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Health Savings Account Associations from a Social Work Perspective

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ABSTRACT

Health Savings Accounts (HSAs) are often considered contrary to social work values and are often unpromoted and unsupported by social workers (Gorin, 2006). However, research demonstrates HSAs may help relieve the financial burden of health care costs and improve access to health care, thereby suggesting HSAs may align with social work values (Hageman & St. George, 2019).

Purpose: The research question addressed is whether health and debt variables are associated with HSA ownership status.

Method: This study explores HSA associations using a subset (n = 3,400) of 12,686 respondents from the National Longitudinal Surveys of Youth (NLSY). Descriptive, bivariate, and weighted logistic regressions were conducted.

Results: About 75% of HSA owners reported they did not have a chronic disease or health-related debt. Weighted logistic regressions results indicate chronic disease status and debt are not significantly associated with owning an HSA.

Discussion: Recommendations for social work practice include assisting eligible clients use HSAs to lower their taxes, pay for out-of-pocket health care expenses, and save for retirement. Further, social workers are called to advocate to restructure current HSA policies to better fit the needs of the populations social worker serve.

KEYWORDS

Health Savings Accounts; health status; health behavior; chronic disease; health debt

Introduction

The push for consumer driven health care led to the creation of high deductible health insurance plans and Health Savings Accounts (HSAs) in the United States (U.S.) (Buchmueller, 2009; Hanvoravongchai, 2002; Schweitzer et al., 1996). The idea behind them was that, as most people age, their health care costs increase over time and, therefore, individuals should save money while younger, to cover their future health expenses (Bunce, 2001;; Jost, 2006; Schweitzer et al., 1996; Worthington, 1978). Setting aside cash to cover future health care expenses is thought to increase family financial responsibility throughout the medical care system and improve the relationship between patients and doctors (Bunce, 2001; Jost, 2006; Schweitzer et al., 1996).

In 2006, the National Association of Social Workers (NASW) published an overview of Health Savings Accounts (HSAs) that outlined the implications of HSAs for social work practice (Gorin, 2006). At that time, Gorin (2006) concluded that HSAs "are inconsistent

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with the values of our [social work] profession" and "not something social workers can support" (p. 311). He argued that HSAs are designed for higher income, healthier families who primarily seek HSAs for tax-free investments gains (Gorin, 2006). Further, Gorin (2006) concluded the existence of HSAs drain employer-provided health insurance options, increase the privatization of health care, and work against universal health care coverage in the U.S. While HSAs may be structured for higher income, healthier families (Gorin, 2006; Park & Greenstein, 2006), the reality is that until more universal health care options exist, social workers should not ignore possible opportunities to examine health and financial outcomes of HSAs and their potential impact for families. In contrast to Gorin's (2006) perspective of HSAs and social work, recent research demonstrates HSAs may ease some of the financial burden of health care costs and improve access to health care (Hageman & St. George, 2019).

Researchers found that social workers are aware of and engaged in addressing the financial challenges of clients diagnosed with a serious medical illness, such as diabetes or cancer (Hageman et al., 2018). Often described as "navigators," social workers address financial challenges related to health concerns at the client, larger health care system, and local agency levels (Hageman et al., 2018). Thus, social workers help their clients who are ill access financial resources (Hageman et al., 2018). Further research examined the associations between owning an HSA and financial barriers using data from the 2015 National Health Interview Survey (NHIS; Hageman & St. George, 2019) and found that owning an HSA reduced financial barriers to health care. The U.S. Centers for Disease Control and Prevention (CDC) 2019 NHIS authors define a financial barrier as an unmet need for health care due to cost over the past 12 months. Results indicate HSA ownership status is significantly associated with reduced financial barriers to health care ($p < .001$; Hageman & St. George, 2019). These two studies demonstrate that HSAs may help individuals and families access financial resources, even when they encounter financial barriers.

While Gorin (2006) argues HSAs as structured are unsuitable for most low-to-moderate income populations social workers serve, he does not provide any analyses of data regarding access to financial resources and financial barriers these populations may face. The National Association of Social Workers (NASW) supports "a national health care policy that ensures the right to universal access to a continuum of health and mental health care" and to expand access to health care to populations with little or no health insurance coverage (National Association of Social Workers, 2006, p. 190). As such, social workers are called to further explore the potential of health-related financial products, such as HSAs, to expand access to health care services that reduced financial barriers and improve overall health and financial outcomes.

