondacaro, (1999) found that when participants believed health-care decisions were fair, they felt less angry, and more pleased and proud overall. They also believed that their relationship with the healthcare provider would improve as a result. Interestingly, participants who thought procedures were fair also believed that the decision-maker would rate them highly on a variety of personality dimensions.

Resident Satisfaction with LTC Staff

Over the past 30 years, research on patient satisfaction has increased dramatically (Smith, Schussler-Florenza, & Rockwood, 2006). Researchers have found that understanding the aspects of healthcare that contribute to a satisfied patient increased treatment and medication compliance (Williams, 1994) and decreased the chance that a patient might sue for malpractice (Hickson, Clayton, Githens, & Sloan, 1992; Rodriguez, Rodday, Marshall, Nelson, Rogers, & Safran, 2008). This, coupled with the recent shift to a patient-centered approach, has boosted the importance of the patient's perspective on care (Mead & Bower, 2000) and has placed the patient in an active role in order to promote better health outcomes (Greenfield, Kaplan, & Ware, 1985). As a result, patient satisfaction is now viewed as a direct goal of healthcare (Cleary & McNeil, 1988).

A similar shift has been observed in LTC, with residents and families now seen as partners in the treatment team, where they were once viewed as passive entities (Rubinstein, 2000). Measuring consumer satisfaction in LTC has played an integral role in this shift; satisfaction surveys aid LTC facilities in becoming more sensitive to the specific needs of residents.

Several domains have been identified as important to the satisfaction experience of the LTC resident, but with little agreement on a consistent set of domains that encompass overall LTC satisfaction. Soberman, Murray, Norton, and van Maris (2000) identified six domains of LTC satisfaction, including living environment, laundry, food, activities, staff treatment, dignity, and autonomy. In this qualitative study, reliability analyses revealed that the staff and dignity domains overlapped significantly, which seems intuitive given that staff treatment of residents likely involves dignity and respect. Additionally, laundry was not strongly associated with overall satisfaction. Satisfaction with staff emerged as the most important factor in predicting resident well-being. Similarly, Mostyn, Race, Seibert, and Johnson (2000) identified comfort and cleanliness, nursing, food service, and facility care and services as important dimensions of nursing home satisfaction.

Do justice perceptions influence resident satisfaction with staff? Researchers have established a link between fairness perceptions and increased satisfaction, with notable examples originating from workplace literature. Industrial and organizational psychology researchers have investigated the impact of employee fairness perceptions on overall satisfaction with the job (McFarlin & Sweeney, 1992; Mossholder, Bennett & Martin, 1998; Wesolowki & Mossholder, 1997; Masterson, Lewis, Goldman & Taylor, 2000). McFarlin and Sweeney (1992) found a link between distributive fairness and job satisfaction, while several other studies found associations between procedural fairness and job satisfaction (Mossholder, Bennett & Martin, 1998; Wesolowki & Mossholder, 1997). It appears that when employees perceive both outcomes and processes to be fair, they are more satisfied overall with their jobs.

The association between resident's fairness perceptions of LTC staff and satisfaction with LTC has not been examined; however, based on the workplace literature, residents who believe

that the procedures, outcomes, and interpersonal treatment enacted by staff are fair may tend to be more satisfied with their LTC experience overall. This effect may be present even after controlling for other factors that have shown previous impact on satisfaction, physical health status, and functional status (Kruzich, Clinton, & Kelber, 1992).

Psychological Sense of Community

Over the last several decades, psychological sense of community (PSOC) has emerged as an important factor in understanding the experience of community among various groups of individuals. The concept was originally identified by Sarason (1974), and was defined as a sense of community that could be created by individuals who have a referent (such as an LTC facility) that enables life structure and meaning, and through which life quality and force are enacted. In 1986, McMillan and Chavis expanded on this idea by defining communities as either relational (professional, spiritual, etc) or territorial (neighborhoods) in nature. Thus, every individual is likely a member of several different relational and territorial communities. For example, a community-dwelling older woman might be a member of a church, live in a neighborhood, and volunteer at a soup kitchen. She likely experiences a different level of PSOC for each of the aforementioned group memberships that she holds.

McMillan and Chavis (1986) asserted that PSOC consists of four components. *Membership*, the first component, is a feeling of belonging or relatedness to others in the community. Members of the community have some sense of shared history, common symbols, emotional safety, and personal investment in the success of the community. Additionally, members can derive a sense of identity and social support from community membership.

The second element, *influence*, is the belief that one can make a difference or has a sense of mattering to the community. This can include influence over actions taken in the community,

but also includes the influence that the community has on the individual. Important in the concept of influence is a balance between individual and community influence. Too much of one or the other can lead to suppression of self-expression or community domination by a small subgroup. Another facet of influence stems from the ability of the community as a whole to combine their skills and knowledge to exert influence on a broader scale over policy or resource allocation. In doing so, members of the community might secure beneficial resources or work towards a goal valued by the community.

McMillan and Chavis (1986) described *integration and fulfillment of needs*, the third component, as the belief that membership in the group or community will provide the resources to meet members' needs. This includes some degree of reinforcement or validation for community members in that they are receiving benefits from membership status. McMillan and Chavis purported that strong communities can fill specific needs of its members, such as status achievement, shared group values, and recognition of competence by other members. Finally, *shared emotional connection* is the belief that members share common experiences and surroundings with each other and can provide a source of social support. Additionally, McMillan and Chavis indicated that a bond is formed by members when they experience events together, whether those events are negative (e.g. a natural disaster) or positive (e.g. running a marathon to support a charity).

Why is a PSOC important? Research has established a link between PSOC (and constructs conceptually similar to PSOC) and mental health and well-being. A high sense of PSOC has shown to be negatively related to antisocial action, aggressive action, and negative mood, and positively related to social joining (Roussi, Rapti, & Kiosseoglou, 2006). Thus, feeling connected to and integrated within the community decreases the propensity to feel

negatively, act antisocially or aggressively, and increases attempts at joining with others "against" difficulties. Several studies examining physically-disabled adults utilizing public transportation, PSOC, and self-efficacy were described by Taylor and Taylor (1996). Consistently, an intervention strategy to build a sense of community helped enhanced the adults' travel competence and facilitated feelings of normalization. In a community psychosocial rehabilitation "clubhouse" program, members identified a sense of community as fostering "recovery" from mental illness (Herman, Onaga, Pernice-Duca, Oh, & Ferguson, 2005). Canadian college students who perceived a high PSOC at their university reported fewer symptoms of academic burnout (McCarthy, Pretty, & Catano, 1990). Overall, the experience of PSOC is positively associated with adaptive outcomes, and is inversely related to maladaptive outcomes.

