



# Spousal Breadwinning Across 30 Years of Marriage and Husbands' Health: A Gendered Life Course Stress Approach

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## Abstract

**Objective:** Wives increasingly outearn their husbands, and gender relations theory suggests this arrangement may undermine men's well-being. We explore how long-term histories of spousal breadwinning may be associated with older men's self-rated mental and physical health, and risk of nine health diagnoses. **Method:** Using 30 years of couple-level income data from the Health and Retirement Study ( $n = 1,095$  couples), we use latent class analyses to identify six classes that differ with respect to the timing and level of wife breadwinning. We link these classes to older husbands' later-life health. **Results:** Classes that transitioned from husband breadwinning to wife breadwinning in early or later adulthood were associated with husbands' poorer overall physical health and risk of cardiometabolic and stress-related diseases. Patterns persist net of sociodemographics, depressive symptoms, health behaviors, and adolescent health. **Discussion:** Violating cultural expectations, such as the masculinity ideal of male breadwinning, is associated with older men's poorer health.

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Married women's labor force participation has increased dramatically over the past five decades. One in three married women worked for pay in 1960, while two-thirds did so in 2010 (Cohany & Sok, 2007). During the same period, wives' contributions to household income rose steeply. In 1960, only 3.5% of wives earned more than their husbands, while 29% did so in 2013 (Fry & Cohn, 2010). Female breadwinner families challenge the historically idealized notion of the male breadwinner/female homemaker household; as such, they provide an important site for exploring changing gender relations in marriage and the implications thereof for health and well-being. Given pervasive and persistent cultural norms upholding the male breadwinning model, shifts away from this economic arrangement may be stressful for men—especially those who grew up in the 1950s when men's feelings of masculinity and self-worth often were defined by the capacity to support one's family financially (Donaldson, 1993). Empirical studies show that men whose wives are breadwinners may respond to this identity threat in unhealthy or unproductive ways including spousal abuse (Atkinson, Greenstein, & Lang, 2005), sexual infidelity (Munsch, 2015), and decreasing one's contributions to housework (Thébaud, 2010).

The consequences of wife breadwinning for husband's mental and physical health are less well understood, however. Some studies suggest that men have poorer health when they earn less than their wives (Springer, 2010; Winkler, McBride, & Andrews, 2005), yet multiple methodological and data limitations have prevented researchers from drawing strong conclusions about the nature of the association or the plausible causal ordering of the relationship. First, most studies focus on a single time point or short spells of wife breadwinning (e.g., 3 years), obscuring the long-term context in which these economic arrangements occur. The health consequences of wife breadwinning may be contingent upon duration, periodicity, life course stage, and sociohistorical context. Second, most studies rely on self-reports of income—often from one spouse—raising concerns about the validity of relative income measures. Third, most studies do not consider diverse health outcomes with different etiologies and latency periods; attention to heterogeneity in outcomes is essential for understanding how stress associated with gendered expectations affects health (Ben-Shlomo & Kuh, 2002).

We extend prior work by exploring how 30-year histories of spousal breadwinning are associated with older men's self-rated mental and physical health, and risk of nine health diagnoses. Our analyses are motivated by theories of masculinity, stress, and life course—with attention to the developmental and historical contexts in which particular breadwinning patterns are entered into, maintained, or exited by married couples. Using Health and Retirement Study (HRS) data from couples who were born between 1931 and 1941, we analyze 30 years of Social Security Administration (SSA) income data (1962–1991) from both spouses to create statistically and conceptually distinct latent class trajectories of spousal breadwinning. We then examine how husbands' later-life physical and mental health varies based on their breadwinning class, net of demographic, early-life health, psychological, and health behavior characteristics. Using the most rigorous and longest measures of spousal breadwinning we know of, we explore the complex ways that gendered economic relations in the family may undermine (or protect) older men's health. Our emphasis on long-term relative earnings trajectories may provide new insights into the persistent gender gap in health, where men consistently evidence higher rates of cardiovascular disease and shorter life expectancies than women (Federal Interagency Forum on Aging-Related Statistics, 2012).

## Background

### *Masculinity Threat as a Stressor*

Contemporary perspectives on masculinity are grounded in gender relations theory, which conceptualizes gendered practices as products of socially structured institutions rather than biological factors or psychological attributes (Connell, 1987). Hegemonic masculinity, or the culturally dominant idea of manhood, is a critical component of gender relations theory as it provides a set of expectations that shape men's behaviors and perceptions. The expectations associated with hegemonic masculinity also may serve as a benchmark against which men evaluate their own experiences (Donaldson, 1993). Throughout much of the 20th century, breadwinning was a central component of hegemonic masculinity (Bernard, 1981). As recently as 1977, two thirds of Americans agreed “it is generally better for a marriage if a husband earns more than his wife” (Cotter, Hermsen, & Vanneman, 2011). Although ideological support for the male breadwinner/female homemaker household has waned considerably in the 21st century, nearly 40% of adults age 65+ still endorsed this view in 2013, consistent with the gender-typed socialization many experienced during their formative years in the 1940s and 1950s (Wang, Parker, & Taylor, 2013).

We propose that older men's deviations from the breadwinning ideal may threaten their identities and cause status-related stress that undermines their mental and physical health. Sociological models of stress, most notably the stress process model, suggest that most stressors are rooted in social positions allocated, in part, on characteristics like age, race, and gender (Pearlin, Schieman, Fazio, & Meersman, 2005). Men, especially those who made the transition to adulthood in the mid-20th century, were socialized to hold male-typed social roles. One particularly rigid and enduring expectation is adherence to the male breadwinner role, considered a hallmark of hegemonic masculinity. Violations of this pervasive expectation may be a source of stress that undermines men's health (Carr, 2005; Salari & Zhang, 2006).

*Mental health.* Men who are their family's primary breadwinner may enjoy mental health benefits, whereas men in wife breadwinner households may experience mental health decrements because their status is discrepant with personal and/or societal expectations. Social psychologists propose that falling short of one's own expectations or the expectations of others may be distressing. For example, discrepancies between one's "actual self" and either one's "ideal self" (who one hopes to be) or one's "ought self" (who one feels they should be) may have negative psychological consequences (Higgins, 1987). Consistent with these perspectives, we expect that men with a wife who is, or has been, the primary breadwinner will report poorer mental health than men who have consistently been the family breadwinner.

*Physical health.* Earning less income than one's wife may affect a man's physical health, either directly or indirectly. The physiological wear and tear of a chronic strain, such as falling short of the male breadwinner ideal, may directly affect primary (i.e., sympathetic nervous and endocrine) and secondary (i.e., cardiovascular, immune, and metabolic) physiological systems. Stress primes the body for an external challenge, and this threat invokes neural and endocrine responses including elevated levels of stress hormones such as adrenalin and glucocorticoids. Although short-term spikes in stress hormones may be adaptive (i.e., "fight or flight" response), chronic activation of physiological stress responses may overburden physiological systems, increasing one's risk of conditions such as hypertension, cardiovascular disease, and diabetes. Persistent stress also suppresses the immune system, rendering an individual susceptible to infectious diseases (Cohen, Janicki-Deverts, & Miller, 2007).

