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Valerie Lander McCarthy
University of Louisville, valerie.mccarthy@louisville.edu

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A New Look at Successful Aging: Exploring a Mid-range Nursing Theory among Older Adults

in a Low-income Retirement Community

Valerie Lander McCarthy, PhD, RN

University of Louisville

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Valerie Lander McCarthy, PhD, RN

Abstract: *The current view of successful aging excludes elders with disease or disability, limits the potential for success among disadvantaged populations, and fails to consider older adults' own criteria for success, especially in the existential or spiritual domain. This cross-sectional study was a preliminary investigation of a mid-range nursing theory (Flood, 2005) of successful aging. A random, stratified sample (N= 112) was used. Questionnaires were administered to small groups of non-demented older adults. Relationships among study variables were examined using hierarchical multiple regression. Adaptation and transcendence explained 45.4% of the variance in successful aging, independent of age, income, function, and health. Transcendence accounted for 2.5 times the effect of adaptation.*

Key Words: *adaptation, lifespan development, health disparities, successful aging, transcendence*

A New Look at Successful Aging: Exploring a Mid-range Nursing Theory among Older Adults in a Low-income Retirement Community

The current view of successful aging as freedom from disease and disability (Rowe & Kahn, 1998) excludes older adults with any degree of chronic disease; focuses on behavioral determinants of health rather than social and environmental factors, thus limiting the potential for success among low-income and minority groups; and fails to consider older adults' own criteria for successful aging, especially in the existential or spiritual domain. A new way of looking at successful aging defines success, not by the absence of disease or disability, but by an individual's personal satisfaction with the ability to adapt to change over time, while maintaining a sense of connectedness, meaning, and purpose in life (Flood, 2005). Flood's mid-range nursing Theory of Successful Aging proposes that adaptation and transcendence are the primary predictors of this new view of successful aging.

The dual purposes of this study were to investigate relationships among adaptation, transcendence, and successful aging (Flood, 2005) and to explore the usefulness of successful aging as a guide to a richer, more meaningful old age for all older adults, regardless of disease, disability, and disadvantages. The study focused on successful aging among older adults dealing with chronic disease, functional limitations, and racial or socioeconomic disadvantages rather than healthy, high functioning older adults. Social and environmental factors were considered along with behavioral determinants of health.

Literature Review

The concept of successful aging commonly focuses on population-based epidemiological studies aimed at understanding genetic, biochemical, and behavioral factors influencing the incidence of disease and disability in late life (Rowe & Kahn, 1987, 1997). Within psychosocial disciplines, successful aging focuses on such constructs as adaptation, specifically coping strategies older adults use to adapt to the changes, challenges, and opportunities of aging (Aspinwall & Taylor, 1997; Baltes & Baltes, 1990; Kahana & Kahana, 1996; Schwarzer & Taubert, 2002). Spiritual or existential aspects of successful aging, such as transcendence, have received some attention in philosophical and theoretical literature but scant empirical investigation (Erikson & Erikson, 1997; Maslow, 1969, 1971; Tornstam, 1989, 2005; Reed,

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1991a, 2003, 2009). Literature about these components of Flood's (2005) mid-range theory – successful aging, adaptation, and transcendence – is discussed below.

Successful Aging

Successful aging was the most common term used to indicate a positive old age (Peel, Bartlett, & McClure, 2004), perhaps due to its use in several large aging studies, e.g., the MacArthur Successful Aging Studies (Rowe & Kahn, 1987, 1997), the Harvard Study of Adult Development (Vaillant & Mukamal, 2001), the Alameda County Study (Strawbridge, Cohen, Shema, & Kaplan, 1996) and the Berlin Aging Studies (Baltes & Baltes, 1990). The predominant view of successful aging as freedom from disease and disability with active social engagement gained popularity with the lay public as a result of Rowe & Kahn's 1998 book, *Successful Aging*.

Current use of the term *successful aging* arose from the multidisciplinary MacArthur Study of Successful Aging, conducted by Rowe and Kahn from 1988 to 1996. The study focused on identifying those factors that, “put one octogenarian on cross-country skis and another in a wheelchair” (Rowe & Kahn, 1998, p. xii). The MacArthur Study changed our understanding of aging in fundamental ways by showing lifestyle was as significant as genetics in determining health in later life, and it generated important research with the potential to decrease morbidity and mortality.

This view of successful aging was problematic however. In addition to a lack of consensus among disciplines on definitions and criteria for successful aging (Phelan & Larson, 2002), older adults' own criteria for successful aging were not adequately considered (Bowling & Dieppe, 2005; Phelan, Anderson, LaCroix, & Larson, 2004), particularly criteria within the spiritual or existential domain (Crowther, Parker, Achenbaum, Larimore, & Koenig, 2002; Sadler & Biggs, 2006). Unidimensional, normative criteria narrowed the possibility of successful aging for individuals with chronic disease and disability (Schulz & Heckhausen, 1996) and measured success by artificial social norms which may not reflect cultural or ethnic values. This view of successful aging has marginalized low-income and minority groups by focusing attention on behavioral determinants of health rather than social and environmental factors (Holstein & Minkler, 2003).

A New View of Successful Aging

Flood (2005) offers an alternate view of successful aging that focuses on the individual's perspective, encompassing physical, functional, and psychosocial health while adding the existential or spiritual domain. Using the process of concept analysis, Flood (2003) defines successful aging as “the individual's perceived satisfaction in adapting to the physical and functional changes of aging, while experiencing spiritual connectedness and a sense of meaning or purpose in life” (p. 34). Flood's multidimensional definition recognizes the importance of the individual's personal values and beliefs and considers all four domains of life within nursing's sphere – physical, functional, psychosocial, and spiritual.

