Healthcare Professionals' Retirement Intentions: The Roles of Financial and Work Factors

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Delayed retirement has been utilized to provide a short-term solution to the healthcare workforce demand-supply gap arising from increased retirement and healthcare needs by the aging population. To adequately design an effective financial therapy and retirement delaying program, a knowledge of key factors affecting retirement intentions is critical. This study examines the influences of financial and work-related factors on retirement intentions among a sample of 21,860 healthcare professionals between 50 to 65 years old. Using data from the Virginia's 2016 Dentist, Licensed Practical Nurse, Registered Nurse, Physician, and Pharmacist Surveys, multinomial logistic regressions were conducted to identify key factors associated with retirement intentions. Study findings show that having lower income, education debt, and higher job satisfaction, among other factors, were associated with delayed retirement intentions. Incorporating this finding will be key in the creation of successful retirement delaying programs, and ultimately in the reduction of the healthcare workforce demand-supply gap.

INTRODUCTION

An aging healthcare workforce and the increased life expectancy of older American adults highlight the need to identify innovative methods to increase the healthcare workforce. However, looming increases in healthcare professionals' retirement further threaten the healthcare workforce. Delayed retirement has been utilized as an approach to help address the workforce demand-supply gap (Hurst, 2017; Wilson & Kaneko, 2017a, 2017b). Yet, the literature on factors associated with retirement intentions among different healthcare professions is limited. Knowledge of factors influencing retirement intentions has the potential to inform financial therapy and the design of effective retirement delaying incentive

programs for older workers. This study aims to examine the influences of financial and work-related factors on the retirement intentions of five types of primary healthcare professionals aged 50 to 65 years: Dentists, licensed practical nurses (LPN), registered nurses (RN), physicians, and pharmacists.

The looming large-scale healthcare professionals' retirement is not surprising as it mirrors the demographic trends in most Western countries where the 65 and older population is growing at an alarming rate. In the United States, the population above age 65 is expected to double in number and proportion over the next four decades (Mather, 2016). Not only will there be more individuals above age 65, but these individuals will also live longer and require more intensive and well-coordinated medical services. As the baby boom healthcare workers age and exit the workforce, the number of workers replacing them will not be large enough to meet the population's healthcare needs, resulting in a gap in the demand and supply of healthcare (Dill, 2016). In light of this knowledge, medical schools have been increasing class sizes by 30% since 2012, but there is still a projected shortage of more than 60,000 physicians by 2025 (Dill, 2016). Delayed retirement could be employed to stem this impending gap in healthcare workforce, particularly in the short-term (Commins, 2011; Levanon, Cheng, & Goldman, 2011).

To delay retirement, it is important to understand retirement intentions. Retirement intentions are strong predictors of retirement (Henkens & Tazelaar, 1994; Prothero & Beach, 1984; Solem et al., 2016) since intentions are generally predictive of a wide range of human behavior (Sheeran, 2002). The present study examines the ways financial and work factors influence retirement intentions among five groups of healthcare professionals.

THEORETICAL FRAMEWORK

This study uses the rational choice (Gustman & Steinmeier, 1986; Hatcher, 2003) and image (Beach & Frederickson, 1989; Feldman, 1994) theories to inform the framework of how push and pull factors influence retirement. Push factors are aversive or negative factors such as dissatisfaction with one's job that drive individuals to intend to retire early. Pull factors, on the other hand, are positive considerations, such as enjoyable leisure activities, that make early retirement appealing to aging workers and result in early retirement intentions (Shultz, Morton, & Weckerle, 1998). Push and pull factors exist for both work and retirement. Rational choice theory suggests that individuals will choose between work and retirement after evaluating the different push and pull factors they are experiencing. When pull factors to work dominate, individuals will formulate later retirement intentions. Whereas, when pull factors to retirement dominate, early retirement often is the outcome. Image theory suggests that individuals seek to sustain a stable self-image and may delay retirement if it will disrupt their self-image. Rational choice is, therefore, inherent in the process, suggesting a need to integrate image theory within rational choice theory in this study. The possibility of continuity of self-image post-retirement will pull individuals to retire early, whereas likelihood of self-image discontinuity will pull individuals towards work and later retirement. The effects of the aggregation of push and pull factors for work and retirement among older healthcare professionals makes this study vital.