Emerging research finds that social stressors, including low status in a social hierarchy, can lead to dysregulated physiological responses. Primate studies reveal that low dominance rank or low relative status negatively

affects most major organ systems (Sapolsky, 2005). Biomarker studies in human populations also show that persistent experiences of status threat may weaken one's immune and cardiovascular systems. Low socioeconomic status (Dowd, Simanek, & Aiello, 2009), perceived discrimination (Lewis, Cogburn, & Williams, 2015), the loss of social influence in small group tasks (Taylor, 2014), and masculinity threats (Kramer, Himmelstein, & Springer, 2017) are linked with accelerated aging and multiple biomarkers implicated in disease. We propose that men in wife breadwinner households may experience compromised physical health due to the strain of holding a lower status position in the marital dyad. We consider multiple health conditions including overall self-rated health, and the presence and total number of both cardiometabolic conditions and other health conditions that have been linked to social stress.

Social stressors like masculinity threats also may affect physical health indirectly, via the pathways of emotional distress and unhealthy coping behaviors. Masculinity threats may undermine men's mental health, including symptoms of depression. Depressive symptoms, in turn, are linked with physical health conditions including cardiovascular disease (Rugulies, 2002), diabetes (De Groot, Anderson, Freedland, Clouse, & Lustman, 2001), and musculoskeletal conditions (Carroll, Cassidy, & Côté, 2004). Men in wife breadwinner families also may compensate for this perceived status threat by engaging in compensatory masculinity practices, such as smoking, drinking, unhealthy eating, or avoiding the doctor (Courtenay, 2003; Springer & Mouzon, 2011). Each of these behaviors is associated with compromised health in later life (Preston & Wang, 2006). Thus, we evaluate the extent to which the relationship between wife breadwinning and older men's physical health attenuate after controlling for depressive symptoms and health behaviors.

### *Life Course Perspective: The Importance of Personal and Historical Time*

Our study is further motivated by the life course paradigm, which emphasizes that individual lives are shaped by historical context, and the impact of a life course transition may be conditional upon one's age and historical moment at which the transition occurs (Elder, 1994). These themes motivate several aspects of our study. First, we focus on a single birth cohort for whom men's adherence to the breadwinner ideal may be particularly salient. Most HRS participants came of age in the 1950s, a period in which socialization emphasized distinctive career and family pathways for men and women (Carr,

2002). Our results for this particular cohort will serve as an important baseline to compare future generations of couples, for whom rigid gender-role expectations may have weakened. We expect that men in “traditional” husband breadwinner families will have better mental and physical health than men in other households.

Second, we evaluate whether the purported health disadvantage associated with wife breadwinning varies based on the duration and recency of the arrangement. We use latent class analysis to identify long-term trajectories of spousal breadwinning, and explore associations between these classes and husbands’ health. This approach represents an advance over studies using single or short-lived spells of wife breadwinning, which potentially conceal heterogeneity in effects (Springer, 2010; Winkler et al., 2005). For instance, brief spells of wife breadwinning may have a negligible effect on husbands’ health, whereas longer periods may have a more powerful impact, consistent with research showing that the “wear and tear” of longer term stressors has particularly deleterious effects on physical health (Jackson & Warr, 1984).

The health effects of wife breadwinning also may vary based on recency. Recent spells may have stronger effects on mental health than distal spells, because the effects of chronic and acute stressors tend to attenuate after the stressful experience ends or after one adjusts to the stressful circumstance (Geurts & Sonnentag, 2006). By contrast, the recency of wife breadwinning may have distinct effects on physical health based on the particular health outcome considered, because some conditions have longer latency periods whereas others emerge shortly after a stressful experience. For example, hypertension may develop shortly after a stressful experience, whereas heart problems and chronic lung disease may emerge following long-term exposures dating back to early life (Ben-Shlomo & Kuh, 2002). Recognizing these differences in latency periods, we consider a range of health outcomes to better explicate wife breadwinning timing and men’s risk of specific diagnoses.

Third, the impact of wife breadwinning may vary across historical periods. In sociohistorical contexts in which a stigmatized attribute or behavior is more normative, its negative health consequences may weaken. For example, the deleterious effects of unemployment on men’s health are weaker among men living in high unemployment areas (Turner, 1995) and among men whose reference group members also are unemployed (Clark, 2003). Thus, we expect that the effects of wife breadwinning on husbands’ health may be muted during more recent time periods, as cultural expectations for men’s and women’s social roles have loosened. We cannot distinguish empirically between age and period effects in our analysis, as the HRS focuses on a single 10-year birth cohort. However, we will discuss plausible ways that historical

context versus a couple's life course stage may condition the health effects of spousal breadwinning trajectories.

Finally, we consider whether the effects of spousal breadwinning trajectories on men's health vary based on the life course stage at which a couple entered into wife breadwinning. Given pervasive expectations that young men will invest heavily in their careers to ensure future success and that they will provide financially for their dependent children, we might expect that the negative consequences of wife breadwinning are particularly strong for men who violated the breadwinning norm during young adulthood when expectations are most stringent (Coltrane, 1997). Conversely, transitions into wife breadwinning when a man is in his 50s or 60s may be less consequential as men often reduce their hours as they approach retirement, with their slightly younger wives either maintaining or increasing work hours and income (Chen & Scott, 2006). Older men also might reduce their work hours or switch to a less vigorous job as a response to illness or age-related declines in physical functioning (Coile, 2004). We cannot fully adjudicate between these two perspectives because we do not have data on the timing of onset of men's health conditions. However, we partially address concerns regarding causal ordering in two ways. First, latent class analyses allow the possibility of identifying a subgroup of couples who have a husband breadwinner throughout most of the marriage but then transition to wife breadwinning as they approach retirement age. This pattern – if associated with a husband's poorer health – could reflect a husband's age-related health decline, which may be accompanied by his reduced labor supply and concomitant increase in his wife's relative income. In other words, if husbands in this subgroup have poorer health, it may reflect reverse causation of a husband's poorer health leading to his wife's breadwinning status. Second, we control for men's early-life self-rated health to partly address the possibility of health-based selection into female breadwinning (Haas, 2007).

### *Other Influences on Wife Breadwinning and Husbands' Health*

We account for additional factors that may confound observed associations between spousal breadwinning trajectories and men's health. Sociodemographic factors including race, educational attainment, marital duration, marital history, and number of children are associated with spousal earnings (Altonji & Blank, 1999; Lundberg & Rose, 2000; Raley, Mattingly, & Bianchi, 2006) and health (Schafer, Wilkinson, & Ferraro, 2013; Williams & Jackson, 2005). We also account for spousal education discrepancies, as they contribute to income disparities (Winkler et al., 2005; Winslow-Bowe, 2006). Wife breadwinner families typically have lower household incomes

than male breadwinner families (Winslow-Bowe, 2006); thus, we account for low household income at four time points, given well-documented associations between income and health (Bernstein, Bilheimer, & Makuc, 2012).