Flood's theory recognizes that older adults with chronic disease or functional limitations may experience satisfaction with their ability to cope and adapt and continue to find meaning in their lives. Flood's theory suggests a more holistic view of health, calling attention to social and environmental factors such as adequate income, access to healthcare, safe neighborhoods and the availability of aging services, making successful aging a possibility for both the octogenarian on skis and the 80-year old in a wheelchair.

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Flood used the process of reformulation (Reed, 1991a) to generate the propositions of her mid-range theory. Merging Roy's Adaptation Model (1984) with Tornstam's (1997) concept of gerotranscendence, Flood proposed that adaptive coping within three domains – functional, intrapsychic, and spiritual – allowed the individual to progress to a fourth coping mechanism, i.e., gerotranscendence. Achievement of gerotranscendence, in turn, resulted in successful aging. The relationships among Flood's constructs are shown in Figure 1.

<Insert Figure 1 about here>

Adaptation

Flood proposed two factors contributing to this new view of successful aging. The first, *adaptation*, is an evolutionary or developmental process with an inherently positive outcome, achieved through coping strategies used to adjust to or alter the environment. In response to stress, adaptive behaviors allow older adults to balance internal needs and external demands, to monitor and evaluate goals, to observe and learn from observation and experience, and to adopt behaviors to change either the environment or personal attitudes and actions (Poon, Gueldner, & Sprouse, 2003). Through adaptation, older adults enhance their ability to survive and thrive.

Adaptation is a dynamic balance between person and environment resulting in *integrity*, or wholeness, achieved through effective coping within four domains – physiologic/physical, role function, interdependence, and self-concept/group identity (Roy, 1984). Adaptation specifically among older adults is the positive outcome of self-regulatory and coping behaviors that allows older adults to cope and adjust effectively to the unique constraints and opportunities associated with aging (Schwarzer & Taubert, 2002).

Coping is the primary mechanism through which adaptation occurs. Cognitive factors that shape an individual's perception of stress and selection of coping behaviors include self-regulation, self-efficacy, motivation, control, appraisal of demands and resources, temporal factors, and the effects of uncertainty (Lazarus & Folkman, 1984; Schwarzer & Taubert, 2002). *Proactive* coping (Schwarzer & Taubert, 2002) refers to coping in response to current stress and coping behaviors aimed at avoiding or minimizing future stress or increasing the potential to achieve future goals.

Transcendence

The construct of *transcendence* was derived from life span development theory, which posits that individuals grow and develop continually throughout life (Erikson & Erikson, 1997; Jung, 1972; Maslow, 1971). Representing a late life developmental stage, the term transcendence originated with the verb *transcend*, which means to rise above or move beyond time, culture, self, and others (Maslow, 1969). Transcendent behaviors include moving beyond weaknesses, fears, and dependency; transcending the opinions or expectations of others, such as social conventions, family roles, or a focus on others to the exclusion of self; and achieving a sense of unity with the self, nature, others – especially the next generation – and a higher power (Maslow, 1969, 1971).

Tornstam (1989, 2005) proposed a theory of gerotranscendence describing the final stage in a natural progression towards maturation and wisdom. Gerotranscendence is marked by a sudden shift from a materialistic and rational view of the world to a more cosmic viewpoint with greater acceptance of self and others, increased selectivity of relationships and activities based on

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personal choices rather than expectations of others, greater need for solitude, and decreased fear of death (Tornstam, 2005).

Similar to, but distinct from gerotranscendence, *self*-transcendence is defined as “the expansion of one’s conceptual boundaries inwardly through introspective activities, outwardly through concerns about others’ welfare, and temporally by integrating perceptions of one’s past and future to enhance the present” (Reed, 1991b, p. 71). Reed (2003) describes self-transcendence as a developmental imperative, an innate human characteristic much like other developmental processes. Development of self-transcendence is a gradual, nonlinear process throughout middle- and old-age, rather than the sudden shift in perspective described by Tornstam (1989).

Reed (2003) argues that by developing self-transcendence older adults view the world more contextually, more easily tolerate ambiguity and the paradoxes inherent in life, and demonstrate greater awareness of the spiritual and existential domain. Behaviors reflecting self-transcendence include such altruistic activities as volunteering, time spent in reflection on spiritual or existential beliefs, lifelong learning, creativity, journaling, and intergenerational relationships which allow passing on wisdom gained through accumulated knowledge and experience (Reed, 2009).

Summary

By examining successful aging from many perspectives, Flood’s (2005) new view of successful aging expands current successful aging theory by merging biomedical and psychosocial perspectives with the perspectives of older adults themselves, adding a spiritual or transcendent dimension. Adaptation and transcendence appear to be substantially related to successful aging. The ability to adapt and cope to achieve personally valued goals and an outlook on life which broadens perceptions of the self, others, and the world may foster the new view of successful aging.

The new view of successful aging is multidimensional, comprehensive, and applicable to older adults who remain healthy and active in late life, as well as those who experience chronic disease or loss of independence. Success is defined not only by physical and functional status, but by the richness and meaning of an older adult’s life. Because theory serves as a road map to guide research, policy and practice, Flood’s theory offers a way of looking at successful aging that may influence nursing science, energize nursing advocates, and decrease healthcare disparities. The potential for successful aging, viewed from the perspective of an individual, exists for all older adults, regardless of health, socioeconomic status, culture, race, or gender.

Research Questions

The aim of the present study was to investigate relationships among adaptation, transcendence, and successful aging, controlling for age, income, function, and health, to explore the potential usefulness of Flood’s view (2005) of successful aging, as a guide to nursing practice, research, and policy for all older adults regardless of disease, disability, or socioeconomic disadvantages.

