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Retirement Choice and Its Relation to Depression

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(Abstract) The purpose of this project is to investigate the short-term effect of retirement choice on post-retirement

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depression in a sample of 234 retirees, all drawn from the first wave of the 1992 Health and Retirement Survey in America. While controlling for disruptive marital life events, change in self-rated health status, spousal social support, adverse health conditions, retirement choice still had a slight association with post-retirement depressive symptoms. Being in control over the retirement event help retirees maintain a better mental health.

I. Introduction

In several major studies, retirement, as a major life transition, has been found to bear with it a potential negative impact on mental health. In particular, if people view their retirement as involuntary- something forced on them- post-retirement adjustment and mental health have been found to be negatively affected (Kimmel, Price, & Walker, 1978; Peretti & Wilson, 1975). Voluntary retirees compared with involuntary retirees experienced higher satisfaction following retirement and more family support for their decision to retire (Kimmel et al., 1978).

The purpose of this project is to investigate the short-term effect of retirement choice on post-retirement depression in a sample of 234 retirees, all drawn from the first wave of the 1992 Health and Retirement Survey in America. In this paper, "retirement choice" is defined as self-perception of respondents' retirement as voluntary or involuntary. Specifically, this study is to assess whether a strong relationship continues to exist between retirement choice and depression in post-retirement, despite intervening experience of disruptive marital life events, health problems, or receipt of social support from spouse.

Why should retirement choice be related to depression? The literature suggests that the personal attributional style of the

retirement choice has a differential effect on mental health (Abramson, Seligman, & Teasdale, 1978). A retiree whose retirement decision is made by choice feels that he/she is in control over the event and thus maintains a better general well-being. In contrast, when a person feels that he/she has no control over the decision, the retirement has occurred involuntarily. I consider attributions of involuntary retirement choice as an instance of external locus of control and voluntary retirement as an instance of internal locus of control. Thus, the retirement choice is a proxy measurement for felt personal control over the retirement event and ensuing life changes.

Although prior research has consistently shown that involuntary retirement is related to adverse mental health consequences after retirement, few studies have established a short time interval between the retirement event and the interview (post-retirement assessment). The length of time between the assessment of retirement choice and the post-retirement assessment of mental health varies widely from study to study (Swan, Dame, & Carmelli, 1991; Peretti & Wilson, 1975). Thus, post-retirement depression, if it occurs, might be a consequence of intervening life events instead of retirement choice. For instance, if the retirement decision and event occurred several years before being interviewed, post-retirement problems may also be affected by intervening life events such as divorce, decline in self-perceived health, lack of available social support, or adverse health conditions such as diabetes, heart disease, or cancer.

Therefore, the true relationship between retirement choice and mental health may be confounded by competing stressful life events, along with the passage of time since the retirement event. In this study, the interval between retrospective report on retirement choice and assessment varies between a maximum of eighteen months and a minimum of one month. Unlike much of previous research (Swan et al., 1991; Kimmel et al., 1978), this

project attempts to assess the relationship between retirement choice and mental health by controlling for intervening life events, changes in self-rated health, negative health conditions, and availability of social support.

Literature Review

A considerable amount of research shows that self-defined involuntary retirement is adversely related to mental health and post-adjustment (Swan et al., 1991; Braithwaite, Gicson, & Bosely-Craft, 1986; Walker, Kimmel, & Price, 1981; Levy, 1981; Peretti & Wilson, 1978-1979; Peretti & Wilson, 1975). Relative to involuntary retirees, voluntary retirees are in better mental health: they are significantly more likely to have positive attitudes and higher satisfaction in retirement (Braithwaite et al., 1986). However, these and other differences may exist before retirement choice: voluntary retirees have better health before retirement, tend to have had higher incomes and better professional occupations (Kimmel et al., 1978). In similar studies, retirement by choice is positively associated with areas of emotional satisfaction, feelings of usefulness, a positive self-image, emotional stability, and more interpersonal relationships (Peretti & Wilson, 1975), whereas those reporting involuntary retirement tended to have poorer adjustment to retirement, more illness, poorer physical status, and more depressive symptomatology (Swan et al., 1991).