In older adults, Bailey and McLaren (2005) examined the role of psychological sense of *belonging* in exercise groups in predicting depression and suicidal ideation in retirees. Psychological sense of belonging was negatively related to both depression and suicidal ideation, indicating that feeling relatedness with others and feeling valued by others is associated with less reported depressive symptoms and suicidal thoughts. Based on this previous research, it appears that feeling a sense of belonging with others is associated with greater mental well-being.

Researchers have also investigated the effects of PSOC on several domains of satisfaction across a number of populations. In adults with intellectual disabilities, a stronger sense of community was associated with greater life satisfaction (Bramston, Bruggerman, & Pretty, 2002). Ferrari, Luhrs, and Lyman (2007) noted similar findings in eldercare volunteers. They indicated that volunteers high in a "reciprocal responsibility" domain of sense of community were more likely to be satisfied with their role as a caregiver. Interestingly, volunteers who saw

eldercare as a "common mission" were not more satisfied with their role as a caregiver. In a healthcare context, Ahern, Hendryx, and Siddharthan (1996) investigated the impacts of a *lack* of sense of community on satisfaction with services. Regardless of age, gender, ethnicity, socioeconomic status, insurance status, or Health-Maintenance Organization membership, adults who felt less connected to their community were less satisfied with healthcare services received in that community.

PSOC in LTC. The LTC facility provides the basis and structure for a territorial community of residents and staff members. For the LTC resident, outside group memberships are difficult to maintain because of decreased independence as a result of moving into a care facility (Lachman, Ziff, & Spiro, 1994), so the primary community (LTC) becomes increasingly important. Additionally, all four dimensions of McMillan and Chavis' (1986) model of PSOC are applicable to the residents' experiences of living in LTC. For example, residents likely have some sense of membership or relatedness to others in LTC, including staff and other residents. Furthermore, residents likely have a sense of how much they matter to or how much influence they have on the LTC community, especially with regards to wisdom sharing or meaning making with others. Integration and fulfillments of needs is especially important to members; they may experience a greater sense of community if they believe that living in LTC will help them sustain a full life over their last years. Residents' need for emotional connection can be fulfilled not only by family members, but by other members of the LTC community in which they reside. Thus, it is likely that LTC residents may perceive PSOC along a continuum, with some residents perceiving low PSOC and others perceiving high PSOC within the facility.

In older adults, a greater sense of PSOC has been associated with positive outcomes. Parr and Green (2002) explored two aspects of PSOC relevant for residents (although the authors did

not refer to these at part of PSOC), including supportive relationships with staff and involvement and influence at the facility. Staff's and residents' perceptions were elicited, with staff indicating that residents tended to be more satisfied with their experience at the facility if they had supportive relationships with the staff and involvement and influence in the facility. This association was also found when examining the residents' perspective; residents were more satisfied when they had supportive relationships with staff and felt involved with the facility.

In a qualitative study, three women residing in LTC associated a sense of belonging with an increased ability to create a sense of meaning for themselves in the face of death (Dwyer, Nordenfelt, & Ternestedt, 2008). Similarly, Kruzich et al. (1992) found that residents who identified someone in LTC that they felt close to also felt more satisfied with their LTC facility. Overall, in older adults, a greater PSOC is associated with positive outcomes, including mental health and LTC satisfaction.

Fairness and PSOC. Much of the research linking fairness perceptions with PSOC has centered around a school context. Kurtiness, Berman, Ittel, and Williamson (1995) asserted that group decision-making and voice form the foundation for social organization. Vieno, Perkins, Smith, and Santinello (2005) added that an organization (in their case, a school) may add to the development of a sense of community by providing fair and supportive interaction and the possibilities they offer students in making decisions related to pertinent activities. Additionally, expressing personal opinions helped students to develop feelings of trust, mutual respect, and solidarity, aspects of overall PSOC (Battistich, Watson, Solomon, Schaps, & Solomon, 1991). It was on these bases that researchers explored the impact of students' fairness perceptions on their PSOC (Vieno, Perkins, Smith, & Santinello, 2005). Results indicated that students who thought

that decision-making processes and interpersonal treatment in school were fair were also more likely to perceive a greater PSOC within the school.

As LTC facilities continue to "strive to be like a community where residents can feel comfortable," (American Health Care Association, 2005, p. 4), understanding what contributes to a stronger PSOC is essential. Research has yet to examine the relationship between justice perceptions and PSOC in LTC. LTC residents who believe that outcomes, decision-making processes, and interpersonal interactions are fair might also perceive a stronger PSOC within the LTC facility.

Purpose of the Present Study

The present study examined the association among LTC residents' perceptions of justice (or fairness) and mental health-related quality of life (QOL), satisfaction with LTC staff, and psychological sense of community (PSOC). Three types of justice were examined, including distributive, procedural, and interactional justice. Based on previous research which highlighted the relationship between physical health-related QOL and functional status with LTC resident satisfaction (Kruzich, Clinton, & Kelber, 1992; Chong, 2003), the presented study controlled for physical health-related QOL and functional status.

Based on the transactional model of stress that an individual's two-fold appraisal of a situation is associated with a psychological state (Lazarus & Launier, 1978; Lazarus & Folkman, 1984; Lazarus, DeLongis, Folkman, & Gruen, 1985), the present study explored the relationship between fairness perceptions and mental health-related QOL. This expanded upon the transactional model of stress by addressing quality of life, a construct more suited for understanding the experience of the LTC resident. Research has not examined which types of fairness perceptions (distributive, procedural, interactional) might be associated with a higher

QOL in LTC residents; however, research with other populations indicates that fairness perceptions are negatively associated with stress and positively associated with mental well-being. Specifically, the association between three types of fairness, distributive, procedural, and interactional, and QOL was examined while holding constant functional status and physical health-related QOL. This allowed for exploration of the specific domains of fairness which may be associated with a better QOL in residents independent of factors that may impact QOL.

Additionally, the present study investigated the relationship between fairness perceptions and satisfaction with LTC staff, or more specifically, an LTC resident's reaction to aspects of the living experience provided by the staff (adapted from Smith, Schussler-Florenza, & Rockwood, 2006). Prior research in the workplace has established a link between perceptions of fairness and job satisfaction. The present study did not employ a summary judgment of total satisfaction in LTC because summary judgments tend to show consistently high rates of care satisfaction and low variability, which renders global satisfaction less helpful in understanding the experience of the resident (Peterson & Wilson, 1992). Instead, satisfaction assessments were elicited by asking specifically about satisfaction with the staff, a concept likely to be related to fairness perceptions of the staff. This relationship was explored while controlling for functional status and physical health-related QOL.