Specifically, the study examined relationships of two predictor variables, transcendence and adaptation, with a single outcome variable, successful aging, controlling for age, income, health, and functional status. Relationships among study variables are shown in Figure 2. Four research questions were addressed:

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1. What are the differences in successful aging among groups based on age, gender, race, marital status, education, income, function, perceived health, or number of chronic diseases?
2. What are the relationships among adaptation, transcendence and successful aging?
3. To what degree do adaptation and/or transcendence predict successful aging?
4. What are the differences in adaptation, transcendence, and successful aging among participants who report they are aging successfully and those who do not?

<Insert Figure 2 about here>

Methods

To answer these research questions, a descriptive cross-sectional survey study was conducted among a stratified random sample (N= 112) of non-demented, low-income, racially diverse older adults, aged 65 and older, living independently or receiving assisted living services in a 390-unit, non-profit continuing care retirement community (CCRC). The investigator administered questionnaires to participants in small groups (n= 5–7), strictly adhering to a standardized protocol which included accommodations for sensory and literacy limitations.

Setting and Sample

The purpose of the study was to explore successful aging among older adults who were dealing with chronic disease, functional limitations, and racial or socioeconomic disadvantages rather than healthy, high functioning older adults. Social and environmental determinants of health were of particular interest. For these reasons a low income, racially diverse population living in an urban non-profit CCRC was selected for the study. A representative sample was randomly selected from a sampling frame consisting of all 239 residents, stratified as either independent or assisted living. Inclusion criteria for participation in the study were (a) being age 65 or older, (b) achieving a normal score on the Mini-Cog Dementia Test (Borson, Scanlan, Brush, Vitaliano, & Dokmak, 2000), (c) having the ability to understand English, and (d) demonstrating sufficient sensory, physical, and cognitive ability to respond to questionnaires. Table 1 displays characteristics of the sample compared with national and local populations.

<Insert Table 1 about here>

Measures

English-language instruments validated among older adults were not available for adaptation (Roy, 1984) and gerotranscendence (Tornstam, 1989, 2005), the theoretical foundations of Flood's (2005) conceptual definitions of the constructs. A thorough review of the literature and a feasibility study (McCarthy, 2009) were used to identify operational definitions for the primary variables which were congruent with Flood's conceptual definitions.

Adaptation: Proactive Coping Inventory Subscale. Adaptation was operationalized using the Proactive Coping Subscale of the Proactive Coping Inventory (Greenglass, Schwarzer, Jakubiec, Fiksenbaum, & Taubert, 1999), based on Schwarzer & Taubert's (2002) theory of proactive coping. As illustrated in Figure 2, propositions of the proactive coping theory are congruent with Flood's (2005) theoretical basis for adaptation (Roy, 1984). The Proactive Coping Subscale is future-oriented and positively focused; significantly correlated with well-

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being, tenacious goal pursuit, and striving for personal growth and meaning in life; and measured the overall tendency toward coping rather than specific coping mechanisms (Sohl, 2008).

The 55-item Proactive Coping Inventory (Greenglass, et al., 1999) is composed of 7 subscales, designed to be used singly or together. The unidimensional Proactive Coping Subscale of the PCI consists of 14 items on a 4-point Likert-type scale, ranging from “not at all true” to “completely true” in response to questions such as, “I like challenges and beating the odds,” and, “When I experience a problem, I take the initiative in resolving it.” The Proactive Coping Subscale is scored by summing the items, with higher numbers indicating greater coping. The scale has been validated among a number of populations, including older adults, with demonstrated internal consistency ($\alpha = .80$ to $.85$).

Transcendence: Self-transcendence Scale. Transcendence was operationalized using Reed’s Self-transcendence Scale (STS) (1989). Like gerotranscendence (Tornstam, 1989, 2005), which provided the theoretical basis for the transcendence construct in Flood’s (2005) theory, self-transcendence is based in lifespan development theory and proposes a late life shift in older adults’ perspective. The propositions of self-transcendence theory are congruent with those of gerotranscendence theory (see Figure 2).

The unidimensional STS consists of 15 items on a 4-point Likert-type scale which measures older adults’ perceptions of the degree or level of transcendence, ranging from 1 for “not at all” to 4 for “very much.” The STS uses mean scores, with higher scores designating greater self-transcendence. It is designed to be administered as an interview or a questionnaire. Items include: “sharing my wisdom and experience with others,” “helping others in some way,” and “finding meaning in my past experiences.” Reported internal validity is demonstrated by Cronbach’s alphas ranging from $.80$ to $.88$ (Coward, 1990), with test/re-test stability of $.70$ to $.95$. Content validity of the STS (Reed, 1989) is based on a thorough literature review (Reed, electronic communication, January 11, 2008). Support for construct validity was found in the relationship of STS scores with other measures, among research participants who scored as hypothesized in a phenomenological study of self-transcendence, and in secondary analysis of data from correlational and longitudinal studies on developmental resources (e.g. Coward, 1990; Reed, 1991b).

Successful aging: Successful Aging Inventory. The Successful Aging Inventory (SAI) (Flood, 2008), used as the outcome measure in the study, was developed specifically to measure the new view of successful aging among older adults, rather than other common measures such as life satisfaction or well-being, which did not fully capture the new view of successful aging theory. The 20-item self-report SAI uses a 5-point Likert-type scale with choices ranging from 0 for “hardly ever” to 4 for “almost always” in response to such statements as, “I have been able to cope with the changes that have occurred to my body as I have aged” and, “I am in a positive, pleasant mood.” The brevity of the scale and the concrete, easily understood items are well-accepted by older adult participants.