While research findings are consistent in showing relationships between retirement choice and adjustment and well-being, the length of time between self-assessment of the retirement choice and self-ratings of post-retirement adjustment varies from study to study. In Kimmel et al. (1978)'s study, about 70% of respondents retired within five years of the date of the study. Swan et al. (1991)'s 27-year follow-up study tends to have much longer time intervals between retirement and the interview; respondents were

retired an average of 8.7 years at the time of the interview. A relatively short time interval between retirement choice and the interview date ranged from two years to three years (Peretti & Wilson, 1975).

On the other hand, Braithwaite et al.'s (1986) findings illustrate how post-retirement well-being can be affected by differences in the time interval between retirement and the interview. When variation in retirees' length of retirement is reduced, for the purpose of study, from a 26 year period (no less than one year but no longer than 26 years) to a 10 year duration (ranging from one year to no longer than 10 years), the retirement choice may be more likely to have an unconfounded short-term effect on mental health. That is, reluctance to retirement tends to be problems only in the short term.

Although the existing literature emphasizes the importance of retirement choice for post-retirement mental health, the literature does not include other factors that might equally contribute to post-retirement depression. While research findings clearly indicate a strong association between retirement choice and difficulties in adjustment, prior researchers have selected a wide range of retirees whose mental health might be affected by other stressful life events as well as retirement choice.

Theoretical Model

The underlying theoretical model in this project is the stress and coping paradigm, which states that an individual's perception of the event determines mental health outcomes (Lazarus & Folkman, 1984). According to this paradigm, individual variations exist in viewing situations as stressful or not. Once a situation is perceived as a stressor, one tries to cope with it using all available resources to alleviate negative effects. Consequences of stressful situations such as depression can be either increased or decreased

by how well individuals utilize available coping resources such as social supports. Based upon the stress and coping model, the model used in this study has six major components: attributional characteristics, retirement choice, health problems, social support, life events, and depression.

Attributional Characteristics: Different retirees have varying attitudes toward the retirement event. Lazarus and Folkman (1984) argued that although certain environmental demands cause stress, individual differences exist in appraising situations. According to Lazarus and Folkman's model, the same retirement event can be appraised as a harm or loss of one's role, a threat to one's sense of identity, or a challenge that provides a new opportunity. It is felt that personal characteristics could predispose retirees to evaluate themselves as voluntary or involuntary retirees. The perception of the retirement event can be different depending on a retiree's level of education, age, and gender.

Retirement Choice: In the current model, retirement choice is considered as a potential stressor that may trigger depressive symptoms. The perception of the retirement decision as having been made involuntarily has a potential negative effect on retirees' well-being. Involuntary retirement as opposed to voluntary is expected to act as a stressor and contribute to the development of depression after retirement.

In this model, retirement choice is treated as a proxy for personal control. It is assumed that people who view their retirement as involuntary have higher feelings of external control. A perception of controllability over the decision to retire is of importance in determining mental health outcomes (Abramson et al., 1978; George, 1989; Kimmel et al., 1987). Psychological states such feelings of control and self-worth not only influence one's retirement choice, but also determine how well a retiree maintains

well-being. If a retiree feels that she/he has control over the retirement event, he tends to have less difficulties in adjusting to retirement life. However, if the retirement event is perceived as the consequence of uncontrollable forces such as compromised health or urgent family problems, the individual may be more susceptible to depression. In short, being in control of retirement choice would lower the likelihood of depression.

Health Problems: Although level of stress is predisposed by personal variables and retirement choice, compromised health conditions are a paramount stress in later life. Whether retirees' health problems are acute or chronic, having seen doctors recently may assess health problems which then increase depressive symptoms. Recent contacts with doctors due to specific health conditions are separately treated as affecting depression.

Disruptive Life Events: Often neglected in personal control research has been the inclusion of disruptive life events as a causal factor leading to depression. Marital events are used as indicators of life events. The sequelae of having experienced a disruptive marital event and involuntary retirement on post-retirement depression is rarely investigated. While ignoring other factors, Holmes and Rahe (1967) maintain that life events such as death of spouse, divorce, or separation are significantly associated with time of illness onset. In this project, these life events will be examined as a factor associated with depression.