Financial factors "are the strongest single predictor" of retirement intentions (Beehr, Glazer, Nielson, & Farmer, 2000, p. 207). Rational choice theory suggests that individuals compare their accumulated finances to their forecasted future financial needs to decide an intended retirement age (Wang & Shultz, 2010). Financial factors may shape retirement intentions in several ways (Hanisch & Hulin, 1990; Henkens & Tazelaar, 1994). Past studies have found greater wealth and higher income were associated with early retirement intentions since greater financial security pulls individuals to retire so as to pursue more leisure opportunities (e.g., Gruber & Wise, 1999; Mermin, Johnson, & Murphy, 2007). These studies suggest that, in the absence of any critical circumstances, workers retire when they can afford to do so. However, some studies argue that individuals with higher income face greater opportunity cost in lost earnings, and therefore, may delay retirement (Belgrave, 1988; Parker & Rougier, 2007). Further, social security benefits provide a higher wage replacement rate for lower income individuals (Van de Water & Romig, 2017) and, thus, may dilute the impact of income on retirement intentions.

Another financial factor, education debt, has lifelong implications for career choices (Baum & Saunders, 1998; Fosnacht & Calderone, 2017), such as retirement. For older workers to have education debt, it means their past wages were likely not sufficient to pay off the debt. Since their financial resources will likely reduce after retirement, rationally, these individuals will not want to retire early. As such, education debt will likely act as a push factor towards work, resulting in later retirement intentions.

In addition to financial influences, work related factors are also important determinants of retirement intentions (Fisher, Chaffee, & Sonnega, 2016; Heponiemi et al., 2008; Schmidt & Lee, 2008. Job satisfaction, "a positive (or negative) evaluative judgement one makes about one's job situation" (Weiss, 2002, p. 175) has emerged as a key determinant of retirement intentions and retirement (Bidewell, Griffin, & Hesketh, 2006; Kautonen, Hytti, Bögenhold, & Heinonen, 2012). Past studies have shown low job satisfaction pushed workers towards early retirement (Fisher et al., 2016; Shultz et al., 1998; whereas, workers with high job satisfaction were pulled towards work and retired later (Fisher et al., 2016; Steger & Dik, 2009). Job satisfaction may operate as a pull factor that keeps individuals in the workforce, and job dissatisfaction may push workers towards retirement (Shultz et al., 1998).

Additionally, it is important to consider how working excessively affects retirement intentions. In this study, excessive working is defined as working more than one full-time job or more than two part-time jobs. Among those working at multiple jobs, it is important to distinguish between individuals working at two part-time jobs to gather enough wages to offset their salary and benefit needs, and those working excessively. Although the Bureau for Labor Statistics (BLS) does not consider excessive working and focuses only on working multiple jobs, findings from the BLS data can help inform this study. Data from BLS (Martel, 2000) showed that age and gender shape people's decision to work multiple jobs, with males over age 55 being most likely to do so because they enjoy their second job. Females over age 55, however, were most likely to work at multiple jobs to meet household expenses (Martel, 2000). These older females were also more likely than males to be working multiple jobs to pay off debt and to save for the future. Although retirement planning was not one of the response choices provided to these respondents, saving for the future may be indicative of

retirement planning. It is plausible that workers with more precarious financial situations are more likely to be pushed towards work, to work excessively, and be less likely to intend to retire early because they cannot afford to do so. It is also possible that individuals may be pushed to work excessively to accumulate the financial resources needed to hasten retirement as close to a fifth of those over age 55 in the BLS study, reported there were "other reasons" why they worked multiple jobs (Martel, 2000). Thus, there is a need to identify if and how working excessively plays a role in the retirement intentions of healthcare professionals.

Job tenure must be included in the examination of retirement intentions. Individuals who have been at their jobs for longer may have gathered the financial resources needed to retire and have experienced fewer financial disruptions that could negatively influence retirement (Davies & Cartwright, 2011; Kilty & Behling, 1985). These individuals will be pulled towards retirement. By contrast, older workers who have been at their current position for a few years may have been affected by disruptions that negatively influenced their post-retirement resources. Davies and Cartwright (2011) found that length at job was negatively associated with later retirement intentions. However, it is important to consider that a new job at age 63 years may be a bridge to full retirement, as research has identified that some workers do not stop working fully but transition to a job requiring fewer hours or less from them upon retiring from their main employer or career (Fisher et al., 2016; Quinn, 2000). In such cases, length at job may be negatively associated with early retirement intentions.