In particular, social workers should know if health and debt are associated with HSAs because of the growing costs of health care and debt in the U.S. A recent study examining health-related debt from 2009 to 2020 found debt related to health care expenses is one of the largest sources of debt in the U.S. today (Kluender et al., 2021). Further, health-related debt is highest among lower income households (Kluender et al., 2021). Social workers need to know how to assist clients who have health issues navigate the financial consequences of health-related debt. As currently structured, if an individual is in good general health, HSAs reduce taxes, potentially lower overall health care expenses, and serve as an additional retirement savings account (Duerfeldt, 2021). For healthy older adults, the money saved in an HSA can be used to offset

the costs of health care after retirement (Duerfeldt, 2021). If HSAs are indeed associated with lower debt and improved health status, then social workers need to be informed about how HSAs work and how they can be modified to assist lower income populations social workers serve.

The goal of this study is to explore whether health and debt are associated with HSA ownership status using a pooled, cross-sectional subset (n = 3,400) of 12,686 respondents from the National Longitudinal Surveys of Youth (NLSY). The research question addresses whether health and debt variables are associated with HSA ownership status. We provide an overview of HSAs as a context and connection to social work practice and policy.

Eligibility and benefits of owning an HSA

The eligibility criteria for HSAs vary somewhat by year, employer participation, Medicare status, and tax dependent status. The eligibility criteria for owning an HSA includes selecting a High Deductible Health Plan (HDHP) as the sole health coverage, not enrolled in Medicare, and cannot be claimed as a dependent (U.S. Department of the Treasury, Internal Revenue Service, 2018). HSAs are considered individual accounts and cannot be opened jointly (U.S. Department of the Treasury, Internal Revenue Service, 2018). The requirements for a HDHP include copayments and other out-of-pocket eligible costs, excluding insurance premiums (U.S. Department of the Treasury, Internal Revenue Service, 2018). The minimum annual deductible for HSAs increases every two years, which can be a financial burden on families. For example, in 2019, the minimum annual deductible ($1,350 single/$2,700 family) and maximum annual deductible ($6,750 single/ $13,500 family), including additional out-of-pocket costs, must be met to open an HSA (U.S. Department of the Treasury, Internal Revenue Service, 2018).

Anyone (including an individual, employer, family member, friend, etc.) may contribute to an HSA for the benefit of the eligible HSA owner (U.S. Department of the Treasury, Internal Revenue Service, 2018). All contributions to an HSA are tax deductible and contributions made by an employer are not included in income (U.S. Department of the Treasury, Internal Revenue Service, 2018). Distributions from an HSA used to pay for qualified medical expenses are not taxed (U.S. Department of the Treasury, Internal Revenue Service, 2018).

The potential benefits of owning an HSA include tax deductions on contributions made to the HSA, any interest earned on the funds in the account, and eligible health care expenses (U.S. Department of the Treasury, Internal Revenue Service, 2018). The funds in an HSA may stay in the account until used, and the HSA itself is "portable" and may remain open if the account owner changes employers or exits employment altogether (U.S. Department of the Treasury, Internal Revenue Service, 2018). As of December 31, 2018, more than 25 million HSAs exist, totaling $53.8 billion and an average balance of $15,146 held in each account (Robb & Remjeske, 2019, p. 3).

HSA ownership, health status, and debt

Research examining HSA ownership and chronic disease status, and debt is sparse. One group of researchers, however, included HSA ownership and chronic disease-related variables in their study on the effect of a consumer directed health plan (CDHP) with an

HSA on medication use and adherence for individuals with a chronic disease. A CDHP is a high deductible health insurance plan paired with an HSA to shift more financial responsibility for health care services to the individual patient (Beaton, 2017). Fronstin et al. (2013) drew a sample of working adults aged 64 or younger and their dependents from a large Midwestern manufacturer implementing a CDHP plan with an HSA. The chronic diseases examined included hypertension (n = 937), diabetes (n = 226), asthma/COPD (n = 115), dyslipidemia (n = 1057) and depression (n = 347) and the researchers also accessed pharmacy and medical administrative claims data to track taking medication (Fronstin et al., 2013). The employer contributed to the HSA for employees and their dependents (Fronstin et al., 2013). Data on the employees and their dependents who indicated they have 1 to 5 chronic conditions, including hypertension, diabetes, asthma, and depression were compared to a control group who did not indicate such conditions (Fronstin et al., 2013, p. e401). Results revealed the CDHP with an HSA was related to a decrease in respondents taking their medication as prescribed for three conditions: hypertension, diabetes, and depression but was not statistically significant for asthma (Fronstin et al., 2013, p. e401). Thus, HSAs may not help individuals suffering from some physical and mental health conditions take their prescription medicine (Fronstin et al., 2013, p. e401).