Finally, early onset of health conditions may negatively affect men's labor supply and earnings (Pacheco, Page, & Webber, 2014) and also has long-term implications for later-life health (Delaney & Smith, 2012). Without controlling for prior health, it is likely that associations we find are at least partly due to men's poor health causing wife breadwinning, rather than the reverse. We cannot definitively rule out this possibility because the HRS does not obtain repeated health measures over the 30-year period that is the focus of our study, but we can substantially improve on prior research by including a measure of husbands' health before labor market activity. Specifically, we control for husbands' retrospective assessment of overall early life health. Retrospective reports of early life health—including the measure used here—are associated with persistent and reoccurring serious childhood health conditions that have been linked with adult health problems, and are also predictive of poorer adult health and work-limiting disability even controlling for socioeconomic status and adult health behaviors (Haas, 2007, 2008; Haas & Bishop, 2010). Poor childhood health measured in the HRS also predicts health-related mobility functional limitations in 1992 and beyond (Haas, 2008)—mobility limitations that have been linked with premature work exit (Rice, Lang, Henley, & Melzer, 2011). Furthermore, retrospective reports of childhood health are relatively unaffected by poorer adult health among HRS respondents, thereby reducing concerns about reporting bias (Haas, 2007). Taken together, these studies suggest that accounting for retrospective childhood health is one useful way to help control for adult health problems that can lead to reduced employment and health problems in older adulthood.

## **Data and Methods**

### *Data*

We use data from the HRS, a nationally representative sample of the U.S. population born between 1931 and 1941, and their spouses. Self-report data were first collected in 1992, with subsequent reinterviews every 2 years. We use the 1992 data to maximize the number of people currently in the workforce and to minimize the effect of selective survival at older ages. We merged HRS public data with SSA earnings data (Juster & Suzman, 1995; RAND, 2013). The SSA data include earnings histories for both spouses for up to 50 years (1951-2005) and have low measurement error, few missing cases, and minimal attrition (Bound & Krueger, 1991; Haider & Solon, 2006).



Our analytic sample includes 1,095 couples (2,190 individuals). Of the 13,434 HRS cohort members, we selected the 9,492 individuals who were married to an opposite-sex person who also participated in the 1992 survey. We merged these cases with respondents who granted permission to access their SSA information between 1992 and 2008 (7,006 individuals; 3,503 couples). We include only couples in which both spouses were born between 1931 and 1941 (1,615 couples) to minimize cohort variation in the sample, to avoid wide age discrepancies between spouses, and to focus on an aging cohort with increasing health problems. Roughly 95% of U.S. spouses are within 10 years of age. Finally, we restricted the sample to couples who were married for at least 30 years as of 1992 (1,095 couples) to reduce heterogeneity regarding the timing of family transitions that might affect spousal breadwinning trajectories (e.g., delayed marriage and childbearing). About two thirds of the HRS couples had been married for at least 30 years as of 1992; this is consistent with other national studies based on comparable cohorts (Kreider, 2005).

## Measures

*Spousal breadwinning.* Our focal predictor is spousal breadwinning history, based on longitudinal latent class analyses (LLCA). We first created a dichotomous measure of *wife breadwinning* for each year from 1962 to 1991 based on SSA data; the measure is coded 1 if a wife earned more than her husband; the reference category includes couples in which the wife earned the same as or less than her husband. This measurement approach is standard in the literature (Winslow-Bowe, 2006) and is predictive of husbands' health (Pierce, Dahl, & Nielsen, 2013; Springer, 2010). In addition, the structure of the SSA earnings data precludes us from calculating the precise earnings gap between high-earning husbands and wives because these data are top-coded at the SSA maximum taxable annual income (e.g., US\$53,400 in 1991). We also cannot ascertain which spouse is the higher earner for the 141 (0.4%) of the 32,850 couple-year data points (i.e., 30 years of SSA earnings for 1,095 couples) in which both spouses are at the maximum taxable income. We code these time points as missing and used maximum likelihood estimation to estimate latent class parameters as we conducted LLCA.

*Husband's health.* We consider two general mental health (depressive symptoms and self-rated mental health) and one self-rated physical health outcomes. Depressive symptoms are assessed with a subset of eight items from the Center for Epidemiological Studies Depressive Scale (CES-D; Radloff, 1977). Respondents indicate how often in the past week they experienced

symptoms such as sadness, where response categories ranged from 1 (*none to almost none of the time*) to 4 (*all or almost all time*). Responses are summed and standardized, where higher scores reflect more frequent symptoms ( $M = 0$ ,  $SD = 1$ ). Self-rated mental health is measured with the single item “How good do you feel or how stressed, anxious, or depressed do you feel,” and self-rated physical health is assessed with the widely used item: “Would you say your health is excellent, very good, good, fair, or poor?” Response categories for both items range from 1 (*excellent*) to 5 (*poor*).

We use dichotomous indicators of whether one was ever diagnosed with any of five cardiometabolic disorders (diabetes, heart problems, high cholesterol, hypertension, and stroke) and four additional conditions linked with stress exposure (back problems, chronic lung disease, psychiatric problems, and stomach ulcers). In addition, we create three summary scores: (a) total number of cardiometabolic diseases (range: 0-5), (b) total number of other diagnoses (range: 0-4), and (c) a cumulative measure of all diagnoses (range: 0-9).

**Control variables.** We adjust our analyses for individual- and couple-level factors that may potentially confound the association between spousal breadwinning and husband's health, including demographic (race, age), family status (prior marriages of either spouse, marital duration, and number of living children in 1992), and health behavior (smoking, heavy drinking, and body mass index) characteristics. Given extensive racial homogamy where 88% of HRS couples comprise a White husband and wife, we included a couple-level measure for race where White couples are coded as 1 and other couples are the reference category. Husband and wife age are each measured in years. Any prior marriages of husband and wife are each separately coded as 1, where the reference category is no prior marriages. Marital duration refers to total number of years married to one's current spouse, as of 1992. Number of living children refers to the number of biological and step-children reported in 1992, top-coded at six because 91% had fewer than six children.

Educational attainment refers to years of completed schooling, ranging from 0 to 17 or more. Consistent with prior studies, we include absolute levels of both husbands' and wives' years of education, and a dummy variable indicating whether the wife has more years of schooling than her husband (Winkler et al., 2005; Winslow-Bowe, 2006). We also include measures of low marital income in 1962, 1972, 1982, and 1991. Couples in the lowest 20th percentile of marital income for each of these 4 years were coded as 1 (indicating low marital income) and other couples were coded as 0. We include four measures of lower income to capture the possibility of lower

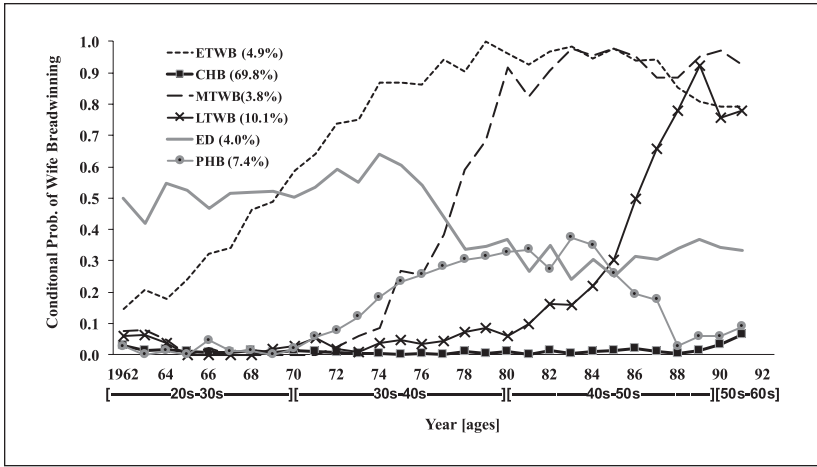
SES throughout the 30-year period without overspecifying by including annual income measures.<sup>1</sup> To adjust for early health-based selection into wife breadwinning, we include a retrospective report of his health “during the period [he was] growing up, through age 16,” measured only in 1998 with a range of 1 (*excellent*) to 5 (*poor*).