Social Support: A bulk of the literature suggests that stress could be mediated or lowered through the availability of social support (Shumaker & Brownell, 1984; Stokes, 1983). Stress derived from involuntary retirement is a risk factor for developing depressive symptoms, but having strong emotional support from spouses or partners can assuage or buffer the occurrence and/or

onset of depression (Wilcox, 1981b). In this project, social support is defined as living with a spouse or partner.

II. Method

Data Sources: The data source was drawn from the first wave of Health and Retirement Survey (HRS) which sampled households with at least one person born between 1931 and 1941. Initially, 1,741 respondents who defined themselves as either partially or completely retired were selected. These same individuals responded that thinking back to the time of retirement, they (1) wanted to, (2) were forced into, (3) or they partly wanted, and felt partly forced into retirement. This last category, whose category of retirement was "part wanted and part forced into," were eliminated - 116 retirees (7%) - and thus 1,625 individuals remained. Of these 1,625 retirees, 261 persons who reported any emotional, nervous, or psychiatric problems during the last 12 months were eliminated, because it is possible that a recent nervous problem have been the result of involuntary retirement or it may have caused their retirement choice. Consequently, the sample was reduced to 1,364. Of the remaining 1,364 retirees, only 352 who retired during the last four years were selected. Of these 352 retirees, those retired more than 18 months and several days ($N = 118$) before the date of interview were further excluded from analyses. Thus, the final 234 retirees were used to test the effect of retirement choices on mental health.

Research Instruments

Operational definition of variables and expected signs for selected variables appear in Table 1.

Retirement Choice and Its Relation to Depression

< Table 1 > Variable definitions and expected signs

	Definitions	Expected Sign
Mental Health	The absence of depressive symptoms	
Depression	A modified version of 11-item CES-D Coded as 1 (= all or almost all), 2 (= most of the time), 3 (= some the time) 4 (= none or almost none).	
Demographic Variables		
Age	retirees age ranged from 50 to 62	?
Female	dummy variable (1 = female), (0 = male).	?
Education	Years of formal schooling completed (Ranged from 0 to 17)	+
Retirement choice	the controllability of retirement event	
Nonvoluntariness	dummy variable (1 = involuntary) (0 = voluntary retirement)	-
Life Event	Within 18 months having stressful events in marital life. Life event dummy variable is created as 1 (= being divorced, widowed, or separated) and 0 (= absence of such event).	-
Change in Self-perceived Health	In comparison with one year ago, current health is much better (= 1), somewhat better (= 2), same (= 3), somewhat worse (= 4), and much worse (= 5).	

Mental Health: In this study, mental health is defined as the absence of depressive symptoms. An 11-item scale, the Center for Epidemiologic Studies-Depression (CES-D) instrument (Radloff, 1977), was used to measure the level of depression. Obtained CES-D scores ranged from 17 to 44 ($M = 39.92$; $SD = 3.97$). Cronbach's alpha inter-item reliability was computed for the eleven item scale with the study population of 234 retirees. An α coefficient of .81 was obtained, indicating there was a high internal consistency among the eleven items.

Retirement Choice: In this study, voluntary retirement was operationally defined as the event wherein individuals feel that the event of retirement, either partially or completely, was something they wanted to do. Non-voluntary retirement constitutes the feeling that they were forced into retirement. The measure of retirement choice was based upon a three-point scale single question--"Thinking back to the time you partly or completely retired, was that something you wanted to do or something you felt you were forced into?" An involuntary dummy variable is created (1 = *involuntary*, 0 = *voluntary*). 57.7% ($n = 135$) of sample were identified as voluntary retirees and 42.3% ($n = 99$) were treated as involuntary retirees. The expected sign was negative, indicating that nonvoluntariness led to a greater likelihood of depression.

Disruptive Life Events: "Stressful event" was defined as having experienced disruptive marital events such as being divorced, widowed, or separated within 18 months prior to the interview date. The presence of one or more life events (e.g., divorced, widowed, or separated) is coded as 1 and the absence of such life event is coded as 0. Four percent of respondents ($n = 8$) are identified as having experienced such an events. The expected sign is negative, indicating that experience with recent disruptive life events with marital stress increases the likelihood of depression.