The present study also explored the relationship between three types of fairness perceptions and psychological sense of community (PSOC). Research has demonstrated a link between the belief that processes are fair and the perception of a strong PSOC, thus, this was examined in LTC residents. PSOC was conceptualized and measured based on the four dimensions proposed by McMillan and Chavis (1986). Psychological sense of community was defined as the feeling held by LTC residents of belonging and being important to others residing

in, and working in the LTC facility, and the shared faith that residents' needs will be met by virtue of their residence in the community (adapted from Roussi, Rapti, & Kiosseoglou, 2006). This relationship was examined while holding functional status and physical health-related QOL constant.

Hypotheses

In this study, six major hypotheses were examined. They were as follows:

H1: Each type of perceived justice would be positively related to QOL. Residents that perceived higher levels of justice related to decision-making processes, outcomes, and interactions would experience greater mental well-being.

H2: Based on the two-factor model, distributive justice would show the strongest association with QOL while controlling for physical health-related QOL and functional status. Residents that believed that privileges allotted reflect their behavior in the facility would feel a greater sense of well-being independent of physical health-related QOL and functional status.

H3: Each type of perceived justice would be positively associated with LTC satisfaction. Residents that perceived higher levels of justice related to decision-making processes, outcomes, and interactions would also be more satisfied with the LTC facility.

H4: Based on the two-factor model, procedural justice would show the strongest association with satisfaction with staff while controlling for physical health-related QOL, and functional status. Residents that perceived higher levels of decision-making justice would be more satisfied with the facility overall, independent of physical health-related QOL and functional status.

H5: Each type of perceived justice would be positively associated with PSOC. Residents that perceived higher levels of justice related to decision-making processes, outcomes, and

interactions would be more likely to believe that they are connected with others, matter to others, and can make a difference in the LTC community.

H6: Perceptions of procedural and interactional justice would show the strongest association with PSOC while controlling for physical health-related QOL and functional status. Residents that perceived higher levels of justice related to decision-making processes and interactions would perceive a higher level of connectedness with others, mattering to others, and making a difference in the LTC community, independent of physical health-related QOL and functional status.

Method

Participants

Participants in the present study were 107 older adults who resided in LTC facilities. The sample consisted of mostly female residents (75.7%) with an average age of 85.3 years (*SD* = 8.3). The sample was comprised of predominately European-American participants (97.1%), with 2.9% of the sample identifying as Hispanic. The mean number of weekly visits from family or friends was 3.2 (*SD* = 3.3), with a range of 0-20 visits per week. The average tenure at the facility (how long one has lived at the facility) was 2.9 years (*SD* = 3.5). On average, residents reported needed full care assistance with 2.7 activities of daily living (*SD* = 1.6).

Procedures

Participants were recruited through staff announcements at resident council meetings, care meetings, and activities. Older adults residing in locked, dementia-care wards were excluded to minimize participant burden. Based on research indicating that cognitive status does not impact self-report perceptions of QOL and LTC satisfaction (Kruzich, et al., 1992; Davis, Sebastian, & Tschetter, 1997), residents (while still excluding those in locked units) were not

screened for a particular level of cognitive status before participating in the study. Participants were surveyed in common areas (a living room or library), or in their rooms, depending on preference. Researchers asked residents about the presence of any significant vision or hearing impairments and adjusted the administration of the survey accordingly. The entire survey was administered by resident written completion or verbally in 15-20 minutes, and occasionally longer depending on the time taken to circle responses or the amount of elaboration offered. The present study was part of a larger study examining the organizational dynamics of LTC.

Measures

Demographic Questionnaire. Participants were asked to provide information about their age, gender, ethnic/racial background, tenure at current facility, number of visits made by friends and family per week, and functional status (see Appendix A).

Justice. Distributive justice was measured using Colquitt's (2001) four-item scale (see Appendix B). Item responses were on a five-point likert scale, with response choices ranging from "1 = Not at all, to 5 = A large extent." Items were designed to elicit fairness perceptions of the resident's ratio of policy and care plan adherence to allotted privileges and staff treatment (input-output ratio). Scale items were modified to accurately reflect the experience of the LTC resident. For example, the word "outcome" and the phrase "effort you have put into your work," were replaced with "personal attention" and "how well you comply with staff requests." The scale was scored by summing the responses to obtain a total distributive justice score. Colquitt's initial work with the scale yielded a Cronbach's alpha of.92. For the present study, the distributive justice scale yielded a mean score of 10.00 out of a possible 16 (SD = 4.78; see Table 2), and coefficient alpha was $\alpha = .82$.

Procedural and interactional justice were measured using Moorman's (1991) scales (see Appendix B). Moorman's procedural justice scale consists of seven items that are responded to on a five-point likert-scale, with response choices ranging from "1 = strongly disagree," to "5 = strongly agree." Items assessed concepts important in procedural fairness, such as consistency and bias suppression in decision-making. Scale instructions were modified to reflect the experience of the LTC resident, while preserving original wording. For example, the word "workplace" was replaced with "nursing home." Individual scale items were not altered. The scale was scored by summing the numbered response choices to form a procedural justice score. Original reliability tests yielded a Cronbach's alpha of .94. For the present study, the mean score on the procedural justice scale was 27.65 out of a possible 30 (*SD* = 4.89: see Table 2), and coefficient alpha was $\alpha = 84$.

Interactional justice was measured using Moorman's (1991) six item, five-point likert scale (see Appendix B), with response choices ranging from "1 = strongly disagree," to "5 = strongly agree." Fairness of interpersonal interactions was targeted with items assessing perceptions of kind treatment, honest feedback, and suppression of personal biases. Scale items were modified to reflect the experience of the LTC resident. For example, an item that originally read "Your supervisor showed concern for your rights as an employee," was modified to read "The staff showed concern for your rights as a resident." The word "supervisor" in the instructions was changed to "staff of this nursing home." This scale was scored by summing the numbered responses to create an interactional justice score. Moorman's original reliability estimate yielded a Cronbach's alpha of .93. For the present study, the mean score on the interactional justice scale was 23.49 out of a possible 30 (*SD* = 4.49; see Table 2), and coefficient alpha was $\alpha = .79$.