Etzioni (1995) argued that, in addition to monetary and intrinsic rewards, work provides some individuals with prestige and self-identity. Specifically, workers in jobs with higher occupational prestige score may be drawn to the prestige derived from such jobs, and thus, want to preserve such self-image for as long as possible (Feldman, 1994). Image theorists like Sonnenfeld (1988) argued that retirement could be particularly distressing for such professionals because their self-identity is intricately tied to their work. Retirement may threaten the preservation of self-image in such professions. Further, jobs with higher occupational prestige scores are more likely to be less physically challenging, more intellectually stimulating, and thus, more accommodating of aging populations (Fisher et al., 2016). Thus, higher occupational prestige may serve as a pull towards work and away from early retirement intentions. Occupational prestige score is expected to be positively related to later retirement intentions (Davis, Smith, Hodge, Nakao, & Treas, 1990).

Apart from financial and work factors, health status is often identified as a predictor of retirement (Heponiemi et al., 2008; Shultz et al., 1998). Although poor health is often linked to greater likelihood of early retirement (Fisher et al., 2016), this study does not include a consideration of health status because it is largely outside the realm of influence of employers and policy makers, particularly at older ages. Retirement delaying incentive programs will likely not affect health status and this study focuses on the factors that incentive programs can influence. Further, healthcare needs that are severe enough to warrant early retirement and leaving behind a comprehensive and often employer-provided health insurance, are often of urgent nature and therefore less likely to be reflected in retirement intentions (Davies & Cartwright, 2011). Feldman (1994) also argued that not all health impairments result in early retirement. Early retirement for individuals with psychosomatic illnesses may result in more time to worry and obsess over illness, and therefore, likely viewed as undesirable (Feldman, 1994).

Social science research is replete with studies examining factors that shape retirement processes; however, much of the research has focused on one specific profession or on a general population (Davies & Cartwright, 2011; Fisher et al., 2016). Few have examined retirement intentions among multiple professions, specifically in the healthcare field (Silver, Hamilton, Biswas, & Warrick, 2016). The present study aims to inform the financial and vocational literature by investigating the influences of financial and work factors on the intended retirement age of five groups of healthcare professionals in Virginia.

THE PRESENT STUDY

This study examines the influences of financial and work related factors on retirement intentions among a group of healthcare professionals (dentists, LPNs, RNs, physicians, and pharmacists) in Virginia. Although all are healthcare professionals, there are some variations in each profession that may be related to retirement intentions (McFall, Sonnega, Willis, & Hudomiet, 2015). For instance, physicians and dentists likely enjoy high autonomy and self-direction in their work compared to RNs or LPNs. In Virginia, 67% of dentists work in solo practice and 19% in group practice; for physicians, 12% and 38%, respectively, do so (Shobo, 2016a, 2016c). Working in solo and group practices is not a feature of RNs' or LPNs' professions, and rarely occurs for pharmacists. High work autonomy may lead to higher job satisfaction and later retirement intentions. Although the average retirement age ranged from about 65 to 69 years for all five professions, the average retirement age may vary within each profession depending on the type of practice. Using data from the 2014 American Medical Association Physician Masterfile, a recent study found that clinical physicians have a median retirement age of 64.9 but the median for all physicians is 66.1 (Petterson, Rayburn, & Liaw, 2016). By contrast, the American Dental Association Health Policy Institute (2018) found the typical retirement age for dentists was 68.9 in 2017. Fang and Kesten (2017) reported 65.1 as the retirement age for nursing faculty in 2015, an increase from 62.2 in 2006. For Social Security Administration (SSA) purpose, the earliest eligible age that this study's respondents can receive retirement benefits is 62; however, the age for obtaining full SSA retirement benefits varies from 66 to 67, as respondents' birth years are between 1951 and 1966.

To inform financial therapy and retirement delaying incentive programs, it is important to focus on individuals who plan to retire soon. In this study, individuals between ages 50 and 65 years old will be included as less than 1% of Americans retire before age 50 (Financial Samurai, 2015). Further, Shobo (2016a, 2016b, 2016c) and Coyle (2016a, 2016b) found that less than 4% of Virginia's dentists, LPNs, RNs, physicians, and pharmacists intend to retire before age 50. Thus, retirement intentions will likely be more salient in the 50 to 65-year-old age group.

This study has three main goals. First, this paper examines the influences of financial factors (personal income and educational debt) on the retirement intentions of healthcare professionals in five different fields. Second, this study investigates the extent to which work-related factors (job satisfaction, working excessively, length at job, and occupational prestige) impact healthcare professionals' retirement intentions. The final goal of this paper is to determine whether financial and work-related factors for retirement intentions differ for

professionals such as dentists, LPNs, RNs, physicians, and pharmacists. This study tests the following hypotheses:

H1. Having education debt will push individuals towards work and later retirement, while not having education debt will be a pull factor to early retirement intentions.