Early psychometric development of the SAI among a convenience sample of community-dwelling older adults ($N=200$) produced a Cronbach’s alpha of $.88$. Statistically significant correlations with the SAI demonstrated convergent validity with the Life Satisfaction Inventory-Aging scale ($.378$) (Neugarten, Havighurst, & Tobin, 1961); the Purpose in Life Test ($.544$) (Crumbaugh, 1968; Crumbaugh & Maholick, 1964); and with a measure of perceived control, the Mastery Scale ($.406$) (Pearlin, et al., 1981). Divergent validity was demonstrated by a

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negative correlation with the CES-D scale for depression (-.317) (Radloff, 1977). Principal Components Analysis identified two factors which together accounted for 47.78% of the variance: coping/adapting (36.4%), and existential (11.38%). Test/re-test stability has not been demonstrated for the scale, and the SAI has not been validated among older adults in a retirement community.

In addition to the previously validated survey instruments, an investigator-developed instrument was used to obtain sociodemographic data and to ask a single dichotomous question, "Do you feel you are aging successfully?" Sociodemographic data used as controls included age in years; income, indicated by HUD income-based rent levels; health, indicated by number of chronic conditions and self-reported health; and function defined as residing in independent living or requiring assisted living services.

Recruitment and Selection

The principal investigator attended two monthly resident meetings and distributed flyers to introduce the purpose of the study. Staff and administration of the CCRC encouraged resident participation. Residents were given an opportunity to opt out of the sampling frame, but no one chose to do so. A random sample, stratified by functional status, was selected from the sampling frame ($n = 239$) and contacted by telephone until the desired sample size was reached. Power analysis revealed that at least 105 participants were needed based on Stevens (2002) suggestion for regression analysis ($n = 15/\text{variable}$). With a response rate of 51.5%, 123 participants consented to participate. Two cases were later excluded based on age, eight based on Mini-Cog scores, and another due to excessive missing data, resulting in a sample size of 112.

Data Collection

Following Institutional Review Board approval and written agreement with the CCRC, data collection was accomplished among small groups ($n = 5-7$) with strict adherence to a standardized protocol to maintain independence of responses and preserve privacy. Participants completed the Mini-Cog Dementia Test (Borson, et al., 2000) after written informed consent and before administration of questionnaires. All participants, including those with abnormal Mini-Cog scores, were allowed to complete the survey process, but data from participants with abnormal Mini-Cog scores were excluded from the analysis.

Statistical Analyses

Correlations (Pearson's r for continuous variables and Spearman's rho for categorical variables) and differences in mean scores (analysis of variance) were examined to determine relationships among variables and differences between groups defined by demographic and control variables. Hierarchical multiple regression was used to determine the magnitude of the effect of adaptation and transcendence on successful aging and the relative contributions of each predictor. Binary logistic regression was planned to identify differences between elders who reported they were aging successfully and those who stated they were not aging successfully, but was not performed due to insufficient variance in responses.

Results

Demographic data on the sample are reported in Table 1. The average age of participants was 79.9 years, ranging from 65 to 95 years of age. Eighty percent of participants were female, 77% Caucasian and 23% African American. Almost half of the sample were widowed, and 77%

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had a high school education or above. Over 20% lived in independent living apartments with assisted living services while 79.5% lived in independent living apartments without assisted living services. All participants were considered low-income under the U.S. Housing and Urban Development (HUD) definition (< \$33,000 annually); 77.7% met HUD criteria for subsidized rent while 22.3% were considered Fair Market Rent.

Acceptable reliability statistics were obtained for the instruments used to measure adaptation and transcendence, i.e., moderate Cronbach's alphas for proactive coping (.77) and self-transcendence (.73). For the SAI, a new instrument in early development, Cronbach's alpha was .82. The measures had adequate face validity and were short, an important consideration among older adults who may easily become fatigued. Results of the analyses will be reported individually for each of the four research questions.

Research Question 1

The first research question asked about differences in successful aging between groups defined by age, gender, race, marital status, education, income, function, perceived health, or number of chronic diseases. Both correlations and differences in mean scores were examined. Bivariate correlations among SAI and these groups are displayed in Table 2. Only perceived health was significantly related to SAI (Spearman's rho = -.217, $p = .022$). No significant differences in mean SAI scores were found for any group.

<Insert Table 2 about here>

Research Question 2

The second research question asked about relationships among primary study variables: adaptation, transcendence and successful aging. Both proactive coping (Pearson's $r = .51$, $p = .000$) and self-transcendence (Pearson's $r = .66$, $p = .000$) were significantly correlated with successful aging. The direction of all correlations was positive, indicating that as coping and transcendence increased, so too did successful aging. Correlations were moderate to large (Cohen, 1988), with transcendence more strongly associated with successful aging than coping. Coping and transcendence were intercorrelated (Pearson's $r = .57$, $p = .000$), but did not seriously violate the assumption of multicollinearity (Tolerance .238 to .922; VIF 1.085 to 4.196).

Research Question 3

The third research question asked to what degree, if any, adaptation and/or transcendence predicted successful aging. To answer this question, successful aging (SAI) was regressed on proactive coping (PCI) and self-transcendence (STS), controlling for age, income, function, perceived health and number of chronic health conditions. The hierarchical regression model accounted for 45.4% (F-change = 38.204 (2,202), $p = .000$) of the variance in successful aging ($R^2 = .502$; adjusted $R^2 = .454$). Proactive coping and self-transcendence both contributed to the model, with the effect of self-transcendence ($\beta = .523$) on successful aging more than 2.5 times greater than the effect of proactive coping ($\beta = .199$). Thus while both proactive coping and self-transcendence were important predictors of successful aging, self-transcendence was the greater and more important predictor. The regression summary model is presented in Table 3.

<Insert Table 3 about here>

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Research Question 4

The fourth research question asked if there were differences observed in proactive coping, self-transcendence, and successful aging between those participants who responded positively to the dichotomous question, “Do you feel you are aging successfully?” and those who responded they were *not* aging successful. Almost 92% of participants responded that they were aging successfully. Thus there was not sufficient variance in the data to support binary logistic regression analysis and answer this research question.