Mental Health-Related Quality of Life. Health-Related Quality of life was measured using the 12-item Short Form Health Survey (SF-12), a shortened version of the longer, 36-item Short Form Health Survey (Ware, Kosinski, & Keller, 1996). The items were originally measured on varying likert-type scales (e.g. some items used three-point and some used five-point), but for the present study, a five-point likert-scale was used for all items to enhance readability and consistency (see Appendix C). The scale was summed (with some items reverse-coded) to create a total score, meaning that higher scores indicate better health-related quality of life. The SF-12 was originally designed to measure the physical and mental health domains that accounted for 80-85 percent of the variance in the 36-item version (Ware, Kosinski, & Keller, 1996; McHorney, Ware, & Raczek, 1993). Physical functioning, physical role accomplishments, bodily pain, and general health items load onto the physical health subscale, while vitality, social functioning, emotional role fulfillment, and mental state items loaded onto the mental health subscale. Reliability estimates for the SF-12 physical and mental health subscales yielded test-retest values of .89 and .76, respectively. For the present study, the mean score on the mental health-related QOL scale was 23.48 out of a possible 30 (SD = 4.23), and coefficient alpha was α = .70 (see Table 2).

Additionally, the SF-12 has been used to measure health-related QOL in older adults (Thome, Dykes, & Hallberg, 2004; Lee, Lee, Woo, & Wong, 2006; Pajalic, Karlsson, & Westergen, 2006;) and has been validated in a sample of seniors residing in an independent living community (Resnick & Nahm, 2001). In this sample, reliability estimates for the physical and mental health subscales yielded coefficient alphas of .84 and .70, respectively. Confirmatory factor analysis supported two underlying factors, although Resnick and Nahm (2001) recommended that the item asking about the impact of physical and mental health either be

changed or included in the physical health subscale scoring because it loaded onto the physical health factor. Due to this, the word "physical" was not included in this item in order to preserve its status as part of the mental health subscale. For the present study, items two, three and twelve were modified to reflect the experience of the LTC resident. For example, in item two the words "moving a table, pushing a vacuum cleaner, bowling or playing golf" were changed to "making my bed, organizing my things, or completing a project."

Physical Health Quality of Life. Physical health status was measured using the physical health subscale of the SF-12 (see Appendix D). Please reference the section on QOL for information about this scale. When the physical health and mental health subscales are examined separately, they no longer represent whole QOL; instead, they represent physical health or mental health-related QOL. As such, this subscale was used as a measure of physical health QOL as indicated by the creators of the SF-12 (Ware, Kosinski, & Keller, 1996). Construct validity exists for this scale in the form of statistically significant negative correlation between the physical health QOL subscale and several chronic illnesses in older adults (Resnick & Nahm, 2001). For the present study, the mean score on the physical health-related QOL scale was 20.05 out of a possible 30 (SD = 5.75), and coefficient alpha was α = .78 (see Table 2).

Resident Satisfaction with LTC Staff. Resident satisfaction with LTC staff was measured using the four-item Satisfaction with Staff subscale of the Resident Satisfaction Questionnaire (Boldy & Grenade, 1998; Chou, Boldy, & Lee, 2002). Items assessed satisfaction indirectly by asking the individual to rate the help received, staff attitudes, respect for privacy, and promptness (see Appendix E). Research has demonstrated that asking residents directly about satisfaction yields range-restricted estimates towards high satisfaction (Chong, 2003). Residents responded to the items on a five-point Likert Scale, with responses including "1 = poor, 2 = fair, 3 = neutral, 4

= good, and 5 = excellent." The scale was scored by summing the response choices to indicate an overall satisfaction with staff score. Reliability estimates yielded a coefficient alpha of .93 for the Satisfaction with Staff Subscale in 394 LTC and 754 assisted-living residents (Chou, Boldy, & Lee, 2002). For the present study, the mean score on the satisfaction with staff scale was 15.14 out of a possible 16 (SD = 3.29; see Table 2), and coefficient alpha was α = .74.

Psychological Sense of Community. Psychological sense of community was measured using the eight-item Brief Sense of Community Scale (Peterson, Speer, & McMillan, 2007) which is administered using a five-point Likert scale (see Appendix F). This measure was designed to assess the four dimensions of PSOC proposed by McMillan and Chavis (1986), including needs fulfillment, group membership, influence, and emotional connection. This scale only included positively worded items (e.g. "I feel like a member of this nursing home" instead of "I do not feel like a member in this nursing home"), and was summative in nature (e.g. higher scores indicate a more favorable perception of PSOC) which is consistent with findings from Peterson, Speer, and Hughley (2006) that negatively-items do not accurately capture the construct of PSOC. Positively-worded items are also less complex and easier to understand, aiding older adults in providing informed responses.

Additionally, the scale items were modified to accurately reflect the experience of LTC residents by replacing the word "neighborhood," originally used in the scale, with "nursing home" (LTC is often colloquially referred to by the residents as a nursing home). Peterson, Speer, and McMillan's (2007) research on the scale yielded a coefficient alpha of .92 for overall PSOC, and coefficient alphas between .77 and .94 among the subscales across a sample of 293 community residents. Confirmatory factor analysis supported the fit of a four-factor model including the factors originally proposed by McMillan and Chavis (1986). In the present study,

the mean score on the PSOC scale was 31.15 out of a possible 40 (SD = 5.66; see Table 2), and coefficient alpha was α = .82.

Results

Based on the "living in the workplace" framework, the present study examined the relationship among three types of justice (distributive, procedural, and interactional) and mental health-related QOL, satisfaction with staff, and PSOC in LTC residents. Correlational analyses were used to examine the association between each type of justice and mental health-related QOL, satisfaction with staff, and PSOC. Hierarchical regression analyses were used to examine the association between the three types of justice and mental health-related QOL, satisfaction with staff and PSOC, while controlling for physical health-related QOL and functional status. An alpha level of .05 was used for all statistical significance tests.

Justice and Mental Health-Related QOL

A correlational analysis was conducted to examine the relationship between each type of justice and mental health-related QOL (H1). Procedural justice showed a significant correlation with mental health-related QOL, r = .27, p < .05 (see Table 2) as did interactional justice, r = .24, p < .05. The effect size for these correlational analyses were r^2 = .07 and r^2 = .06. respectively. For clarification, Cohen's (1988) guidelines for interpreting effect sizes in relation to each other state that an effect size of r = .10 or less is considered small and .30 is considered medium.

A hierarchical regression analysis was conducted to determine whether higher scale scores for the three types of justice predicted higher scores on the mental health-related QOL scale above and beyond physical health-related QOL and functional status (H2). Physical health-related QOL and functional status scores were entered into the model first, and scores on the distributive, procedural, and interactional justice scales were entered second with scores on the

mental health-related QOL scale as the dependent variable. The model was significant overall (R^2change = .10, $p < .05$, see Table 3). Upon further examination, physical health-related QOL emerged as the strongest predictor of mental health-related QOL ($\beta = .31$, $p < .05$). Distributive, procedural, and interactional justice were not significant predictors of mental health-related QOL after controlling for physical health-related QOL and functional status.