H2. Workers' job satisfaction will be positively associated with later retirement intentions, as job satisfaction will act as a pull factor towards work.

H3. Occupational prestige will be positively associated with later retirement intentions, as individuals with higher occupational prestige scores will seek to preserve their work identity for as long as possible and thus intend to retire later.

H4. The association between financial and work factors will differ among professions. Dentists, for instance, are expected to have the latest retirement intentions.

METHODOLOGY

Participants

This study utilized data from Virginia's 2016 Dentist, Licensed Practical Nurse, Registered Nurse, Physician, and Pharmacist Surveys (Coyle, 2016a, 2016b; Shobo, 2016a, 2016b, 2016c). The surveys were administered as a part of the license renewal process for each profession. The Dentist and Pharmacist Surveys were administered annually, whereas the Physician Survey occurred biennially. The Licensed Practical Nurse Survey and Registered Nurse Survey took place annually. Licensees filled out a survey every other year, so approximately half of the LPN and RN licensees completed the survey each year. Because the year a licensee obtains their license is random, a year's worth of data with half of the licensees was deemed sufficient for this study and reflective of the larger nurse population.

Data

A total of 123,513 licensees were eligible to complete the five professional surveys, with 95,176 completing the five surveys, resulting in an overall response rate of 77%. Of the 95,176 individuals, 93,145 had currently active license status; others were suspended, revoked, surrendered, or currently inactive. Among those with a currently active license, 10,704 had missing information on current employment status, which was used to identify those who are currently working. Approximately 90% (74,204) of the remaining 82,405 reported that they were employed in the profession for which they were surveyed. The remaining individuals were either voluntarily (n=2,916) or involuntarily (n=327) unemployed, retired (n=2,936), employed in other profession apart from what is indicated on their license (n=1,885) or did not provide a reason for not being employed in the field (n=138). Of the remaining 74,204, respondents were excluded if they did not provide an intended retirement age (n=11,306), which was used as the outcome variable in this study. Those excluded because they did not report an intended retirement age did not differ significantly

from the analytical sample used with regards to this study's variables of interest. Individuals who indicated that they do not plan to retire (n=4,055) were excluded because this study is interested in examining specific intended retirement ages. Based on these selection criteria, the analytical sample consisted of 58,843. Of these, 21,860 who were between ages 50 and 65 years old were included in this study. Table 1 presents the total analytic sample, and those between ages 50 and 65 who were used in this study, by profession.

Table 1

Analytical Sample by Profession

	Analytical sample	Analytical sample between ages 50 and 65 years old
Dentist	3,520	1,181
LPN[1]	5,781	1,852
RN[1]	23,217	8,970
Physician	18,642	7,565
Pharmacist	7,683	2,292
Total	58,843	21,860

Measures

Outcome Variable

Retirement Intention. Respondents reported the age that they planned to retire using the following response options: under age 50, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80 or over, and I do not intend to retire. The retirement intention variable was created to reflect

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[1] These are the numbers renewing in 2016. However, there were 31,102 LPNs and 108,135 RNs licensed in 2016. The remaining will come up for renewal in 2017.

whether respondents intended to retire "early, before age 65;" "normative, between ages 65 and 69;" and "later, after 70 years (base category in regression analysis)." Respondents who chose "I do not intend to retire" were excluded because the premise of this study is to examine those who have formulated their retirement plans by explicitly stating an age.

Predictor Variables

Income. Respondents indicated the amount of personal income received (below $50,000, $50,000 to $99,999, $100,000 to $199,999, $200,000-$299,999, and more than $300,000).

Education Debt. Respondents reported the amount of education debt they held in $10,000 intervals, starting from less than $10,000 to $250,000 or more. Responses were recoded into a dichotomous variable of whether respondents had any education debt (0 = *no*, 1 = *yes*).

Job Satisfaction. To assess job satisfaction, respondents reported how satisfied they were with their current employment on a four-point scale (1 = *very dissatisfied* to 4 = *very satisfied*).