One mechanism through which masculinity threat may affect husbands' health is via maladaptive health behaviors. Because we are using contemporaneous measures of husband health and health behaviors (1992), we cannot make definitive claims regarding causal ordering nor can we formally test mediation effects. However, we include these measures as controls. Body mass index (BMI) is calculated from self-reported weight and height data, where BMI equals kilograms/meters squared. We recoded continuous BMI scores into four categories based on cutpoints defined by the National Heart, Lung, and Blood Institute (National Institutes of Health, 1998) guidelines: *underweight* or *normal* (less than 24.9), *overweight* (25–29.9), or *obese* (30 or higher). Self-reported weights are highly correlated with scale weights (Palta, Prineas, Berman, & Hannan, 1982). *Smoking status* is coded as 1 if a respondent has ever smoked (0 = those who have never smoked). Heavy drinking is coded as 1 for respondents reporting that they currently drink more than 3 drinks per day; the omitted category includes nondrinkers and those who drink three or fewer drinks a day.

Missing data are minimal. Most measures were obtained from the RAND-HRS version of data, in which missing cases were already imputed. However, the childhood health item had missing data for 15% of cases. We performed 10 imputations in STATA (ICE command) using switching regression, an iterative multivariate regression technique (Royston, 2005).

### *Analytic Strategy*

Our analyses followed a two-step procedure. First, we used LLCA to identify spousal breadwinning trajectories—based on whether and when the wife was the breadwinner over the 30-year period 1962 to 1991, at which time HRS participants were ages 21 to 61. We used LLCA for two reasons. First, unlike other growth models that estimate changes as a function of time using growth parameters, LLCA has no restrictions on the power of the growth curve, and instead allows for all possible patterns of groups. Second, LLCA is particularly useful when latent classes are characterized by diverse patterns; for example, some latent classes have consistent growth over time, whereas other classes have fluctuating or discontinuous growth (Collins & Lanza, 2010). To select the best-fitting model, we used the Akaike information criterion (AIC), the Bayesian information criterion (BIC), entropy, and



**Figure 1.** Predicted probability of breadwinning by year for each of the six classes. Note. ETWB = early transition to wife breadwinning; CHB = continuous husband breadwinning; MTWB = midlife transition to wife breadwinning; LTWB = late transition to wife breadwinning; ED = equal dependence; PHB = primarily husband breadwinning.

interpretability (Collins & Lanza, 2010).<sup>2</sup> The profile labels reflect the class-specific conditional probability of being in a wife versus husband breadwinning household over the 30-year period.

We then examined how husbands' class membership predicts their mental and physical health. We constructed dummy variables to represent each latent class where the continuous husband breadwinning class is the reference category. Finally, we estimated the effect of spousal breadwinning class on husband's risk of developing each diagnosis controlling for all other variables. We used ordinary least squares (OLS) regression models for the continuous outcome of CES-D symptoms, ordered logit regression models for self-rated physical and mental health, Poisson regression models for the diagnosis count outcomes, and logistic regression models for the binary indicators of specific diagnoses. We used STATA 14.0 and Mplus 6.0 to conduct the analyses (Muthén & Muthén, 2010; StataCorp, 2009).

## Results

### *Latent Classes of Spousal Breadwinning Over 30 Years of Marriage*

We identified six latent classes of spousal breadwinning trajectories, as shown in Figure 1. Seventy percent of couples were in *continuous husband*

*breadwinning* (CHB) households, a class characterized by a negligible chance of wife breadwinning across the entire 30-year period (1962-1991). An additional 7.4%, referred to as the *primarily husband breadwinning* (PHB) class, also had a near zero percent chance of wife breadwinning throughout the 1960s and again in the late 1980s. However, they did deviate from husband breadwinning during the 1970s and early 1980s, with a peak 35% chance of wife breadwinning in 1983. An additional 4.0% are labeled *equal dependence* (ED) couples; they fluctuate around a 50% chance of wife breadwinning between the 1960s and early 1970s then dipping to approximately 30% by the mid-1980s, when the respondents were in their 40s and 50s.

The remaining three classes transitioned from husband to wife breadwinning, with transitions at different time points. The *early transition to wife breadwinning* (ETWB; 4.9% of sample) group included those transitioning from husband to wife breadwinning in the early 1960s, when they were in their 20s and 30s. Of the women in this class, 15% were breadwinners in young adulthood (1962), but this percentage increased sharply over the next 10 years, reaching about 90% in 1974 when the women were in their 30s and 40s. This proportion dropped slightly by the late 1980s, yet more than 80% of the wives in this class were breadwinners from 1974 to 1990.

The final two groups experienced later and shorter-lived transitions to wife breadwinning, just 5- to 10-year periods rather than the nearly 25-year duration detected for the ETWB group. The *middle transition to wife breadwinning* (MTWB; 3.8% of sample) class transitioned to wife breadwinning in the early 1980s, when they were in their 40s and 50s. The *late transition to wife breadwinning* (LTWB; 10.1% of sample) class began transitioning from husband to wife breadwinning in the early 1980s. By the mid-1980s, half of the wives in this class were breadwinners, and this proportion climbed to more than 80% by 1991, when HRS sample members were in their 50s and early 60s.

### *Characteristics of the Sample and Breadwinning Classes*

Descriptive statistics for all variables used in the analyses, for the total sample and by breadwinning class, are presented in Table 1. Overall, the HRS men are in good health. Mean levels of self-rated physical (2.5) and mental (2.4) health fell between very good and good. On average, husbands reported just 1.5 out of nine possible diagnoses, one out of five possible cardiometabolic diagnoses, and 0.6 out of four other possible conditions. The most prevalent conditions were high blood pressure (42%) and back problems (35%). Almost one quarter of participants reported high cholesterol (24%), and slightly less than one fifth (17%) reported a diagnosed heart problem. Eleven