Justice and Satisfaction with Staff

A correlational analysis was conducted to examine the relationship between each type of justice and satisfaction with staff (H3). Both procedural and interactional justice were correlated with satisfaction with staff, $r = .57$, $p < .05$ (see Table 2), and $r = .61$, $p < .05$, respectively. The correlation between distributive justice and satisfaction with staff was also statistically significant, $r = .24$, $p < .05$. The effect size for these correlational analyses were $r^2 = .32$, $r^2 = .37$, and $r^2 = .06$, respectively.

A hierarchical regression analysis was conducted to determine whether higher scale scores for the three types of justice predicted higher scores on the satisfaction with staff scale above and beyond physical health-related QOL and functional status (H4). As with the previous analysis, physical health-related QOL and functional status scores were entered into the model first, and scores on the distributive, procedural, and interactional justice scales were entered second with scores on the satisfaction with staff scale as the dependent variable. The model was significant overall (R^2change = .41, $p < .05$, see Table 4). When examining each construct individually, procedural justice was a significant predictor of satisfaction with staff ($\beta = .40$, $p < .05$), along with interactional justice ($\beta = .31$, $p < .05$). Distributive justice was not a significant predictor of satisfaction with staff.

Justice and PSOC

A correlational analysis was conducted to explore the relationship between each type of justice and PSOC (H5). Procedural justice showed a significant correlation with PSOC, $r = .46$, $p < .05$ (see Table 2), as did interactional justice, $r = .43$, $p < .05$. The effect size for these correlational analyses were $r^2 = .21$ and $r^2 = .18$, respectively. The correlation between distributive justice and PSOC was also statistically significant, $r = .28$, $p < .05$ with an effect size of $r^2 = .08$.

A hierarchical regression analysis was utilized to explore whether higher scale scores for the three types of justice predicted the level of PSOC above and beyond physical health-related QOL and functional status (H6). With PSOC serving as the dependent variable, physical health-related QOL and functional status scores were entered into the model first, and scores on the distributive, procedural, and interactional justice scales were entered second. The model was significant (R^2change = .30, $p < .05$, see Table 5). Further examination revealed that all three types of justice significantly predicted PSOC, including procedural ($\beta = .26$, $p < .05$), distributive ($\beta = .25$, $p < .05$), and interactional ($\beta = .24$, $p < .05$).

Discussion

The present study examined the relationship between among three types of justice (distributive, procedural, and interactional) and mental health-related QOL, satisfaction with staff, and PSOC in residents of LTC. Physical health-related QOL and functional status of the residents were controlled.

Justice and Mental Health-Related QOL

After controlling for physical health-related QOL and functional status, none of the three types of justice was a significant predictor of mental health-related QOL. This finding was

inconsistent with the original hypothesis, which stated that justice would be correlated with mental-health QOL and that distributive justice would be the strongest predictor of mental health-related QOL after controlling for physical health-related QOL and functional status. This is also inconsistent with previous research conducted in the workplace, which found that perceptions of justice (all three types) were an important factor in several areas of mental health, including depression (Tepper, 2001; Spell & Arnold, 2007), stress (Riolli & Savicki, 2006), and increased risk for psychiatric disorders (Kivimaki et. al, 2003). Additionally, this finding is inconsistent with the two-factor model's assertion that distributive justice should be associated with person-referenced outcomes, such as mental health-related QOL (Sweeney & McFarlin, 1993).

It is important to note that the present study examined mental health-related QOL based on the recent movement in justice research towards examining the association between perceived justice and well-being instead of distress (Greenberg, 2004). The association between perceived justice and well-being has been supported in healthcare decision making research (Murphy-Berman, Cross, & Fondacaro, 1999), and in family decision-making research (Fondacaro, Dunkle, & Pathank, 1998). It could be that the perception of just exchanges, decisions, and interpersonal treatment is not enough to enhance QOL for LTC residents; however, it may be that perceptions of *injustice* in those domains could be associated with increased levels of stress or symptoms of mental illness. Having a perceived fair environment on the whole might prevent residents from experiencing some level of distress; however, it appears that fair perception of outcomes, decisions, and interpersonal exchanges are not associated with enhanced resident well-being.

Physical health-related QOL emerged as the strongest predictor of mental health-related QOL, indicating that the more favorably a resident perceives her/his physical health-related QOL, the greater a resident's sense of mental well-being. This relationship was present independent of functional status, demonstrating the connection between physical and mental health-related QOL in LTC residents, independent of residents' functional capabilities. For example, even if an older adult is functionally dependent in several areas (i.e. bathing, toileting, transferring, etc), the belief that her/his physical health-related QOL is good is associated with a better mental health-related QOL. In optimizing mental health-related QOL in LTC residents, it is clearly important that residents perceive a good QOL with respect to their physical condition.

In sum, responses from the LTC residents in the present study suggest that none of the three types of justice was related to mental health-related QOL after controlling for physical health-related QOL and functional status. Instead, it appears that for LTC residents, perceiving a strong physical health-related QOL is quite central to mental well-being. Perceiving a just environment may serve as a buffer to distress, but it is not associated with enhanced well-being.

Justice and Satisfaction with Staff

When examining the relationship between justice and satisfaction with staff, procedural justice perceptions showed the strongest association with increased satisfaction levels above and beyond physical health-related QOL and functional status. This is consistent with the original hypothesis and with several studies examining the relationship between procedural fairness perceptions and satisfaction with one's supervisor (Deconink & Stilwell, 2004) and overall job satisfaction (Masterson, Lewis, Goldman, & Taylor, 2000; Mossholder, Bennett, & Martin, 1998; Weslowski & Mossholder, 1997). The finding that procedural justice showed the strongest association with resident satisfaction with staff is also consistent with the two-factor model,

which stated that procedural justice would show the strongest association with organization-related outcomes (Sweeney & McFarlin, 1993).

These findings indicate that when residents believe that decision-making procedures are just, they tend to feel a greater sense of satisfaction with the staff at the facility, independent of functional status or physical health-related QOL. Previous research has found that functional status and physical health-related QOL can greatly impact resident perceptions of satisfaction with various aspects of their care (Kruzich, et. al, 1992), so these findings indicate that even when the effects of physical health-related QOL and functional status are removed, residents are more satisfied with the staff when decision-making procedures are consistent, transparent, and clearly articulated by staff. Given that staff are often in charge of making many decisions in the facility, it is important for residents to perceive justice in decision-making procedures if they are to feel satisfied with the staff.