Change in Self-perceived Health: It is hypothesized that, compared to the previous year, retirees whose perceived health is declining are more likely to be depressed. Change in self-rated health was an one-item indicator based on the response to the question, "Compared with one year ago, would you say that your health is much better now, somewhat better now, about the same, somewhat worse, or much worse than it was then?" The construct of self-rated health was rated on a five point scale from *much better* (= 1) to *much worse* (= 5). 3.2% of respondents responded as *much better* ($n = 8$), 12.0% of them as *somewhat better* ($n = 28$), 68.9% of individuals as *same* ($n = 161$), 10.3% of retirees as *somewhat worse* ($n = 24$), and 5.6% of them as *much worse* ($n = 13$). Obtained mean was 3.03 ($SD = .76$). The expected sign is negative, showing that declining perceived health is associated with more depression.

Health Problems: The presence of physical health problems is construed as experiencing health problems such as diabetes, cancer, heart, and stroke during the last year. Health problem areas consist of four separate questions. 21% was reported having seen a doctor for diabetes, 5% for cancer, 13% for heart conditions, and 4% for stroke. Since both heart condition and stroke tap the domain of cerebrovascular diseases, they were collapsed into one category: 0, reports neither of the problems; 1, reports either heart or stroke problem; and 2, reports both problems. Two dummy variables of *diabetes* and *cancer* are created (1 = presence of problem) and (0 = absence of problem). The expected sign is negative, suggesting that having contact with doctors for these health limitations increases the level of depression.

Social Support: There exists well-documented evidence that social support plays a mediating role in managing the impact of stress (Wilcox, 1981a, 1981b; Ward, 1985). Results of social support

research suggest that in times of significant life stress, individuals with strong social support may be protected from developing symptoms of psychological distress. It is posited that retirees having access to social support will tend to have lower depression as a result of this buffering effect. Marital status variable was used to construct spousal social support indicator. A spousal support dummy variable was created (1 = being married or living with partner) and (0 = separated, widowed, divorced, or never married). 75% of respondents were living with spouses or partners. Since it is assumed that the receipt of spousal support is related to lower level of depression, the expected sign is positive.

Demographic Variables: Selected demographic variables are gender, age, and education. Respondents (119 men and 114 women) ranged in age from 50 to 62 years ($M = 57.59$; $SD = 3.0$). Years of education ranged from 0 to 17 ($M = 12.55$; $SD = 2.83$). Income category is not included for this reason: although the literature suggests that high wage earners have a tendency to identify themselves as voluntary retirees (Kimmel et al., 1978), level of income prior to retirement may not determine retirement choice or affect level of depression. A female dummy variable was created (1 = female; 0 = male). Since females generally report more depression, gender is thus a confounding variable. However, no sign is expected when all other variables are controlled for. The education variable is a continuous measure of the number of years of formal schooling completed, with a maximum of 17 years. It is hypothesized that although education does not directly affect mental health (Kimmel et al., 1978), it may help retirees control depressive moods. The expected sign is positive, indicating that higher education results in lower continuous; however, since increased age may not contribute to depression in the age range studied, no sign is expected.

III. Results

Bivariate analyses of mean comparisons between voluntary and involuntary retirees appear in Table 2.

< Table 2 >

Mean Comparisons Between Voluntary and Involuntary Retirees (SD)

Mean	Voluntary Retirement ($n = 135$)	Involuntary Retirement ($n = 99$)	t -value (p value)
CES-D	41.10 (3.13)	38.32 (4.43)	5.35 (.001)***
Life Event	.01 (.11)	.07 (.25)	-2.00 (.048)**
Social Support			
Spousal Support	.86 (.34)	.58 (.50)	4.87 (.001)***
Change in Self-rated			
Health	2.83 (.62)	3.31 (.85)	-4.76 (.001)***
Health Problem			
Diabetes	.063 (.24)	.122 (.33)	-1.52 (.131)
Cancer	.014 (.12)	.102 (.30)	-2.75 (.007)***
Stroke	.009 (.09)	.071 (.26)	-2.29 (.024)**
Heart	.065 (.25)	.227 (.42)	-3.42 (.001)***
Demographic Variables			
Female	.47 (.50)	.51 (.50)	-.58 (.561)
Age	57.82 (3.04)	57.28 (2.95)	1.37 (.172)
Education	13.40 (2.69)	11.38 (2.62)	5.77 (.001)***

* $p < .10$ ** $p < .05$ *** $p < .01$.