**Table 1.** Means (and Standard Deviations) or Proportions by Latent Class of Spousal Breadwinning ( $n = 1,095$ ).

	Total ( $n = 1095$ )	CHB ( $n = 764$ ) <sup>a</sup>		ETWB ( $n = 54$ ) <sup>b</sup>		MTWB ( $n = 42$ ) <sup>c</sup>		LTWB ( $n = 110$ ) <sup>d</sup>		ED ( $n = 44$ ) <sup>e</sup>		PHB ( $n = 81$ ) <sup>f</sup>		Significant subgroup differences
Self-rated health (1992)														
z-scored CES-D														
Self-rated mental health (1 = excellent to 5 = poor)	0.00 (1.00)	-0.05 (0.98)	0.19 (1.07)	0.05 (0.97)	0.10 (1.00)	-0.04 (0.94)	0.19 (1.13)							
Self-rated health (1 = excellent to 5 = poor)	2.4 (1.0)	2.3 (1.0)	2.4 (1.1)	2.3 (1.1)	2.6 (1.1)	2.3 (0.9)	2.5 (1.0)							
Health diagnoses (1992)	2.5 (1.1)	2.4 (1.1)	2.9 (1.0)	2.5 (1.2)	2.8 (1.4)	2.5 (1.1)	2.7 (1.3)							ab ad af
Cardiometabolic diagnoses														
Hypertension	.42	.39	.50	.40	.48	.52	.47							
High cholesterol	.24	.24	.33	.24	.20	.20	.23							
Diabetes	.11	.10	.13	.05	.15	.14	.15							
Heart problems	.17	.16	.26	.14	.17	.18	.22							
Stroke	.03	.03	.06	.00	.05	.05	.01							
Other diagnoses														
Chronic lung disease	.07	.06	.15	.02	.10	.05	.11							
Ulcer	.09	.07	.17	.12	.15	.09	.07							
Back problems	.35	.33	.41	.43	.39	.34	.37							
Emotional problems	.06	.05	.09	.05	.09	.05	.10							
Cumulative CV metabolic diagnoses	1.0 (1.0)	0.9 (1.0)	1.3 (1.0)	0.8 (0.9)	1.1 (1.1)	1.1 (1.0)	1.1 (1.1)							
Cumulative other diagnoses	0.6 (0.7)	0.5 (0.7)	0.8 (0.9)	0.6 (0.7)	0.7 (0.8)	0.5 (0.8)	0.7 (0.9)							
Cumulative all diagnoses	1.5 (1.3)	1.4 (1.2)	2.1 (1.5)	1.5 (1.1)	1.8 (1.6)	1.6 (1.3)	1.7 (1.5)							af
Demographics														
White couples	.88	.91	.72	.81	.92	.73	.79							ab ae af bd de df
Husband age	57.2 (2.7)	57.0 (2.7)	58.1 (2.3)	57.0 (2.7)	57.3 (2.6)	57.2 (2.6)	57.7 (2.6)							ab ae bc
Wife age	55.2 (2.8)	55.1 (2.8)	55.6 (2.9)	55.2 (2.8)	55.1 (2.8)	55.7 (3.1)	55.5 (2.9)							
Husband had prior marriage	.03	.03	.02	.05	.03	.02	.04							

(continued)

**Table 1. (continued)**

	Total (n = 1095)	CHB (n = 764) <sup>a</sup>	ETWB (n = 54) <sup>b</sup>	MTWB (n = 42) <sup>c</sup>	LTWB (n = 110) <sup>d</sup>	ED (n = 44) <sup>e</sup>	PHB (n = 81) <sup>f</sup>	Significant subgroup differences
Wife had prior marriage	.03	.03	.04	.02	.03	.00	.07	af ef
Marital duration (years)	35.3 (2.8)	35.1 (2.8)	35.5 (3.0)	35.0 (2.6)	35.2 (2.8)	35.9 (3.2)	36.0 (3.1)	af
Number of living children	3.2 (1.4)	3.2 (1.4)	2.9 (1.4)	3.7 (1.5)	3.3 (1.4)	2.9 (1.5)	3.4 (1.5)	ac bc ce
Education								
Husband education (years)	12.3 (3.3)	12.3 (3.2)	12.8 (3.7)	13.0 (2.7)	11.8 (3.1)	12.7 (2.9)	11.3 (3.8)	af bf cd cf ef
Wife education (years)	12.2 (2.6)	12.1 (2.6)	12.7 (2.7)	12.8 (2.7)	12.1 (2.4)	13.3 (2.4)	12.0 (2.7)	ae de ef
Wife more educated	.31	.28	.26	.33	.41	.39	.41	ad af
Marital income, bottom 20%	.21	.16	.44	.26	.22	.45	.25	ab ae bc bd bf ce
≤US\$2,400 in 1962	.20	.12	.56	.43	.25	.50	.36	ab ac ad ae af bd
≤US\$5,800 in 1972	.20	.13	.37	.36	.29	.48	.37	bf cd de
≤US\$9,800 in 1982	.20	.16	.26	.24	.23	.36	.38	ab ac ad ae af de
≤US\$8,820 in 1991	.73	.72	.80	.71	.76	.77	.67	ae af df
Health-related behaviors in 1992								
Ever smoked	.07	.08	.13	.07	.04	.11	.04	bd
Heavy drinking	.26	.25	.39	.19	.27	.20	.25	ab bc be
BMI (<25)	.54	.56	.46	.55	.41	.50	.60	ad df
BMI (25-30)	.20	.19	.15	.26	.32	.30	.15	ad bd df
BMI (>30)	1.8 (0.9)	1.8 (0.9)	1.8 (0.9)	1.9 (1.0)	1.7 (0.9)	1.5 (0.6)	1.8 (0.9)	ae ce

Note. Cumulative CV metabolic diagnoses refer to the sum of five conditions: diabetes, heart problems, high cholesterol, hypertension, and stroke. Cumulative other diagnoses refer to the sum of four conditions: back problems, chronic lung disease, psychiatric problems, and ulcers. Cumulative all diagnoses refer the sum of all nine diagnoses. Tukey-Kramer pairwise comparisons for post hoc were used to contrast each possible pair of wife breadwinning classes. CHB = continuous husband breadwinning; ETWB = early transition to wife breadwinning; MTWB = middle transition to wife breadwinning; LTWB = late transition to wife breadwinning; ED = equal dependence; PHB = primarily husband breadwinning; CES-D = Center for Epidemiological Studies Depressive Scale; CV = cardiovascular; BMI = body mass index.

percent had diabetes, and fewer than 10% reported any of the other diagnoses. These proportions are slightly lower than those detected in national samples of adults of ages 55 to 64, perhaps reflecting the fact that our analytic sample is limited to long-married persons, who typically enjoy better health and longevity than their unmarried counterparts (Federal Interagency Forum on Aging-Related Statistics, 2012).

We used Tukey–Kramer pairwise comparisons to contrast each possible pair of classes, adjusting for multiple comparisons. We detected few statistically significant differences in the health statuses of men across the six classes. Men in CHB couples had significantly better self-rated health than men in the ETWB, LTWB, or PHB groups and significantly fewer diagnoses than men in the PHB group. We will explore more fully whether these bivariate associations are accounted for (or suppressed by) the covariates in our multivariate analyses.

We find roughly comparable retrospective reports of childhood health status across the categories ( $M = 1.8$ ). The groups were generally comparable with respect to health behaviors, with roughly three-quarters reporting ever smoked and 7% identifying as heavy drinkers. Slightly more than half of men are classified as overweight (BMI 25-30), with another 20% classified as obese (30+), and 26% classified as healthy weight. Men in the CHB group are significantly more likely to be healthy weight compared with men in the LTWB group and significantly less likely than LTWB men to be obese. We find few demographic differences across the breadwinning classes, although CHB couples consistently evidence higher income. Women in the PHB and LTWB categories were most likely to have more education than their spouses (41% each), relative to women in the CHB class.