Discussion

The overarching goal of the study was to examine relationships among adaptation, transcendence, and a new view of successful aging, to explore the potential usefulness of Flood’s (2005) theory of successful aging as a guide to a more holistic view of aging, particularly among disadvantaged older adult populations. Current successful aging theory originated largely from the medical model and focused almost entirely on behavioral determinants of health. Little research was identified that considered how older adults themselves defined successful aging (Phelan & Larson, 2002; Phelan et al., 2004; Strawbridge, et al. 2002). The few studies which did explore how older adults perceived successful aging identified two areas not previously noted: (a) social and environmental determinants of health (Holstein & Minkler, 2003; Knickman & Snell, 2002; Schulz & Northridge, 2004), and (b) spiritual or existential factors such as a sense of meaning or purpose in life and connectedness with the self, others, and a higher power (Crowther, et al., 2002; Sadler & Biggs, 2006). This study examined propositions of Flood’s (2005) successful aging theory and explored the potential usefulness of Flood’s theory as a means to improve positive, quality aging for all older adults, regardless of disease, disability or socioeconomic disadvantages.

No significant correlations or differences in the means were found for groups based on age, gender, race, income, health, or functional status, suggesting that when successful aging is defined more holistically and multidimensionally, success may be independent of factors other than perceived health. Major findings from the study supported Flood’s (2005) propositions. Both adaptation (operationalized for the study as proactive coping) and gerotranscendence (operationalized as self-transcendence) were significant predictors of successful aging defined from the individual older adult’s perspective. Together, adaptation and transcendence accounted for almost half of the variance in successful aging, independent of the effects of age, health, income, or function, with self-transcendence explaining more than 2.5 times the effect of proactive coping. Given the contribution of self-transcendence, this study suggests transcendence may be an important new factor with the potential to increase successful aging, and merits further empirical study. Effect size was sufficient to suggest findings may be statistically and practically significant.

Limitations and Future Directions

Perhaps unavoidably, a high probability of self-selection and social desirability bias existed. Despite random sampling, it is likely that older adults who were not satisfied with how they were experiencing old age would be less likely to agree to participate. This may have explained the lack of variability in responses to the dichotomous question about perceived successful aging. The target population also encompassed a limited number of older adults in a narrowly-defined sample. Few retirement communities offer assisted living services for low income populations (Heumann, 2004) so findings of the study cannot be generalized to other

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samples and settings. Another limitation of the study was the cross-sectional study design, which cannot reveal whether findings will persist over time.

A final limitation was related to operationalization of the variables in the study. While a feasibility study (McCarthy, 2009) provided some information on the reliability and practical usefulness of instruments, none had been validated among older adults in a low-income CCRC. Cronbach's alpha coefficients did provide some support for the reliability of the instruments (PCI= .77, STS= .73, SAI= .82). Of particular concern, the Successful Aging Inventory was in an early stage of development among community-dwelling older adults attending a senior citizen center. While results of the present study provide initial support for the SAI, evidence of validity remains limited.

Future longitudinal study is needed to see if results persist over time. Studies replicating results of this study among a more diverse sample in varied settings are needed to determine the generalizability of these results. Further qualitative study may identify additional factors that may potentially contribute to this new view of successful aging. If further studies support the results of this preliminary work, interventional studies designed to increase adaptation and/or transcendence may feasibly increase successful aging.

Implications for Nursing

Flood's (2005) theory offers a new view of successful aging, merging both biomedical and psychosocial perspectives on aging, while adding the perspectives of older adults and incorporating a spiritual or existential dimension. This new view addresses disparities in the potential for successful aging among low-income and minority groups. Flood's theory proposed that adaptation and transcendence predict successful aging. The present study provides preliminary evidence that both adaptation and transcendence are positively associated with this view of successful aging. Transcendence, in particular, may be an important consideration in aging study meriting further investigation.

Flood's (2005) successful aging theory may serve as a road map to guide nursing research, shape aging and health care policy, and inform program development and clinical practice. The new view of successful aging, and the factors that promote it such as adaptation and transcendence, could potentially lead to improved quality of life for all older adults, their families, and caregivers, while decreasing the burden of the rapidly growing aging population on social, health, and economic systems. Given this potential, Flood's theory of successful aging merits further investigation.

REFERENCES

- Aspinwall, L. G. & Taylor, S. E. (1997). A stitch in time: Self-regulation and proactive coping. *Psychological Bulletin*, 121(3), 417-436.
- Baltes, P. B., & Baltes, M. (1990). Psychological perspectives on successful aging: The model of selective optimization with compensation. In P. Baltes & M. Baltes (Eds.), *Successful Aging: Perspectives from the Behavioral Sciences*. Cambridge, UK: Cambridge University Press, pp.1-34.
- Borson, S., Scanlan, J., Brush, M., Vitaliano, P., & Dokmak, A. (2000). The Mini-cog: A cognitive 'vital signs' measure for dementia screening in multi-lingual elderly. *International Journal of Geriatric Psychiatry*, 15(11), 1021-1027. Retrieved online on May 2, 2008 at http://geriatrics.uthscsa.edu/educational/med_students/minicog_admin.htm.