As expected, involuntary retirees had lower scores on the CES-D, indicating more depressive symptoms ($t = 5.35, p < .01$). Involuntary retirees were less educated ($t = 5.77, p < .01$) than voluntary retirees. Involuntary choice was also adversely related to health problems. Involuntary retirees were significantly more likely to have contacted doctors during the last 12 months for cancer ($t = -2.75, p < .01$), stroke ($t = -2.29, p < .05$), or heart diseases ($t = -3.42, p < .01$) than voluntary retirees. There was no difference, however, in contacts with physician for diabetic problems ($t = -1.52, p = n.s.$).

Furthermore, compared with one year ago, involuntary retirees were more likely to perceive their overall health as declining compared to voluntary retirees ($t = -4.76, p < .01$). Difference in spousal social support between the two retirement choice groups was significant ($t = 4.87, p < .01$), indicating that voluntary retirees were more likely to have a spouse or partner. While recent disruptive marital life events were relatively rare in the sample data, involuntary retirees were significantly more likely than voluntary retirees to have experienced such an event ($t = -2.00, p < .01$). Consistent with prior research, the bivariate analyses indicate that being in control of the retirement decision is related to short term post-retirement adjustment. However, the results also suggest that involuntary retirees were more likely to experience other events or problems that may serve as competing causes of depressive symptoms.

Multivariate Results: A set of variables were entered hierarchically into a regression equation to estimate each group of variables and their impact on the level of depression, using ordinary least squares (OLS) regression. The summary of analyses are presented in Table 3.

Retirement Choice and Its Relation to Depression

< Table 3 >
Hierarchical Multiple Regression Analysis
of the Retirement Choice to Depression ($n = 234$)

Variables	Unstandardized Coefficients	Standardized Coefficients	t-Value	Significance
Model I				
1. Retirement Choice	-1.99	-.25	-3.87	.00 ***
2. Age	.16	.12	1.97	.05
3. Female	-.14	-.02	-.30	.76
4. Education	.35	.25	3.88	.00 ***
Adjusted R Square = .19				
Model II				
1. Retirement Choice	-1.35	-.17	-2.41	.02 **
2. Age	.14	.11	1.80	.07 *
3. Female	-.23	-.03	-.48	.63
4. Education	.37	.27	4.07	.00 ***
5. Heart & Stroke	-1.36	-.14	-2.18	.03 **
6. Cancer	-2.02	-.11	-1.76	.08 *
7. Diabetes	-.60	-.04	-.70	.48
8. Changes in Health	-.05	-.01	-.15	.88
9. Life Events	-.98	-.05	-.75	.46
Adjusted R Square = .19				
Model III				
1. Retirement Choice	-1.06	-.13	-1.85	.07 *
2. Age	.16	.12	2.04	.04 **
3. Female	.01	.00	.02	.99
4. Education	.39	.28	4.25	.00 ***
5. Heart & Stroke	-1.31	-.13	-2.10	.04 **
6. Cancer	-2.01	-.11	-1.77	.08 *
7. Diabetes	-.42	-.03	-.49	.62
8. Changes in Health	.01	.00	.04	.97
9. Life Events	-.15	-.01	-.11	.91
10. Social Support	1.26	.14	2.03	.04 **
Adjusted R Square = .20				

* $p < .10$ ** $p < .05$ *** $p < .01$.

First, the demographic and retirement choice variables were entered to predict CES-D scores. These four variables were chosen first, because the current literature maintains that these variables are significant predictors of depression in post-retirement. The results provided in Model I showed that both retirement choice and educational attainment were significant predictors of depression. The overall adjusted *R*-square of Model I was 0.17. Without controlling for other factors (perceived change in health, health problems, spousal social support, and life events), involuntary retirement was found to be significantly related to level of depression. While controlling for three demographic variables, involuntary retirement choice was associated with about a 2 point decrease in CES-D scores, indicating more depression. With an approximate retirement choice mean of 39, this amounts to about 5% change. The hypothesis stating that retirees whose retirement choice is voluntary have better mental health is consistent with these findings.