### *Associations Between Spousal Breadwinning Class and Husbands' Health*

We next explore how spousal breadwinning classes differ with respect to husband's mental (Table 2) and physical (Table 3) health in 1992, net of covariates. The multivariate analyses yield two general trends. First, we find very limited evidence that breadwinning class is linked to husbands' mental health; none of the coefficients presented for the depressive symptom models is statistically significant, consistent with our bivariate results. Only one of the five groups differs significantly from CHB for self-rated mental health in the fully adjusted model: LTWB husbands have significantly higher odds of poorer mental health (odds ratio [OR] = 1.63).

By sharp contrast, we find that men in CHB couples enjoy consistently better physical health than men in ETWB and LTWB couples. Men in ETWB



**Table 2.** Estimated Coefficients, Latent Classes of Spousal Breadwinning Predicting Husband's Mental Health in 1992 ( $n = 1,095$ ).

	OLS regression		Ordered logistic regression	
	z-scored CES-D		Poorer self-rated mental health	
	Estimate (standard error)		Odds ratio (95% CI)	
	Model 1	Model 2	Model 1	Model 2
CHB (reference)				
ETWB	.23 (.14)	.22 (.14)	1.35 [0.78, 2.35]	1.36 [0.79, 2.36]
MTWB	.06 (.16)	.05 (.16)	1.04 [0.57, 1.88]	0.99 [0.54, 1.80]
LTWB	.13 (.10)	.12 (.10)	1.66 [1.14, 2.42]**	1.63 [1.11, 2.40]*
ED	-.01 (.16)	-.03 (.16)	1.32 [0.75, 2.33]	1.21 [0.68, 2.14]
PHB	.14 (.12)	.15 (.12)	1.21 [0.79, 1.86]	1.26 [0.82, 1.94]

Note. All models control for demographics, education, marital income, and childhood health. Model 2 also controls for smoking, heavy alcohol use, and BMI in 1992. Emotional health ranges from 1 (*excellent*) to 5 (*poor*). OLS = ordinary least squares; CES-D = Center for Epidemiological Studies Depressive Scale; CI = confidence interval; CHB = continuous husband breadwinning; ETWB = early transition to wife breadwinning; MTWB = middle transition to wife breadwinning; LTWB = late transition to wife breadwinning; ED = equal dependence; PHB = primarily husband breadwinning; BMI = body mass index.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

(OR = 2.71) and LTWB (OR = 1.69) couples are significantly more likely to report poorer self-rated health relative to men in CHB couples, net of demographics and childhood health. ETWB men also evidence significantly higher cardiometabolic diagnoses (incidence rate ratio [IRR] = 1.35), other diagnoses (IRR = 1.68), and total number of all diagnoses (IRR = 1.48). Likewise, LTWB men evidence significantly poorer health with respect to the four non-cardiometabolic conditions (IRR = 1.36) and total number of diagnoses (IRR = 1.26), but no greater risk of cumulative cardiometabolic diagnoses.

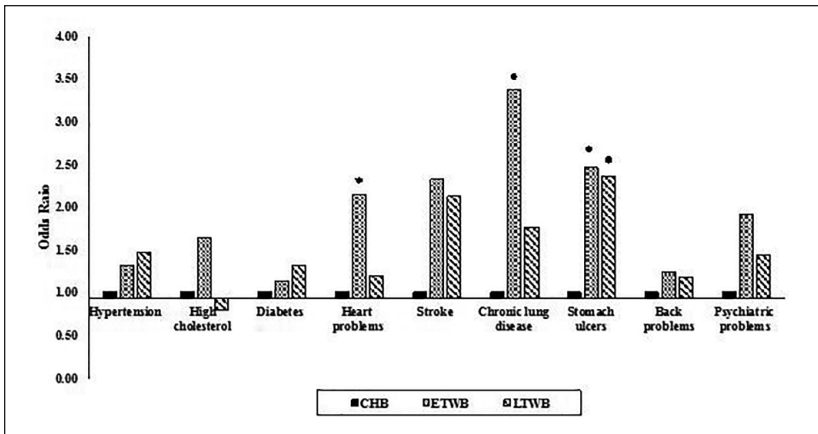
These statistically significant effects persisted and declined only slightly in magnitude when depressive symptoms and health behavior variables were controlled, suggesting that the relatively poorer physical health among men in the early and later wife breadwinning groups (ETWB, LTWB) is not likely accounted for by psychological or health behavior adaptations to the stress associated with maintaining a nonnormative economic arrangement in one's home. The largest attenuation occurred among ETWB men for the outcome of self-rated physical health; IRRs declined by 16% from 2.71 to 2.28 when depressive symptoms and health behaviors were controlled, yet the disparity remains large and statistically significant.

**Table 3.** Estimated Coefficients, Latent Classes of Spousal Breadwinning Predicting Husband's Physical Health in 1992 (n=1,095).

	Ordered Logistic Regression		Poisson Regression Model						
	Poorer self-rated physical health Odds ratio (95% CI)		Cumulative Cymetabolic diagnoses Incidence Rate Ratio (95% CI)		Cumulative other diagnoses Incidence Rate Ratio (95% CI)		Cumulative all diagnoses Incidence Rate Ratio (95% CI)		
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	
CHB (reference)									
ETWB	2.71*** (1.63-4.49)	2.28** (1.38-3.79)	1.35* (1.04-1.76)	1.35* (1.04-1.75)	1.68** (1.20-2.34)	1.47* (1.06-2.05)	1.48*** (1.20-1.82)	1.41** (1.15-1.73)	
MTWB	1.13 (.62-2.05)	1.02 (.56-1.87)	.89 (.63-1.26)	.87 (.62-1.22)	1.21 (.80-1.81)	1.20 (.80-1.81)	1.01 (.77-1.31)	.98 (.76-1.28)	
LTVB	1.69** (1.15-2.49)	1.52* (1.03-2.24)	1.20 (.98-1.46)	1.15 (.94-1.40)	1.36* (1.06-1.73)	1.32* (1.03-1.69)	1.26** (1.08-1.47)	1.21* (1.04-1.41)	
ED	1.45 (.81-2.58)	1.30 (.71-2.35)	1.18 (.87-1.60)	1.10 (.81-1.51)	1.09 (.70-1.69)	1.13 (.73-1.76)	1.15 (.89-1.48)	1.12 (.87-1.45)	
PHB	1.25 (.80-1.94)	1.22 (.78-1.92)	1.14 (.91-1.44)	1.13 (.90-1.43)	1.10 (.82-1.49)	1.04 (.77-1.41)	1.12 (.93-1.35)	1.09 (.91-1.31)	

Note. All models control for demographics, education, marital income and childhood health. Model 2 also controls for depressive symptoms and smoking, heavy alcohol use, and body mass index (BMI) in 1992. Self-rated health ranges from 1 (excellent) to 5 (poor).

\*p < .05, \*\*p < .01, \*\*\*p < .001.



**Figure 2.** Predicted odds ratio of husbands' diagnoses associated with breadwinning in fully adjusted logistic regression model.

Note. Asterisks (\*) indicate that the odds ratios of PWB or LTWB differ significantly from CHB. CHB = continuous husband breadwinning; ETWB = early transition to wife breadwinning; LTWB = late transition to wife breadwinning.