Work Excessively. Respondents indicated the number of positions that they currently held. The response options were: one part-time, two part-time, one full time, a combination of one full time and one part-time, two full time, and more than two positions. Respondents who worked two part-time jobs reported an average of 36 work hours per week were coded as holding the equivalent of one full time job. By contrast, those who reported one full time and one part-time, two full time positions, or more than two positions worked an average of 52, 61, and 51 hours per week, respectively. A dichotomous variable was created with "0" representing respondents occupying one full time, one part-time, or two part-time positions, and "1" indicating working excessively, that is having one full time and one part-time, two full time positions, or more than two positions.

Length at Job. Length at primary job was assessed as 0 = worked for zero to two years at primary work location, 1 = worked between three and 10 years at primary work location, and 2 = worked over a decade at primary work location.

Occupational Prestige Score. Information on occupational prestige score was obtained from The National Opinion Research Center. The estimated occupational prestige scores for dentists (71.7), LPNs (59.9), RNs (66.4), physicians (86.0), and pharmacists (68.3) (Davis et al., 1990; Nakao & Treas, 1992) were utilized.

Profession. For each profession, dichotomous variables were created for whether a respondent belonged to that profession.

Control Variables

A set of control variables was included in the final regression model. Gender (0 = *male* and 1 = *female*) and age in years were included. Holding licenses to practice in other states may affect retirement because of the onerousness of renewing licenses varies by states and having different options of states to work could increase the likelihood of finding a state that is better suited to an aging professional. Consequently, a variable was created to indicate

whether a respondent is licensed in another state (0 = *no*, 1 = *yes*). However, it is important to note that Virginia is part of the Nurse Licensure Compact, therefore, Virginia's nurses do not need to be licensed to work in any of the 24 other Compact states (e.g., Maryland, North Carolina, and Delaware). Total weekly hours worked consisted of the number of hours worked in a typical week and allowed differentiation between the hours worked by different individuals in the same Work Excessively category. Dummy variables of whether respondents were White, Black, Asian, Hispanic, and of other race were previously included in the analysis. However, none of their coefficients were significant and some of the professions were not racially diverse; hence, race/ethnicity variables were excluded from the final analysis.

Data Analysis

Multinomial logistic regression was used to examine whether retirement intention was associated with financial and work-related factors. Although ordinal logistics regression was considered due to the ordered nature of the outcome variable, a detailed examination of the proportional odds assumption showed that there were differences in the coefficients of the different models of the outcome.

The model controlled for gender, age, whether respondents were licensed in other states, and hours worked per week. Race/ethnicity did not significantly influence the model or change the coefficients, and thus, was excluded. To account for differences in response rates by age and rural status of the respondents' mailing address, this study used weighted estimates. Analyses were conducted with SPSS.

RESULTS

About a third of the sample intended to retire early; the mean retirement age was 66.3. The median annual income was $100,000 to $199,999 and approximately 14% of the sample had education debt. Nine out of ten respondents reported that they were satisfied with their current employment; the mean of the job satisfaction scale was 3.5. About 8% have two full time positions or more than two positions. On average, 79.4% of the respondents have been at their jobs for at least two years; close to a third have been at their jobs for over a decade (not shown). The sample comprised of 64.1% female, with a mean age of 57. Slightly over a third of the professionals hold licenses to practice in other states. The sample included 76.6% White, 10.6% Black, 7.6% Asian and 2.4% Hispanic respondents (not shown). Table 2 provides the demographic characteristics of the respondents in the study.

To address the first goal of this study, the results show the two financial factors wielded a strong influence on retirement intentions. Income was significantly associated with retirement intentions for all income groups. Compared to those earning more than $300,000, those earning below $300,000 were less likely to intend to have early or normative retirement as opposed to later retirement. Individuals earning between $50,000 and $99,999 were 35% less likely to intend to retire early compared to those earning above $300,000. The likelihood of normative retirement rather than late retirement intentions was lowest for those who earned the least. Lower income earners were 44% less likely to intend to have normative

retirement compared to those earning above $300,000. Having educational debt also significantly decreased the likelihood of retiring early. Compared to respondents without any education debt, individuals with debt were 66% less likely to intend to have early retirement and 42% less likely to have normative retirement as opposed to late retirement intentions. Full results are shown in Table 3. The retirement intentions model was statistically significant (χ^2 = 1,989; p=.000; Nagelkerke pseudo R^2=0.12) and showed no evidence of multicollinearity.