Additionally, interactional justice perceptions were associated with feeling more satisfied with the staff. There is some support for the role of interactional justice in satisfaction (Masterson et. al, 2000); however, the association between procedural justice and satisfaction (with job or supervisor) has been more extensively reported. Given that researchers often comment on the importance of the dignified, kind, and compassionate treatment of older adults (Rubenstein, 2000), it seems to fit that if a resident perceives fair interpersonal treatment by staff, s/he would also feel more satisfied overall with facility staff.

Justice and PSOC

Distributive, procedural, and interactional justice were all associated with PSOC after controlling for physical health-related QOL and functional status, and procedural justice emerged as the strongest predictor. Distributive justice was the second strongest predictor of PSOC,

although all three types of justice showed essentially the same strength as predictors (Beta weights were all within .01 of each other). The original hypothesis indicated that procedural and interactional justice would show the strongest relationship to PSOC, so the findings are partially-consistent with this hypothesis. Research conducted in an academic context showed that procedural and interactional justice perceptions were associated with a stronger PSOC (Vieno, Perkins, Smith, & Santinello, 2005). Prior research had not yet examined the association between distributive justice perceptions and PSOC, so this may account for the present study's findings that distributive justice was as strongly associated with PSOC as procedural and interactional justice.

Findings from the present study indicated that residents who perceive fair decision-making process and interpersonal exchanges felt a stronger PSOC, while controlling for the effects of functional status and physical health-related QOL. When residents feel like they have a voice in facility decisions, they are more likely to feel a stronger PSOC. For example, one means of providing the opportunity for residents to feel heard is a resident-council meeting where residents can discuss important issues, such as food, activities, availability of services, or staff treatment. Attending this meeting and voicing one's opinion with the support of other residents could contribute to feelings of belongingness and community. Finally, when residents perceive fair and honest interactions with staff, they also have a stronger PSOC. Important to interactional fairness is the perception that staff are honest, kind, considerate, and will provide residents with the information necessary to navigate life in LTC effectively (Bies & Moag, 1986). This respect from staff may allow residents to feel comfortable and valued, thus contributing to a stronger PSOC.

Additionally, it appears that if a resident believes that s/he has been treated fairly by staff in comparison to other residents, s/he feels a stronger PSOC. Distributive justice involves the fair exchange of input-output (Adams, 1963, 1965). For example, if a particular resident expends a great deal of effort to comply with staff requests and receives less personal attention or privileges than other residents, s/he may believe that s/he has been treated unfairly. It seems that when residents believe that they are treated fairly in comparison to other residents, they might avoid the feeling of frustration and sense of being "wronged" that accompanies unfair treatment. Given that distributive justice perceptions are effected by social comparison (Adams, 1965), residents might have more positive feelings towards other residents whom they perceive to have been given equal rewards, as opposed to those whom they feel have been given more rewards for perceived equal behavior. Avoiding negative feelings towards staff and other residents may allow residents to feel connected to others, and more like they belong, thus contributing to a stronger PSOC.

Strengths and Limitations

The results of the present study should be tempered by several limitations. First, the majority of the participants in the present study identified as White/Caucasian females. Although this is consistent with present trends on the demographic of older adults residing in community-based LTC (Department of Health and Human Services Administration on Aging, 2004), caution should be utilized when generalizing the results.

Additionally, some of the participants were unable to read and fill out the survey on their own; instead, the researcher read the survey aloud and circled the responses indicated by the resident. For these participants, the presence of the researcher, and the fact that the researcher

knew how the resident responded, may have impacted the way that residents responded (Bowling, 2005).

Additionally, some mutlicolinearity existed between scores on the procedural and interactional justice scales (see Table 2). A long-standing debate exists in the justice literature, with some researchers arguing that these two constructs are independent and distinct (Cohen-Charash & Spector, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001), and others arguing that they overlap such that they are not separate constructs (Cropanzano & Greenber, 1997; Tyler & Bies, 1990) It is unclear whether they reflect the same construct or are distinct constructs in this population, and this should be explored in future research.

Despite the existing limitations, there are several strengths evident in the present study. First, the present study examined a population that has historically been under-represented in the literature base, residents of LTC (Olson, 2001). Additionally, the present study examined the LTC resident experience based on the "living in the workplace" framework, which had not previously been utilized in looking at the resident experience. Previous research utilized the medical model/institutional framework as a basis for the study of LTC (Ragsdale & McDougall, 2008), which may not have accurately captured important aspects of living in LTC, such as the perception of justice in exchanges, decision-making, and interpersonal treatment. Additionally, utilizing the institutionalized setting framework does not align with current efforts towards culture change in LTC; however, the "living in the workplace" framework seems to capture aspects of both the medical model and home-like framework that are likely present in the current, transitional state of LTC facilities.

In addition to utilizing a new framework to examine the LTC resident experience, the present study adds to existing literature by investigating resident perceptions of justice, including

distributive, procedural, and interactional. This is consistent with the culture change movement (Rahman & Schnelle, 2008) and with overall trends in healthcare research towards examining satisfaction and other areas of importance from the perspective of the consumer (Mead & Bower, 2000). Moreover, the justice construct appears to be an effective way to operationalize perceived fair and just treatment for residents, including feeling that their voice has been heard in decision-making processes, that they have been treated with dignity and respect, and that they receive treatment that is fair and equal to that of other residents. Also, existing justice scales were modified to reflect the nature of living in LTC; these scales could be used for further research since they demonstrate acceptable to good internal consistency and predictive value. Finally, residents were surveyed at several different facilities in the region, providing a rich sample.

Implications

The present study has implications for the manner in which LTC resident treatment and care should be approached. First, given that physical health-related QOL was the most important predictor of mental health-related QOL, it is important that residents have the highest *perception* of physical health-related QOL possible. Although aging is not synonymous with disease or poor health, older adults in LTC have often faced health functional challenges which initially prompted a move to LTC. Since older adults may not be as functionally able as once before, feeling or perceiving one's physical health-related QOL to be high appears to be central to the maintenance of mental well-being for the LTC resident. Overall, it is clear that the connection between perceptions of physical and mental health is strong for residents of LTC.

Additionally, given that perceiving interactional and procedural justice in LTC is strongly associated with how satisfied a resident feels with the staff, staff training can focus specifically on these two components of resident interaction during facility-wide training sessions. Fostering

a culture of fair and just treatment for residents, both in the form of interpersonal interactions and consistent, transparent decision-making procedures, can aid in the resident's satisfaction with the staff. Moreover, promoting an overall culture of justice in the *entire* LTC facility (including residents and not only with regards to LTC employees), may help residents to feel more satisfied with staff.