Previous research suggests that HSAs primarily benefit wealthier, healthier families in the form of tax-deductible investment accounts (Gorin, 2006; Park & Greenstein, 2006) or not at all (Keeler et al., 1996). For example, Remler and Glied (2006) claimed the impact of HSAs on out-of-pocket health expenses depended on health care plans. The researchers concluded that most HSAs could decrease the financial burden of health care for many families (Remler & Glied, 2006). Another group of researchers explored the impact of HSAs on health care costs using three years of health plan administrative data for 76,310 individuals (Sasso et al., 2010). Results indicated HSA owners spent about 6% less than those who did not own an HSA on overall health care (Sasso et al., 2010).

Social workers actively work to reduce health disparities by assisting vulnerable families navigate social service systems and benefits, such as Medicaid and Medicare (Allen, 2012; Cabin, 2020). Medicaid is a state and federally funded health insurance program providing health care coverage for more than 75 million low-income, elderly, and disabled Americans (U.S. Centers for Medicare and Medicaid Services, n.d.-a). Medicare is a U.S. health insurance program funded by the federal government for individuals 65 years old or older, some disabled individuals and individuals suffering from End-Stage Renal Disease (ESRD; U.S. Centers for Medicare and Medicaid Services, n.d.-b). Further, social workers understand the social and environmental barriers surrounding access to health care resources, and successfully advocate and intervene on behalf of those most in need (Allen, 2012; Cabin, 2020). To further examine whether HSAs could align with social work values and practice and assist families that social workers serve, this study examines whether health and debt variables are associated with HSA ownership status using a pooled cross-sectional sample drawn from a nationally representative longitudinal dataset. While current narratives deem HSAs contrary to social work values (Gorin, 2006), it is worthwhile to examine alternative perspectives if health and debt are associated with HSA ownership status. HSAs could be another resource that social workers use to assist families pay for health care.

Method

Overview of design and sample

Weighted logistic regression was conducted using secondary data from the National Longitudinal Survey of Youth (NLSY; U.S. Bureau of Labor Statistics, 2016). The NLSY is comprised of a nationally representative sample of 12,686 individuals age 14 to 24 years old who responded to the first data collection interview in the U.S. in 1979 (U.S. Bureau of Labor Statistics, 2016). Data for the NLSY is drawn from a stratified multistage random cross-sectional sample every two years. Demographics reported for the overall sample include gender (6,403 males and 6,283 females) and race/ethnicity (7,510 Non-black /Non-Hispanic, 3,174 Black, and 2,002 Hispanic/Latino; U.S. Bureau of Labor Statistics, 2016). A subset of the 12,686 respondents were drawn for this study to include respondents who answered survey questions from 2010 to 2014 about owning an HSA, having or not having one or more chronic diseases (Centers for Disease Control and Prevention, 2019), answering the 12-Item Short Form Survey (SF-12; Ware et al., 1996) physical and mental component questions, the health behavior questions, and the debt questions (U.S. Bureau of Labor Statistics, n.d.-a). The final sample is n = 936 for 2010; n = 853 for 2012; and n = 1,080 for 2014.

Cross-sectional, pooled sample

A preliminary test of Generalized Estimating Equations (GEE) was used to test whether chronic disease status was associated with HSA ownership status. Results indicate too little within-person variability. The PROC GENMOD procedure yielded questionable convergence, which is a consequence of data patterns known as complete or quasi-complete separation. According to Albert and Anderson (1984), the outcome variable separates the predictors perfectly resulting in complete separation. For these patterns, the maximum likelihood estimates do not exist (Albert & Anderson, 1984). The exchangeable working correlation for Chronic Disease result is .99. Given the data used to assess whether chronic disease status is associated with HSA ownership status are stable over time, an alternative analysis using repeated cross-sectional observations, logistic regression using PROC SURVEYLOGISTIC. Thus, the data was pooled and analyzed as a cross-sectional sample. The demographics of the overall sample and the subset sample drawn for this study are not significantly different.

Variables

Chronic disease and health behavior independent variables

Chronic disease is defined in this dataset as diabetes, non-skin cancer and skin cancer, heart problems (congestive heart failure, stroke, or other heart problem) and arthritis and rheumatism. The chronic disease items were recoded as binary variables to indicate whether a respondent reported a chronic disease in one or more of the chronic disease components, or not. The following questions were included in the health behavior items examined in this study (a) alcohol use: Have you had any alcoholic beverages, including beer, wine, or liquor, during the last 30 days?