*Diagnosis-specific outcomes.* We next explored associations between breadwinning class and risk of each of the nine specific diagnoses included in the three diagnosis count measures. We focus on only the three classes which differed significantly with respect to the diagnosis count outcomes: CHB, ETWB, and LTWB couples. Odds ratios for breadwinning class, adjusted for all control variables, are presented in Figure 2. These results suggest that physiological stress may partly explain the poorer health of ETWB and LTWB men, relative to CHB men. We find significant effects for three physical health outcomes that have been linked to stress response: chronic lung disease, heart problems, and stomach ulcers.

Men in ETWB couples have greater odds of being diagnosed with heart problems (OR = 2.15), chronic lung disease (OR = 3.38), and stomach ulcers (OR = 2.46) relative to men in CHB households. Men in LTWB households evidence elevated risks of stomach ulcers (OR = 2.36) only, although they also have marginally higher odds of hypertension (OR = 1.47,  $p = .08$ ) relative to men in CHB couples. The latter finding was statistically significant in a prior model, which excluded controls for CES-D and health behaviors. These patterns are suggestive of the distinctive etiologies of the diagnoses considered, where some may have their onset shortly after a stressor occurs, and others have longer latency periods and emerge only after long-term exposure.

## **Discussion**

Wives' labor force participation and earnings have increased dramatically over the last five decades, with a corresponding increase in the proportion of wives who earn more than their husbands (Fry & Cohn, 2010). Wife breadwinning families are an important site for studying men's health, as they are defined by a social and economic arrangement that challenges personal and cultural expectations of masculinity (Atkinson et al., 2005). Given the persistence of the male breadwinner ideal as a hallmark of hegemonic masculinity, especially among current cohorts of older adults (Wang et al., 2013), we proposed that men who deviate from this standard may experience poorer health than their counterparts who adhere to the male breadwinner norm. Testing these possibilities in one of the first cohorts to experience widespread shifts of women into the labor market provides an important baseline for analyses exploring the relationship between wife breadwinning and husbands' health in future cohorts.

Our analyses were guided by gender relations theory and stress process models as well as empirical work documenting the health consequences of identity-relevant stressors, including low rank in one's status hierarchy (Sapolsky, 2005; Taylor, 2014). Drawing on core concepts of the life course paradigm, we further speculated that husband's health would vary based on the timing and duration of wife breadwinning spells.

Our analyses yielded three main findings. First, we identified six distinctive spousal breadwinning trajectories. Second, we documented the weak effects of these trajectories on husbands' later-life mental health. Third, we found that wife breadwinning transitions are associated with husbands' physical health, yet effects are limited to a subset of classes and health outcomes.

### *Patterns of Spousal Breadwinning*

We identified six patterns of spousal breadwinning, distinguished by the time at which a couple transitions into and out of wife breadwinning. These life course profiles represent a significant advance in documenting the prevalence and consequences of wife breadwinning, because prior studies have used a single point-in-time or short time periods in which wives were the primary breadwinner (Winkler et al., 2005; Winslow-Bowe, 2006). Our analysis, which uses 30 years of SSA earnings data from husbands and wives, confirms that the majority (70%) of HRS cohort couples complied with the "traditional" male breadwinning idea. These CHB couples had almost no chance of wife breadwinning at any point during the 30-year observation

period. An additional 7% of couples were classified as PHB, complying with the “male breadwinner” ideal for most of the observation period. A small group (4%) comprised the ED class that fluctuated between a 30% and 50% chance of wife breadwinning throughout the 30 years.

We also identified three classes that transitioned into wife breadwinning, defined as a nearly 100% conditional probability of wife breadwinning for at least one time point. These categories reveal the heterogeneous and dynamic nature of wife breadwinning; we detected classes in which the wife breadwinner transition occurred in early (ETWB, 5%), middle (MTWB, 4%), or later (LTWB, 10%) adulthood. In all three groups, the likelihood of wife breadwinning generally increased over the observation period, with the highest chance of wife breadwinning occurring in the 1980s. These results suggest that a couple’s transition to wife breadwinning may reflect both life course contingencies and macrosocial factors such as shifting cultural norms regarding the acceptability of female breadwinning. Because we focus on a single cohort (between 1931 and 1941), we cannot discern whether the rising levels of wife breadwinning documented in Figure 1 reflect age or period effects. For instance, the rising probability of wife breadwinning across the wife breadwinning groups in the later time periods may reflect life course stage, such as a couple’s transition to empty nest stage in their 50s, which might free up wives to increase their labor supply (García-Manglano, 2015), or period effects, such as the rising labor force participation of married women and stagnation of men’s wages in the 1980s (Macunovich, 2010). Nonetheless, these classes clearly reveal the dynamic and varied nature of wife breadwinning, and show how a single point in time measure may conceal this rich nuance.

### *Wife Breadwinning and Husbands’ Mental Health*

Our main goal was to explore whether husbands in each of the six breadwinning classes differ with respect to their mental and physical health, and their risk of specific cardiometabolic and other diagnoses. We found limited evidence that spousal breadwinning trajectories are linked with men’s mental health. None of the breadwinning categories differed significantly from the CHB category with respect to depressive symptoms; only men who made late transitions to wife breadwinning had elevated risk of poor self-rated mental health. Men in this LTWB class started making the transition to wife breadwinning in the 1980s, with this transition peaking in the late 1980s and early 1990s, when they were in their late 50s and early 60s. Although we cannot definitively ascertain the reason for this pattern, we find two explanations plausible. First, the poorer self-rated mental health of LTWB men may reflect

recency effects, whereby the psychological effects of a stressor (such as masculinity threat) are most acute immediately following the onset of the stressor. With the passage of time, the stress-inducing experience may end or the individual may adjust to their new circumstances (e.g., Geurts & Sonnentag, 2006). Second, later-life transitions to wife breadwinning may be a response to declines in husband's physical health, upon which husbands may decrease, and wives may increase, their labor supply (Siegel, 2006). These physical health declines, in turn, may undermine men's mental health. We cannot directly test the latter speculation because the HRS does not obtain the date of onset of men's health conditions. Future research should explore interconnections among the timing of men's health declines, the couple's transitions between breadwinning classes, and men's later-life health

### *Wife Breadwinning and Husbands' Physical Health*

We found strong evidence that wife breadwinning is linked to husbands' physical health, where those who transition into this arrangement early (ETWB) or late (LTWB) in life report significantly poorer physical health than men in CHB families. However, men who make midlife transitions into wife breadwinning (MTWB), men in primarily husband breadwinner (PHB) couples, and men in couples marked by ED do not differ significantly from CHB men on any of the physical health outcomes. The patterns for the PHB and EB men are expected, because these men never experienced a transition to female breadwinning and thus were not exposed to the hypothesized masculinity threat stress.