[Type text]

- Bowling, A., & Dieppe, P. (2005). What is successful aging and who should define it? *British Medical Journal*, *331*, 1548-1551.
- Cohen, J. (1988). *Statistical power analysis for behavioral sciences* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.
- Coward, D. (1990). The lived experience of self-transcendence in women with advanced breast cancer. *Nursing Science Quarterly*, *3*, 162-169.
- Crowther, M. R., Parker, M. W., Achenbaum, W. A., Larimore, W. L., & Koenig, H. G. (2002). Rowe and Kahn's model of successful aging revisited: Positive aging – the forgotten factor. *The Gerontologist*, *42*, 613-620.
- Crumbaugh, J. C. (1968). Cross-validation of Purpose in Life Test based on Frankl's concepts. *Journal of Individual Psychology*, *24*, 74-81.
- Crumbaugh, J. C. & Maholick, L. T. (1964). An experimental study in existentialism: The psychometric approach to Frankl's concept of noogenic neurosis. *Journal of Clinical Psychology*, *20*, 589-596.
- Erikson, E. H. & Erikson, J. M. (1997). *The life cycle completed: Extended version with new chapters on the ninth stage of development*. New York: W. W. Norton and Company, Inc.
- Flood, M. (2003). Successful aging: A concept analysis. *Journal of Theory Construction and Testing*, *6*(2), 105-108.
- Flood, M. (2005). A mid-range nursing theory of successful aging. *Journal of Theory Construction & Testing*, *9*(2), 35-39.
- Flood, M. (2008). Successful Aging Inventory: Instrument development among community-dwelling Southern older adults. Manuscript in preparation, received from the author through electronic mail on June 16, 2008.
- Greenglass, E., Schwarzer, R., Jakubiec, D., Fiksenbaum, L., & Taubert, S. (1999). *The Proactive Coping Inventory (PCI): A multidimensional research instrument*. [Technical report.] Retrieved online April 9, 2008 at <http://www.psych.yorku.ca/greenglass/pci.php>
- Heumann, L. F. (2004). Assisted living for lower income frail older persons from the housing and built environment perspective. *Journal of Housing for the Elderly*, *18*(3), 165-178.
- Holstein, M. B., & Minkler, M. (2003). Self, society, and the "new gerontology." *The Gerontologist*, *43*(6), 787-796.
- Jung, C. G. (1972). The transcendent function. In H. Read, M. Fordham, G. Adler, & W. McGuire (Eds.). *The structure and dynamics of the psyche: Volume 8. The collected works of C. G. Jung* (2nd ed.). London: Routledge and Kegan Paul.
- Kahana, E. & Kahana, A. (1996). Conceptual and empirical advances in understanding aging well through proactive adaptation. In *Adulthood and aging: Research on continuities and discontinuities* (pp. 18-40).
- Kentucky State Data Center. (2002). *Census 2000 summary file income profile for Jefferson County: Household income by age of householder*. Retrieved online on June 2, 2009 at <http://ksdc.louisville.edu/sdc/census2000/58pageprofiles/JeffersonCounty3.pdf>
- Knickman, J., & Snell, E. (2002). The 2030 Problem: Caring for aging baby boomers. *Health Services Research*, *37*(4), 849-884. Retrieved online on April 15, 2007 at http://www.findarticles.com/p/articles/mi_m4149/is_4_37/ai_91568394.
- Lazarus, R. S. & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer Publishing Company.
- Maslow, A. (1969). Various meanings of transcendence. *Journal of Transpersonal Psychology*, *1*, 56-66.

[Type text]

- Maslow, A. (1971). *The farther reaches of human nature*. New York: Viking Press.
- McCarthy, V. L. (2009). A feasibility study: Exploring the relationship of transcendence and adaptation with a new view of successful aging. Poster presentation for Research!Louisville Annual Research Conference. October 12 – 16. Louisville. KY.
- Neugarten, B. L., Havighurst, R. J., & Tobin, S. S. (1961). The measurement of life satisfaction. *Journal of Gerontology*, *16*, 134-143.
- Pearlin, L., Lieberman, M., Menaghan, E., & Mullan, J. (1981). The stress process. *Journal of Health and Social Behavior*, *22*, 337-56.
- Peel, N. M., Bartlett, H. P., & McClure, R. J. (2004). Healthy ageing: How is it defined and measured? *Australian Journal on Ageing*, *23*(3), 115-119.
- Phelan, E. A., Anderson, L. A., LaCroix, A. Z., & Larson, E. B. (2004). Older adults' views of "successful aging": How do they compare with researchers' definitions? *Journal of the American Geriatrics Society*, *52*, 211-216.
- Phelan, E. A., & Larson, E. B. (2002). Successful aging: Where next? *Journal of the American Geriatrics Society*, *50*, 1306-1308.
- Poon, L. W., Gueldner, S. H., & Sprouse, B. M. (2003). *Successful aging and adaptation with chronic diseases*. New York: Springer Publishing Company.
- Radloff, L. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, *1*, 385-401.
- Reed, P. G. (1989). Self-transcendence in aging scale: Mental health of older adults. *Western Journal of Nursing Research*, *11*(2), 161-163.
- Reed, P. G. (1991a). Toward a nursing theory of self-transcendence: Deductive reformulation using developmental theories. *Advances in Nursing Science*, *13*(4), 64-77.
- Reed, P. G. (1991b). Self-transcendence and mental health in the oldest-old. *Nursing Research*, *40*(1), 5-11.
- Reed, P. G. (2003). The theory of self-transcendence. In P. R. M. J. Smith and Liehr (Ed.), *Middle Range Theory for Nursing* (pp. 145-165). New York: Springer Publications.
- Reed, P. G. (2009). Demystifying self-transcendence for mental health nursing practice and research. *Archives of Psychiatric Nursing*, *23*(5), 397-400.
- Rowe, J. W., & Kahn, R. L. (1987). Human aging: Usual and successful. *Science*, *237*, 143-149.
- Rowe, J. W., & Kahn, R. L. (1997). Successful aging. *The Gerontologist*, *37*(4), 433-440.
- Rowe, J., & Kahn, R. (1998). *Successful aging*. New York: Random House.
- Roy, C. (1984). *Introduction to nursing: An adaptation model* (2nd ed.). Englewood Cliffs, New Jersey: Prentice-Hall.
- Sadler, E., & Biggs, S. (2006). Exploring the links between spirituality and "successful aging." *Journal of Social Work Practice*, *20*(3), 267-280.
- Schulz, R. & Heckhausen, J. (1996). A life span model of successful aging. *American Psychologist*, *51*(7), 702-714.
- Schulz, A. & Northridge, M. E. (2004). Social determinants of health: Implications for environmental health promotion. *Health Education Behavior*, *31*(4), 455-471.
- Schwarzer, R. & Taubert, S. (2002). Tenacious goal pursuit and striving toward personal growth: Proactive coping. In E. Frydenberg (Ed.), *Beyond coping: Meeting goals, visions, and challenges*. London: Oxford University Press, pp. 19-35.
- Sohl, S. J. (2008b). *Refining the conceptualization of an important future-oriented self-regulatory behavior: Proactive coping*. Unpublished dissertation. Electronic copy provided by author, September 28, 2008.