Table 2

Participants Characteristics

	Percent or Mean (SD)					
	Dentist	LPN	RN	Physician	Pharmacist	All
Early retirement	30.3%	32.4%	35.0%	29.5%	33.8%	32.5%
Normative retirement	42.4%	49.8%	49.2%	44.2%	47.0%	47.0%
Mean retirement age	67.0 (5.2)	66.2 (4.6)	65.9 (4.5)	66.9 (5.2)	66.1 (4.9)	66.3 (4.8)
Median income (000s)	$100-$200	$1-$50	$50 -$100	$200-$300	$100-$200	$100- $200
	($98)	($23)	($33)	($92)	($36)	($95)
Has education debt	10.1%	18.3%	17.7%	9.9%	8.0%	13.6%
Satisfied with job	95.9%	95.9%	93.4%	91.7%	91.7%	93.0%
Mean job satisfaction	3.68(0.6)	3.60(0.6)	3.52(0.7)	3.48(0.7)	3.43(0.7)	3.51(0.7)
Work excessively	8.9%	8.2%	6.6%	10.7%	7.4%	8.3%
Job length 0- 2 years	89.2%	72.5%	77.5%	81.9%	78.9%	79.4%
Occupational prestige	71.7(0)	59.9(0)	66.4(0)	86.0(0)	63.3(0)	72.6(10)
Female	23.8%	95.3%	93.9%	30.3%	55.6%	64.1%
Mean age	57.7(4.7)	56.2(4.4)	56.7(4.4)	57.4(4.5)	56.8(4.5)	57.0(4.5)
Licensed in other states	32.3%	17.8%	18.6%	9.9%	59.9%	35.2%
Mean weekly hours	37(0.7)	40(1.0)	40(0.9)	44(0.9)	37(0.8)	40(0.9)

The results also showed that work factors were associated with retirement intentions. A one-unit increase in the job satisfaction score decreased the likelihood of intending to retire

early by 32% and that of intending to have normative retirement by 6%, as compared to retiring after age 70. Working excessively also decreased the probability of intending to have early or normative retirement by 40% and 30%, respectively. Shorter job tenure was negatively associated with early retirement intentions. For example, compared to those who have been working at their job for over a decade, those who have been at their job for less than two years were half as likely to intend to retire before age 65, as compared to intending to retire after age 70. Those who have worked between 3 and 10 years were 34% less likely to intend to retire before age 65, as opposed to intending to retire after age 70. Occupational prestige was also negatively associated with the likelihood of early retirement intention.

Finally, this study examined whether the associations found between financial and work-related factors differ for professionals such as dentists, LPNs, and RNs. Both physicians and pharmacists were the reference category in the final model. The professions' variables were all significant for respondents intending to retire between age 65 and 69. Compared to physicians and pharmacist, dentists intended to retire later whereas nurses intended to retire earlier.

These results showed that financial and work factors significantly predicted retirement intentions. Income showed a strong pull influence towards retirement. In support of hypothesis one, respondents with education debt intended to retire later. Indeed, education debt had the highest likelihood of delaying retirement. Job satisfaction acted as a pull factor towards work, supporting this study's second hypothesis. Like job satisfaction, occupational prestige also had a workforce retaining effect. Occupational prestige was positively linked to later retirement intentions, confirming the third hypothesis. Other work factors, such as working excessively and length at job, also were significantly associated with retirement intentions. Finally, dentists were more likely to intend to retire after age 70 and nurses were more likely to retire earlier compared to physicians and pharmacists, supporting the fourth hypothesis.

Table 3

Multinomial Logit Regression of Financial and Work Factors on Retirement Intentions

	Under 65 years [a]				65-69 years			
	β	SE β	RRR	95% C.I	β	SE β	RRR	95% C.I
Income (000s)								
<$50	-0.33**	0.13	0.72	0.56, 0.92	-0.57***	0.12	0.56	0.45, 0.71
$50-$100	-0.44***	0.11	0.65	0.52, 0.80	-0.45***	0.10	0.64	0.53, 0.77
$100-$200	-0.20*	0.09	0.82	0.69, 0.97	-0.24**	0.08	0.79	0.68, 0.92
$200-$300	-0.20*	0.08	0.82	0.70, 0.97	-0.19*	0.08	0.83	0.71, 0.96
Education debt	-1.07***	0.07	0.34	0.30, 0.39	-0.54***	0.06	0.58	0.52, 0.65
Satisfied with job	-0.39***	0.03	0.68	0.64, 0.72	0.06*	0.03	0.94	0.88, 0.99
Work[b] excessively	-0.52***	0.08	0.60	0.51, 0.70	-0.36***	0.07	0.70	0.61, 0.79
Job length 0- 2 years	-0.69***	0.06	0.51	0.44, 0.56	-0.40***	0.06	0.67	0.60, 0.75
Job length 3-10 years	-0.41***	0.05	0.66	0.60, 0.73	-0.20***	0.05	0.82	0.75, 0.90
Prestige score	-0.01**	0.00	0.99	0.98, 1.00	-0.02***	0.00	0.99	0.98, 0.99
Dentist	-0.32**	0.10	0.73	0.59, 0.89	-0.37***	0.09	0.69	0.58, 0.83
LPN	0.05	0.14	1.05	0.80, 1.38	0.28*	0.13	1.32	1.03, 1.70
RN	0.34***	0.09	1.40	1.18, 1.68	0.34**	0.08	1.40	1.19, 1.65
Valid Weighted N				17,805				
Model χ^2				1,989				
Nagelkerke Pseudo R^2				0.12				