In addition to retirement choice and the demographic variables, three health problem indicators, the life events variable, and the change in self-rated health variable were entered simultaneously in Model II. Nineteen percent of the variance in depression scores was explained by these nine variables in total. The variable distinguishing retirees who saw a doctor due to either heart or stroke problems within last year was the most significant among the health problem indicators ($t = -2.18, p < .05$), and the second most significant health problem was having seen doctors for cancer problems ($t = -1.76, p < .10$). However, having seen doctors due to diabetes ($t = -.70, n.s.$), disruptive marital life events ($t = -.75$), and other perceived health changes over the year ($t = -.15, n.s.$) were not significant predictors. It is noteworthy that retirement choice is second only to education in the relative significance of its coefficient in the model. Therefore, the results of Model II indicate that despite the presence of competing stressors, involuntary

retirement is associated with depression.

In Model III, one social support indicator - living with spouse or partner - was added to Model II to determine whether retirement choice is affected by the presence of social support. The result showed that the significance of retirement choice was weakened when the social support variable was added. This may suggest that when retirement choice was voluntary, the presence of social support through either a spouse or partner could lower depression. More importantly, although the influence of retirement choice on levels of depression was weakened by adding a social support variable, the former still remained a marginally significant predictor. In all three models, expected signs were confirmed with all variables.

To summarize the multivariate results: variables associated with depression in the literature such as marital disruption, diabetic problems, and self-perceived health are not related to depressive symptoms shown in both Model II and III. In contrast, social support, retirement choice, two physical health problems - cardiovascular disease and cancer - are significantly associated with depression. The retirement choice variable is influenced by the addition of competing factors. As shown Model III, retirement choice is only marginally significant at the $p < .10$ level.

IV. Discussion

The main hypothesis of this study was given partial support in these analyses. That is, the locus of control indexed by retirement choice played a moderate role in determining the level of depression in later life. External locus of control indexed by involuntary retirement was related to more depressive symptoms after retirement. Maintaining personal control facilitates mental health in retirement.

When other precursors to depression were controlled, retirement

choice was a weak, but marginally significant predictor of post-retirement depression. That is, once disruptive marital life events, health problems, and self-rated health change were held constant, retirement choice still had a slight association with post-retirement assessment of depressive symptoms. Thus, the competing variables did not invalidate the importance of locus of control belief on post-retirement depression.

Another noticeable finding was that the presence of social support indexed by living with spouse or partner may alleviate emotional difficulties arising from the retirement decision. The results showed that depressive symptoms were lower among married persons than among the unpartnered and social support emerged as a stronger predictor than retirement choice. The results suggested that spousal support may provide a buffer to the stress associated with involuntary retirement.

Finally, the role of one health variable - seeing a physician for heart and stroke problems - was significantly associated with depression. In the full model, it emerged as a stronger predictor than retirement choice. This suggests that cardiovascular health is strongly associated with depression in post-retirement life.

This study confirms that there is an association between retirement choice and depression (albeit modest), indicating that internal locus-of-control belief is a risk factor for depression. It also found that other factors contribute to depression more or intervene with retirement choice to weaken its association with depression. More importantly, despite external locus of control belief, social support may act to mediate or modify depressive symptoms.

Several caveats remain to be considered. First, the sample size was small, such that the results may be an artifact of the sample size. A second concern derives from the research design used the HRS survey. Since retired respondents were surveyed after retirement, information is lacking on personal control beliefs prior

to retirement. This is a common shortcoming of cross-sectional designs when studying locus of control. Lachman's (1986) findings suggest that locus of control is a stable personality characteristic across ages 35 to 69. If locus of control is stable, then retirement choice which represents locus of control, may actually measures pre-retirement personality. Thus, the theoretical model of this study presumes that locus of control is a stable attribute which is relatively unaffected by any retirement choice situation. Future research needs to follow more cases using a longitudinal design.

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