[Type text]

- Stevens, J.P. (2002). *Applied multivariate statistics for the social sciences* (4th ed.) Mahwah, NJ: Lawrence Erlbaum Assoc., Inc.
- Strawbridge, W. J., Cohen, R. D., Shema, S. J., & Kaplan, G. A. (1996). Successful aging: Predictors and associated activities. *American Journal of Epidemiology*, 144, 135-141.
- Strawbridge, W. J., Wallhagen, M., & Cohen, R. (2002). Successful aging and well-being: Self-rated compared with Rowe and Kahn. *The Gerontologist*, 42, 727-733.
- Tornstam, L. (1989). Gero-transcendence: A meta-theoretical reformulation of the disengagement theory. *Aging: Clinical and Experimental Research*, 1(1), 55-63.
- Tornstam, L. (1997). Gerotranscendence: The contemplative dimension of aging. *Journal of Aging Studies*, 11(2), 143-154.
- Tornstam, L. (2005). *Gerotranscendence: A developmental theory*. New York: Springer Publishing.
- U.S. Census Bureau. (2007). *United States S0103. Population 65 years and over in the United States*. American Community Survey: Three-year estimates. Retrieved online on March 7, 2009 at http://factfinder.census.gov/servlet/STTable?_bm=y&-qr_name=ACS_2007_3YR_G00_S0103&-ds_name=ACS_2007_3YR_G00_-&-_lang=en
- U.S. Department of Health and Human Services (DHHS). (2009). Poverty guidelines updated periodically in the *Federal Register* by the U.S. Department of Health and Human Services under the authority of 42 U.S.C. 9902(2). Retrieved online on March 10, 2009 at <http://aspe.hhs.gov/POVERTY/09poverty.shtml>
- U.S. Department of Housing and Urban Development (HUD). (2008a). *Income limits documentation system: Income limits summary for Jefferson County, Kentucky*. Retrieved online on March 4, 2009 at http://www.huduser.org/datasets/il/il2008/2008summary.odn?INPUTNAME=METRO31140M31140*2111199999%2BJefferson+County&selection_type=county&stname=Kentucky&statefp=21&year=2008.
- U.S. Department of Housing and Urban Development (HUD). (2008b). *Income limits documentation system: Income limits summary for Kentucky*. Retrieved online on March 4, 2009 at http://www.huduser.org/datasets/il/il2008/2008summary.odn?inputname=STTLT*2199999999%2BKentucky&selection_type=county&stname=Kentucky&statefp=21&year=2008.
- Vaillant, G. & Mukamal, K. (2001). Successful aging. *The American Journal of Psychiatry*, 158, 839 – 847.

Valerie Lander McCarthy, PhD, RN is Assistant Professor in the School of Nursing at University of Louisville, Louisville, KY 40292. Dr. McCarthy may be contacted at vemcca01@louisville.edu.

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Figure 1

Successful Aging Model (Flood, 2005)