Note. RRR = relative risk ratio; CI=confidence interval. [a] Reference dependent variable category 'Intends to retire after age 70'. Control variables include age, gender, total weekly hours worked, and whether respondent is licensed in another state. *$p<.05$. **$p<.01$. ***$p<.001$

DISCUSSION

It is imperative to identify innovative ways to maintain or increase the healthcare workforce. This study contributes to the financial therapy literature by examining the influences of financial and work related factors on retirement intentions in a group of healthcare professionals. Findings from this study demonstrate the importance of financial factors in understanding retirement intentions. Individuals in the highest income group were least likely to intend to retire after age 70 and individuals with debt were nearly twice as likely to intend to retire after age 70. These findings can play critical roles in informing financial therapy and retirement delaying incentive programs for healthcare professionals.

In line with past studies (Gruber & Wise, 1999; Mermin et al., 2007), income was negatively associated with retirement intentions, such that those with the highest income had the earliest retirement intentions. Respondents who earned below $300,000 were more likely to intend to retire after age 70 compared to those earning above $300,000. However, the association between income and retirement intentions was not linear; those earning between $50,000 and $99,999 had a slightly lower likelihood of intending to retire before age 65 compared to those earning below $50,000. This finding likely reflects the possibility that social security wage replaces a larger share of past wages of low earners. Social security benefits represent 51% to 54% replacement ratios for individuals with pre-retirement incomes of $40,000-$50,000 compared to 36% of the incomes of individuals with pre-retirement income above $90,000 (AON Consulting, 2008). Using data from the Health and Retirement Study, Purcell (2012) also estimated that social security composed of 7.7% of the income for those in the fourth and highest income quartile in the first year of retirement and 33.3% in the 9th or 10th year of retirement. For those in the first and lower quartile, however, social security benefits were 23% of household retirement income in the first year after retirement and 77.8% of household retirement income in the 9th or 10th year post retirement (Purcell, 2012). Thus, if social security benefits replace nearly all the earnings for those in the lowest income bracket, then retiring before age 70 will be attractive. However, social security benefits replace a lower proportion of the income of those earning between $50,000 and $99,999, and may delay retirement plans more for this group. In this study, the pull impact of income on retirement is well demonstrated.

Findings from this study show education debt has one of the most consequential effects on healthcare professionals' retirement intentions, supporting hypothesis one and the rational choice theory (Hatcher, 2003). Healthcare workers who have education debt intended to retire much later than those who do not. Having education debt at ages 50 to 65 years may be indicative of later educational attainment that will likely result in a need to work longer. This finding aligns with past studies that show wealth and assets to be negatively associated with later retirement intentions (Gruber & Wise, 1999; Mermin et al., 2007).

Similar to past studies (Bidewell et al., 2006; Fisher et al, 2016; Shultz et al., 1998), job satisfaction appears to be key to delaying retirement. In this study, respondents with higher job satisfaction were more likely to intend to retire later, supporting hypothesis two. It is possible that having a job where one is satisfied is associated with greater job commitment, whereas, individuals with lower job satisfaction are looking forward to exiting the labor force. As suggested by Shultz et al. (1998), job satisfaction appears to operate as a pull factor in helping to retain healthcare professionals in the workforce, while job dissatisfaction pushes

workers towards retirement. This is a key area for human resources personnel to direct greater attention in their retention efforts. With more demands on the healthcare system, it is likely that job dissatisfaction will increase due to the professions' staff shortage. In the effort to increase healthcare professionals' job satisfaction, more attention should be directed at targeting the stress associated with everyday job demands.