By contrast, ETWB men were disadvantaged (relative to CHB men) with respect to self-rated physical health, cardiometabolic diagnoses, other stress-related conditions, and total number of diagnoses. LTWB men showed a similar profile, although they did not have an elevated risk of cardiometabolic conditions. When we examined specific health outcomes, we found that ETWB men were at elevated risk of heart problems, chronic lung disease, and stomach ulcers. LTWB men had an elevated risk of stomach ulcers only, and a marginally higher risk of hypertension ( $p < .10$ ). The health disadvantages evidenced among the ETWB and LTWB groups persisted net of all covariates, strengthening our conclusion that deviations from the male breadwinner role are negatively associated with men's physical health.

Whereas our mental health analysis found a disadvantage for LTWB men only, our physical health analysis documents far-reaching health disadvantages for ETWB men. These results are consistent with research demonstrating that the physiological wear and tear of a chronic strain, such as falling short of the male breadwinner ideal, can trigger physiological dysregulation

and cardiometabolic health problems (Step toe & Kivimäki, 2013). Men in the ETWB class transitioned to wife breadwinning in their 20s and 30s, and this arrangement persisted through later life. They evidenced an elevated risk of two conditions linked to metabolic dysregulation (i.e., heart problems and stomach ulcers) and were the only class to have heightened odds of chronic lung disease. These three conditions have long latency periods and may be linked to cumulative long-term stress such as masculinity threats associated with long-term wife breadwinning. Lung disease may also be a consequence of smoking; men may react to persistent breadwinner strain with compensatory masculine behaviors such as smoking (Nicholas, 2000). However, we considered only a coarse measure of ever-smoked status, and could not differentiate duration or level of smoking.

Men who transitioned to breadwinning in later life (LTWB), like men in the ETWB category, had poorer outcomes on the general health measures yet showed an elevated risk of just two specific health conditions—stomach ulcers and hypertension—although the latter was significant only at the  $p < .10$  level. We suspect that their poorer self-rated health evaluations are explained by processes similar to those discussed above for mental health—the recency of their transition to the breadwinner role and the prior onset of health conditions that triggered the breadwinning transition. These patterns also may reflect disease etiology; hypertension may result from shorter term physiological dysregulation, whereas the conditions experienced by ETWB men (heart problems and chronic lung diseases) might emerge following long-term stress exposure (Ben-Shlomo & Kuh, 2002). The one condition that both ETWB and LTWB are at heightened risk of is ulcers, which may be a product of stress, regardless of duration. Ulcers are described as the “very model of modern [biosocial] etiology” in that psychosocial stress may provoke unhealthy behaviors such as smoking or decreased sleep, as well as physiological responses (e.g., increased acid secretions and decreased immune defense) which produce increased acid load leading to ulcers (Levenstein, 2000).

We were surprised that we did not find compromised health among men in the MTWB category, given the strong patterns that emerged for ETWB and LTWB men. This may reflect statistical power, as the MTWB is the smallest class ( $n = 42$ ). The pattern may also reflect life course stage; midlife wives might have increased their labor force participation as they entered the empty nest stage, perhaps to help meet anticipated expenses associated with their children’s education. Couples in the MTWB category had significantly more children than the other five classes ( $M = 3.7$ ); as such, husbands might have viewed their wives’ earnings as a necessity. Prior studies suggest that wives’

earnings are less distressing for husbands who deem those earnings as necessary for the family's financial well-being (Spade, 1994).

### *Limitations and Future Directions*

Our study is the first we know of to use nearly complete lifetime records of long-married husbands' and wives' earnings to explore prospectively the relationship between wife breadwinning and older men's health. Despite these strengths, our project has several limitations. First, we could not discern the timing of onset or duration of health condition(s). Including childhood health is an improvement over past research and has been shown to be valid, reliable, and predictive of adult health even after a range of controls (Haas, 2007, 2008; Haas & Bishop, 2010). Including this measure helps us feel more confident that results are not completely driven by reverse causation (i.e., men's poor health leading to wife breadwinning). We are more convinced for the class with the most consistent physical health effects (ETWB), given the relatively closer temporal proximity of early-life health and the timing of the wife breadwinning transition among couples in ETWB. Using latent class analyses also allows us to identify a subset of couples most likely affected by reverse causation. Specifically, the LTWB group likely results from reverse causation whereby men's later onset work-limiting health problems lead to wife breadwinning through men's decreased work hours. Nonetheless, future research using prospective longitudinal health data combined with life course, couple-level earnings data would be more definitive.

Second, we do not have life course health behavior measures and thus cannot ascertain whether smoking or drinking is a response to breadwinner stress. Our current health behavior measures also cannot distinguish whether one quit smoking or drinking due to onset of illnesses such as lung disease or ulcers. Third, we did not directly measure biological pathways through which wife breadwinning might affect husbands' health. Our results suggest that physical outcomes plausibly linked to stress, including heart problems and stomach ulcers, are most strongly affected but we did not directly examine biological pathways such as cortisol levels (Taylor, 2014). Fourth, we considered a narrow subset of mental health outcomes. Future studies should consider a fuller range of outcomes including externalizing behaviors such as anger and aggression, or physical symptoms such as sleep problems or sexual dysfunction (Rosenfield & Mouzon, 2013). Fifth, future research could further explore possible psychological and social factors that might further explain associations between breadwinning and health, such as social support. Sixth, our subjective assessments of self-rated mental and physical health may be downwardly biased if men most troubled by masculinity threats are reluctant to report



symptoms that they associate with weakness (Courtenay, 2003). Seventh, our analysis is limited to those in long-term marriages; marriages most strained by wife breadwinning might have ended in divorce, whereas marriages with unhealthy husbands might have ended prematurely via widowhood. Thus, our results may be understated. However, it is also possible that our results are overstated if men with worse health and lower earnings stay in marriage despite possible breadwinning stress. Finally, we do not have direct assessments of masculinity threat, and presume that wife breadwinning is a plausible proxy for one's perceptions of identity threat.

Despite these limitations, our study is the first we know of to document life course patterns of wife breadwinning and the health associations thereof for older husbands. We find that wife breadwinning is not uniformly harmful to men's health, with compromised health evidenced only among couples who transitioned to wife breadwinning long ago (ETWB) or relatively recently (LTWB), consistent with research showing that chronic and recent stress exposure typically have the strongest effects on health. These findings provide new insights into older men's health. While most research on men's mortality and morbidity disadvantages relative to women point to biological differences (Owens, 2002) and differences in health behaviors and services utilization (Read & Gorman, 2010), our work reveals the health threat of deviation from the male breadwinner role. Our results may provide a foundation for understanding the particularly poor health and mortality outcomes among working-class White male baby boomers, for whom the persistent pressures of hegemonic masculinity combined with constrained employment opportunities in the recessionary years of the early 21st century may be especially harmful (Case & Deaton, 2015). These findings suggest that challenging ideas about male breadwinning and hegemonic masculinity could both promote gender equality in the workforce, and reduce men's stress and ultimately improve their health.

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## Notes

1. Future research could explore interactions of low income and latent classes to more fully understand how wife breadwinning and lower income work together to shape men's health.
2. The Bayesian information criterion (BIC) and Akaike information criterion (AIC) showed significant model improvement for the six-class solution (AIC = 12,669 and BIC = 13,594) in comparison with the five-class solution (AIC = 12,916 and BIC = 13,685). In comparisons between the six- versus seven-class solution, there was a slight increase in the BIC for the seven-class solution (AIC = 12,768 and BIC = 13,679).

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