The present study also identified an association between distributive, procedural, and interactional justice perceptions and PSOC. This indicates that when an LTC resident believes that decision-making processes and interpersonal treatment are fair and perceives equitable treatment from staff, a resident also perceives a stronger sense of community. As LTC facilities move towards a "community" model by creating "neighborhoods" that include smaller groups of residents (American Health Care Association, 2005), fostering a strong PSOC continues to be a central goal. Staff can contribute to this by honoring resident rights, treating residents with kindness and respect, helping residents feel heard, and emphasizing equal resident-staff effort-reward exchanges. These actions may contribute to stronger LTC resident perceptions of justice and community.

Future Directions

The present study examined the relationship among three types of justice and mental health-related QOL, satisfaction with staff, and PSOC in a sample of older adults residing in LTC. Functional status and physical health-related QOL were held constant. As noted above, a connection between a perceived just or fair environment and a better mental health-related QOL was not established after controlling for physical health-related QOL and functional status. Future research in this area utilizing the transactional model of stress (Lazarus & Launier, 1978; Lazarus & Folkman, 1984; Lazarus, DeLongis, Folkman, & Gruen, 1985) could be approached

from the injustice-as-stressor perspective (Tepper, 2001), examining the relationship between *in*justice and mental *illness*. Specifically, feelings of depression, suicidality, insomnia, or anxiety could be addressed instead of the present study's aim, well-being. While previous studies in the justice literature have found a significant relationship between perceived justice and well-being (Fondacaro, Dunkle, & Pathank, 1998; Murphy-Berman, Cross, & Fondacaro, 1999; Greenberg, 2007), there is also empirical evidence of a relationship between injustice and symptoms of mental illness (Greenberg, 2006; Tepper, 2001; Spell and Arnold, 2007), which should be the focus of future justice research in LTC.

Furthermore, based on the results of the present study, it is unclear whether or not interactional and procedural justice are distinct constructs in LTC. Future research should examine the strength of the association between procedural and interactional justice, and should try to uncover unique predictive ability with other aspects of the LTC resident experience to determine whether or not these are two different constructs in this population. Additionally, future research could focus on identifying other constructs that are associated with the perception that an LTC resident's experience is fair. For example, perceived justice might also be associated with frequency of participation in available activities or perceived social support. Identifying other areas important to the resident experience that are associated with perceived justice can assist researchers in understanding further how justice fits into the LTC environment. Furthermore, future research can identify predictors of the perception that the LTC environment is just, such as perceived control. The construct has been identified as a predictor of justice in the workplace literature (Shapiro & Brett, 2005). Identifying predictors of and other outcomes of perceived justice may eventually lead to the creation of a model of justice specific to the experience of the LTC resident.

In addition, future research could explore the creation of an intervention targeting the perception of a just or fair environment for LTC residents. This intervention could include several principles of justice, such as treating residents with kindness, respecting resident rights, allowing residents to have a voice in decisions, making transparent decisions, and providing residents with additional information about decisions. Satisfaction with staff and PSOC could be used as outcome variables, to be measured before and after the intervention to examine its effectiveness.

Finally, future research should continue to utilize non-traditional frameworks to examine aspects of the LTC resident experience. For example, the present study utilized the "living in the workplace" framework as a means of identifying a previously un-researched portion of the LTC resident's experience, justice. Exploring non-traditional frameworks in this line of research allows researchers to deviate from the perspective of LTC as an institutional setting operating under the medical model. This promotes the recognition that living in LTC might not be exactly like living in one's home or like living in an institution as it once was, but that is may be more comparable to living in a workplace. If the LTC resident experience is indeed akin to living in the workplace, LTC researchers can capitalize on the abundance of existing workplace literature to help guide future LTC research and increase understanding LTC. New and important facets of LTC resident life can thus be explored and recognized, in-turn, promoting the overall understanding of the LTC living environment and the well-being of the LTC resident.

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Table 1

Similarities Between the Experience in LTC and in the Workplace Environment

Experience	LTC	Workplace
Structured schedule	Waking, grooming, meals, activities	Shift time, meals, deadlines
Scheduled appointments	Medical providers, occupational and physical therapy	Department or team meetings
Accountable to supervisor/staff	Taking medication, attending activities, complying with facility policies	Completion of work, following company policies
Performance evaluation and feedback	Care conference, resident notification of feedback on better "performance"	Work performance, performance evaluation, feedback meeting
Termination/removal	Grossly inappropriate behavior or disobeying of facility rules, consistent aggression towards staff or other residents	Counterproductive work behavior, disobeying company rules
Reward of positive behaviors	Favors, more staff attention, social support, "resident of the month," privileges	Increased pay, positive feedback, formal recognition
Internal policies/rules/regulations	Resident rights, resident guidelines, facility standards	EOE, employee manual, workplace standards
Filing grievances	Ombudsman	Human Resources
External requirements placed on facility	Federal nursing home requirements (OBRA), state-level requirements	Department of Labor requirements, OHSA

Table 2

Descriptive Statistics, Reliabilities, and Correlations Among Justice and QOL, Satisfaction with Staff, and PSOC

Variable	*M*	*SD*	1	2	3	4	5	6	7	8
1. Functional Status	2.66	1.64	--							
2. Physical health-related QOL	20.05	5.76	-.32**	(.78)						
3. Mental health-related QOL	23.49	4.23	.01	.33**	(.70)					
4. Satisfaction with staff	15.14	3.29	.08	.03	.15	(.74)				
5. PSOC	31.15	5.66	.25*	.05	.26*	.54**	(.82)			
6. Distributive justice	10.01	4.78	-.14	.07	.13	.24*	.28**	(.82)		
7. Procedural justice	27.65	4.89	.33**	-.02	.27**	.61**	.46**	.25**	(.84)	
8. Interactional justice	23.49	4.49	.24*	.02	.24*	.57**	.43**	.15	.69**	(.79)

Note. Alpha coefficients in parentheses, N = 107. * $p < .05$. ** $p < .01$.