In this study, working excessively is also predictive of later retirement intentions. Holding more than one full time job equivalent may indicate a real or perceived financial need. Retirement delaying incentive programs may need to approach healthcare professionals who do not work excessively with non-financial incentives to delay retirement.

In addition, this study also found job tenure to be an important contributor in shaping retirement intentions. Respondents who have spent the least amount of time at their job were least likely to intend to retire early and most likely to want to retire later. This could be indicative of late entry into the workforce or less stable work history, which may have resulted in respondents being less prepared financially for retirement. However, it also could be that the job is a less demanding version of the workers' previous job, acting as a bridge to eventual retirement. Programs should target workers who have been at their jobs for over a decade to identify what incentive programs would work best for retaining this group in the healthcare workforce.

In line with the third hypothesis and the image theory, occupational prestige also has a weak, but significant, positive association with retirement intentions. Membership in a higher status profession is likely desirable and respondents may seek to prolong the image associated with that profession as long as possible, resulting in delayed retirement. It is also likely that higher status professions are less physically taxing and therefore more accommodating of aging populations. Any effort that can be expended to increase the perceived prestige of all healthcare professions may be critical.

The profession variables were nearly all significant; being a dentist, was associated with a higher likelihood of planning to retire after age 70, as compared to being a pharmacist or a physician; the inverse held for nurses. One possible explanation for this finding could be that dentists may delay retirement because of the image and prestige associated with it. Additionally, because dentists tend to have solo practices and are less likely to work for others (Shobo, 2016a), they self-provide benefits like retirement income and health insurance, and have few post-retirement work opportunities. Expanding post-retirement opportunities for pharmacists may affect the retirement intentions of these professionals. On the other hand, physicians may be reporting their retirement intentions for their main job, but may keep working shorter and more flexible hours because they have more opportunities for flexible moonlighting than dentists.

Limitations and Future Research

This study is limited in that it focuses only on the end stage of the working life to provide targeted information to help stem healthcare professionals' shortage in the short-term. Understanding the retirement intentions of individuals who are further away from retirement may be useful in order to start incentivizing them for later retirement, and to provide a more long-term solution for stemming the demand-supply gap in the healthcare

workforce. Another limitation of this study is that some LPNs and RNs were excluded from participation because they were not surveyed in the same year as those included. Finally, this study focuses on healthcare workers in Virginia. It would be valuable for future studies to include all types of healthcare professions at the national level.

Research examining single intended retirement ages, while likely more analytically complex, may also be more informative. This may be particularly critical to understanding the role that social security benefits play in the retirement intentions of healthcare professionals. Such studies could examine the role of financial and work factors in delaying retirement intention for each year past the full retirement age. With people living longer, policy makers are already discussing the need to increase the retirement age above the recommendations in the 1983 Social Security Amendment Act (Hurst, 2017; Wilson & Kaneko, 2017a, 2017b). For example, the National Commission on Fiscal Responsibility and Reform (2010) recently suggested the Social Security Administration provide information to the public "with an eye towards encouraging delayed retirement" (p. 527). It would be important to see if such intended policy changes could help retain more healthcare professionals.

Future studies should also refine the education debt question to specifically target debt accrued for respondents' education, as it currently asks respondents "what is your estimated current educational debt?" It is important to differentiate between respondents' debt due to their own education, and any Parent Plus debt they may have accrued for children and grandchildren's education. Further research is needed to examine how the amount of education debt is linked to retirement intentions and address the question, "is there a threshold at which education debt may not matter for workforce retention?"

CONCLUSION

This study underscores previous research findings that financial factors play critical roles in retirement intentions. It appears that individuals truly only retire when they can afford to do so. Retirement delaying programs that provide financial incentives may only be successful in retaining those who would have stayed anyway. Programs may also need to focus on non-financial goals like increasing job satisfaction to retain healthcare workers. Further, Fetherstonhaugh and Ross (1999) suggested that there is a need to frame early retirement in terms of financial loss rather than gains because individuals tend to be loss averse, and therefore, respond stronger to loss more than equivalent gains.

Findings from this study contribute to financial therapy and healthcare fields by identifying the financial and work-related factors that influence retirement intentions among healthcare professionals from five fields. The current study highlights the importance of financial factors in retirement intentions, showing that having education debt and lower income are positively associated with later retirement intentions of healthcare professionals. In the effort to address the impending healthcare professional shortage, the identification of these factors is an important first step to help design financial therapy programs and other programs that may delay the retirement of healthcare professionals.

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