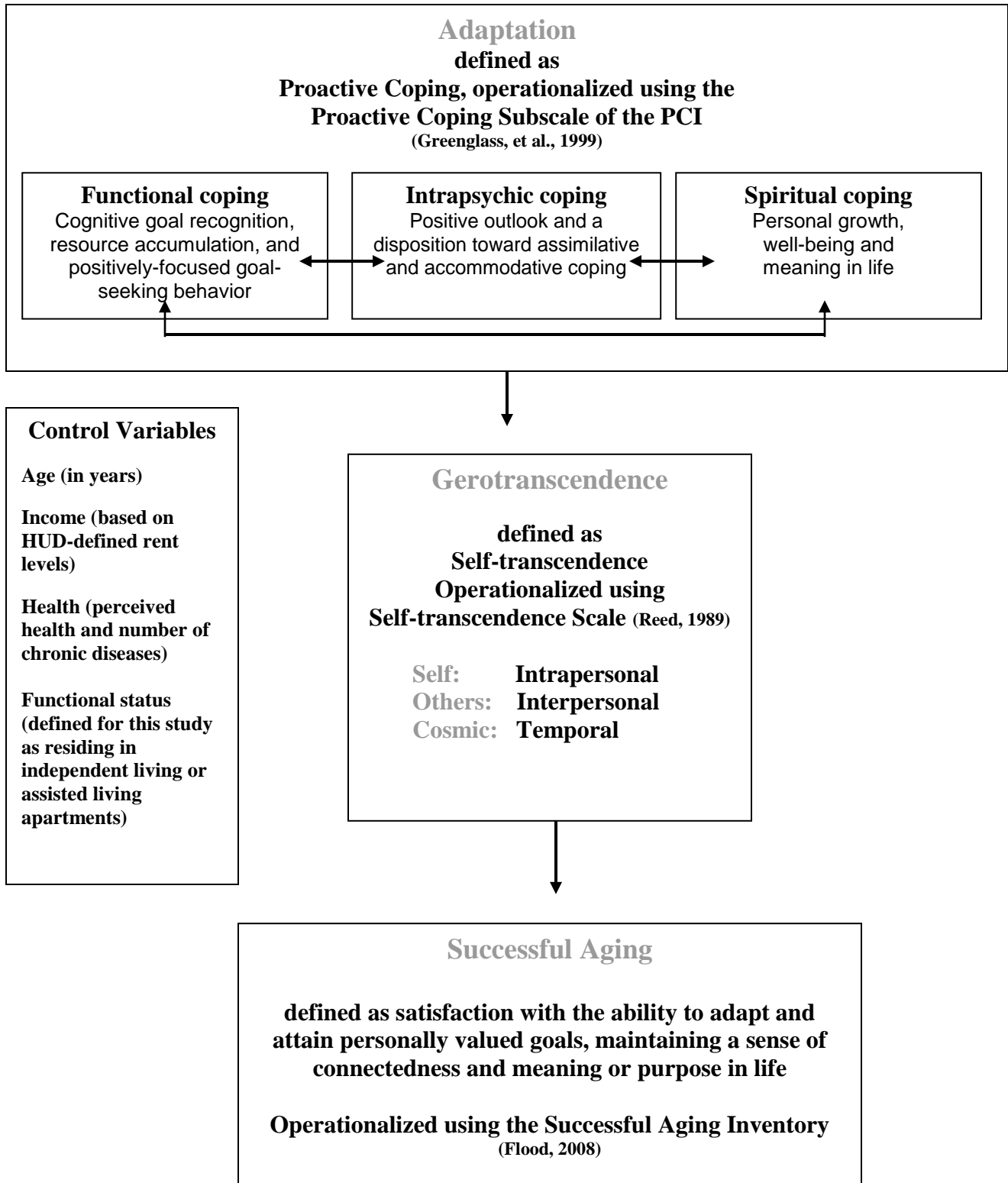


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Figure 2

Model of Study Variables

(Showing alignment of theoretical (grey) and operationalized (black) definitions)



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Table 1

Characteristics of the Sample Compared to the Population Aged 65 or Older

	US	State	County*	Sample
% of Population	16.5	12.8	14.6	51.5
Mean age in years	74.8	74.2	75.1	79.9 Range 65 – 95
% Gender				
Male	42	41.4	39	19.6
Female	58	58.6	61	80.4
% Race				
White	85.2	93.8	86	76.8
African American	8.4	5.1	12.5	23.2
Other	6.4	1.1	1.5	0
% Marital status				
Married	53.3	51.8	47.6	10.7
Never married	4.6	4.0	4.7	12.5
Divorced/separated	10.6	9.9	11.6	22.7
Widowed	31.6	34.3	36.2	49.1
% Education				
< High school	27.2	40.7	29.1	23.2
HS/GED	34.4	31.7	34.0	33.9
Some college	19.7	15.4	19.9	26.8
College degree or >	18.7	12.2	16.9	16.1
% Disability				
With	40.9	48.8	43.4	Assisted 20.5
Without	59.1	51.2	56.6	Independent 79.5
% Poverty*				
< 100%	9.9	13.4	9.2	HUD subsidized** 77.7
100 – 149%	11.9	15.7	11.2	Fair Market Rent 22.3
150% or >	78.2	70.9	79.6	
Median income among adults ≥ 65 and income-based rent level	\$25,210	\$25,834	\$26,633***	Sec. 8 69.6 Sec. 236 8.1 FMR 22.3

U.S. Census Bureau, American Fact Finder, 2007

** U.S. Department of Health and Human Services, 2009*

*** US Department of Housing and Urban Development (HUD), 2008*

****Kentucky Data Center, 2002*

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Table 2

Bivariate Correlations among SAI, Demographic, and Control Variables (N=112)

	<i>SAI</i>	<i>Age</i>	<i>Gender</i>	<i>Race</i>	<i>Marital</i>	<i>Educ</i>	<i>Income</i>	<i>Function</i>	<i>Perceived Health</i>	<i>Chronic Diseases</i>
SAI	1.0	-.182	.015	-.091	.015	-.029	-.034	-.166	-.217*	.067
Age		1.0	-.225	.039	.341*	.013	.225*	-.031	.024	-.204*
Gender			1.0	-.048	-.282*	-.027	.028	-.14	.019	-.067
Race				1.0	-.179	-.173	-.028	-.139	.004	-.118
Marital					1.0	-.038	-.161	-.041	.064	.009
Education						1.0	.121	.033	.057	.144
Income/Rent							1.0	-.001	.052	-.20*
Function								1.0	-.079	.044
Perceived health									1.0	.229*
Chronic disease										1.0

* Correlation significant at the .05 level (2-tailed)
Spearman's rho reported for categorical variables; Pearson's *r* for continuous variables

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Table 3

Hierarchical Regression Model Summary

Model	R	R-square	Adjusted R-square	Std. Error of the Estimate	R-square Change	Change Statistics				
						F- Change	df ₁	df ₂	Sig. of F- Change	Durbin-Watson
1	.356 ^a	.127	.059	9.042	.127	1.869	8	103	.073	
2	.709 ^b	.503	.454	6.890	.376	38.204	2	101	.000	1.793

^a Predictors: (Constant), Age, Perceived Health, # of Chronic Dx., CCRC Rent, CCRC Function
^b Predictors: (Constant), Age, Perceived Health, # of Chronic Dx., CCRC Rent, CCRC Function, Proactive Coping Inventory, Self-transcendence Scale
Dependent: Successful Aging Inventory