Table 3

Hierarchical Multiple Regression Analysis for Effects of Distributive, Procedural, and Interactional Justice Predicting Mental Health-Related QOL

Equation	Variable	β	se β	F	R^2	ΔR^2
Step 1				4.88*	.10	
	Functional status	-.03	.31			
	Physical health-related QOL	.31**	.08			
Step 2				4.36**	.20	.10*
	Distributive justice	.06	.09			
	Procedural justice	.15	.12			
	Interactional justice	.20	.13			

Note. N = 107, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2

* $p < .05$, ** $p < .01$

Table 4

Hierarchical Multiple Regression Analysis for Effects of Distributive, Procedural, and Interactional Justice Predicting Satisfaction with Staff

Equation	Variable	β	se β	*F*	R^2	ΔR^2
Step 1				1.17	.02	
	Functional status	-.07	.19			
	Physical health-related QOL	.03	.05			
Step 2				14.35**	.44	.41**
	Distributive justice	.01	.06			
	Procedural justice	.40**	.08			
	Interactional justice	.31**	.08			

Note. N = 107, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2
*$p < .05$, ** $p < .01$

Table 5

Hierarchical Multiple Regression Analysis for Effects of Distributive, Procedural, and Interactional Justice Predicting Psychological Sense of Community

Equation	Variable	β	se β	*F*	R^2	ΔR^2
Step 1				3.45*	.07	
	Functional status	.16	.34			
	Physical health-related QOL	.09	.09			
Step 2				14.35**	.37	.30**
	Distributive justice	.25**	.10			
	Procedural justice	.26*	.14			
	Interactional justice	.24*	.15			

Note. N = 107, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2

* $p < .05$, ** $p < .01$

Appendix A

Demographic questionnaire.

Section I: Please check or write down a response that best describes you.

1. Gender __ Female __ Male

2. Ethnicity

__ White/ Caucasian
__ Asian-American-Pacific Islander
__ Latino (a)/ Hispanic
__ Other _____
__ African American
__ Native American
__ Multiracial

3. Year of Birth: _____

4. How long have you lived at *this* facility? _____(years)

5. Which unit or wing do you live on? _____

5. How many times do family or friends visit you here on a weekly basis?

_____ visits

6. Please put a check next to the activities in which you receive *total* care assistance in doing (or have significant difficulty doing independently):

___Bathing ___Toileting ___Dressing

___Eating ___Transferring from bed to a chair

Appendix B

Residents' fairness perceptions of staff

Please use the rating scale below to describe how accurately each statement describes **YOUR** experience at the nursing home. Describe your experiences as they generally are now, not as you wish them to be in the future. Please be as honest as possible.

Distributive Justice

The following items refer to your <u>privileges in this nursing home</u>. **To what extent…**		Not at all	Hardly, but more than "not at all"	To some extent	To a moderate extent	To a large extent
1.	When you comply with staff requests, do you receive extra's from staff, such as drinks or food?	1	2	3	4	5
2.	When you comply with staff requests, do you receive additional personal attention?	1	2	3	4	5
3.	When you comply with your care plan, are you allowed to participate in any activity that you would like?	1	2	3	4	5
4.	When you comply with your care plan, do you receive extra support from the staff?	1	2	3	4	5

Procedural Justice

In general, this nursing home has developed procedures designed to…		Strongly disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly agree
1.	Collect accurate information that is necessary to make decisions.	1	2	3	4	5
2.	Provide opportunities to appeal or challenge decisions.	1	2	3	4	5
3.	Attempt to have all sides represented in decisions.	1	2	3	4	5
4.	Generate standards so the decisions can be made with consistency.	1	2	3	4	5
5.	Hear the concerns of all residents affected by decisions.	1	2	3	4	5
6.	Provide information about the decisions made and how they will be carried out.	1	2	3	4	5
7.	Entertain requests for additional information or provide clarifying information about the decision.	1	2	3	4	5

Interactional Justice

To what extent are the following true for you… **In general, when making decisions that affect you, staff of this nursing home…**		Strongly disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly agree
1.	Consider your viewpoint when making decisions.	1	2	3	4	5
2.	Leave out their own personal biases when making decisions.	1	2	3	4	5
3.	Provide you with information about the decisions made.	1	2	3	4	5
4.	Treat you with kindness and consideration.	1	2	3	4	5
5.	Show concern for your rights as a resident.	1	2	3	4	5
6.	Take steps to deal with you in a truthful manner.	1	2	3	4	5

Appendix C

Mental Health QOL Subscale of Short- Form Health Survey-12

	For the following items, please circle one number for each question that best describes how you have been feeling over the PAST TWO WEEKS.	Never	A little of the time	Some of the time	A lot of the time	All of the time
1.	I felt energized.	1	2	3	4	5
2.	I accomplished less because of an emotional problem, such as feeling depressed or anxious.	1	2	3	4	5
3.	I had trouble doing normal activities because of an emotional problem, such as feeling depressed or anxious.	1	2	3	4	5
4.	I felt calm and peaceful.	1	2	3	4	5
5.	I felt downhearted and blue.	1	2	3	4	5
6.	My emotional difficulties kept me from visiting with friends, family, and other residents.	1	2	3	4	5

Appendix D

Physical Health Quality of Life Subscale of Short-Form Health Survey-12

In general....		Strongly Disagree	Disagree	Neither Agree Nor Disagree	Somewha Agree	Agree
1.	Overall, I am in good health.	1	2	3	4	5
2.	My physical health limits me in moderate activities, such as making my bed, organizing my things or completing a project.	1	2	3	4	5
3.	My physical health limits me in walking to and from places in the nursing home.	1	2	3	4	5

For the following items, please circle one number for each question that best describes how you have been feeling over the PAST TWO WEEKS.		Never	A little of the time	Some of the time	A lot of the time	All of the time
1.	I wasn't able to do my normal activities in the nursing home because of my physical health.	1	2	3	4	5
2.	I accomplished less due to my physical health problems.	1	2	3	4	5
3.	Pain interfered with my normal activities here.	1	2	3	4	5

Appendix E

Satisfaction with Staff Subscale of Resident Satisfaction Questionnaire

Thinking about the staff, how would you rate:		Poor	Fair	Neutral	Good	Excellent
1.	The help you received from the home at the time you moved in?	1	2	3	4	5
2.	Their attitude toward you?	1	2	3	4	5
3.	Their respect for your privacy?	1	2	3	4	5
4.	The promptness with which they respond to your calls for help?	1	2	3	4	5

Appendix F

Brief Psychological Sense of Community Scale

In general....		Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1.	I can get what I need in this nursing home.	1	2	3	4	5
2.	This nursing home helps me fulfill my needs.	1	2	3	4	5
3.	I feel like a member of this nursing home.	1	2	3	4	5
4.	I feel a sense of belonging in this nursing home.	1	2	3	4	5
5.	I have a say about what goes on in this nursing home.	1	2	3	4	5
6.	People in this nursing home are good at influencing each other.	1	2	3	4	5
7.	I feel connected in this nursing home.	1	2	3	4	5
8.	I have a good bond with others in this nursing home.	1	2	3	4	5