(1 = yes, 0 = no); (b) How often have you had 6 or more drinks on one occasion during the last 30 days? Would you say it was … ? (0 = never in the last 30 days; 1 = less often than once a week; 2 = 1 or 2 times per week; 3 = 3 or 4 times per week; 4 = 5 or 6 times per week; 5 = everyday); (c) diet: In the past seven days, how many times did you … … Eat food from a fast-food restaurant such as McDonalds, Kentucky Fried Chicken, Pizza Hut, or Taco Bell? (coded as a continuous variable); (d) exercise: How often do you do light or moderate activities for at least 10 minutes that cause only light sweating or slight to moderate increase in breathing or heart rate? (1 = times per day; 2 = times per week; 3 = times per month; 4 = times per year; 0 = unable to do this activity); (e) How often do you do vigorous activities for at least 10 minutes that cause heavy sweating or large increases in breathing or heart rate? (1 = times per day; 2 = times per week; 3 = times per month; 4 = times per year; 0 = unable to do this activity); and (f) smoking: Do you now smoke daily, occasionally, or not at all? (1 = daily; 2 = occasionally; 3 = not at all).

SF-12 physical and mental component independent variables

The SF-12 (Ware et al., 1996) physical and mental component summary scores were collected from respondents when they turned age 40 or 50 (U.S. Bureau of Labor Statistics, n.d.-a). Respondents who completed the SF-12 (Ware et al., 1996) physical component health 40+ and/or the 50+ module received a continuous score ranging from 10.0 to 70.0 (U.S. Bureau of Labor Statistics, n.d.-a). A score of 10 indicates the poorest level of health and a score of 70 indicates the highest level of health (U.S. Bureau of Labor Statistics, n.d.-a). Respondents who completed the SF-12 (Ware et al., 1996) mental component health 40+ and/or the 50+ module received a continuous score ranging from 10.00 to 80.00 (U.S. Bureau of Labor Statistics, n.d.-a). A score of 10 indicates the poorest level of health and a score of 80 indicates the highest level of health (U.S. Bureau of Labor Statistics, n.d.-a). The SF-12 (Ware et al., 1996) physical and mental component summary scores were coded as continuous variables.

Debt independent and HSA dependent variables

The following questions were included in the debt items examined in this study (a) Do you [or] [Spouse/partner's name] currently owe money to any other businesses, such as stores, doctor's offices, hospitals, or banks? Please include any installment plans, rent-to-own accounts, or any other business that you owe money to (excluding mortgage debt) (1 = yes, 0 = no); (b) After the most recent payments were made on these accounts, what was the balance still owed? (coded as an interval variable into the following categories: 0; 1 to 999; 1,000 to 1,999; 2,000 to 2,999; 3,000 to 3,999; 4,000 to 4,999; 5,000 to 5,999; 6,000 to 6,999; 7,000 to 7,999; 8,000 to 8,999; 9,000 to 9,999; 10,000 to 14,999; 15,000 to 19,999; 20,000 to 24,999; 25,000 to 49,999; 50,000 or more]. One question, the HSA item, was administered to determine if respondents set up an HSA to pay for health care expenses. The HSA item was administered during the years 2010 to 2014 (U.S. Bureau of Labor Statistics, n.d.-a). HSA ownership status is the dependent variable in this study.

Demographic independent variables

The demographic variables included in this study are family size, marital status, race and ethnicity, gender, respondent residence type, current region of residence, urban or rural location of respondent residence, age, highest education level reached as of May 1st of the year data was collected, and total family net income from the previous year (U.S. Bureau of Labor Statistics, n.d.-a).

Procedure

To correct for over-sampling, clustering, and differential base year participation for the sample years used in this study, a custom sample weight program was applied to create longitudinal weights and accurately estimate the results (U.S. Bureau of Labor Statistics. National Longitudinal Survey Program, n.d.-b). Missing data were determined to be missing at random. Descriptive statistics were used as the first step to analyze the data. Descriptive statistic results are organized by HSA ownership status from 2010 to 2014. Bivariate analyses were conducted. Weighted logistic regression was used to test whether HSA ownership status is associated with chronic disease status and whether or not a respondent reported having debt. All variables were entered into the model simultaneously. Assumptions pertaining to individual variables tested included normality and independence. Confidence intervals were set to 95%. Quantitative data from the NLSY79 dataset years 2010, 2012, and 2014 was entered and recoded using SAS Version 9.4.

Results

Descriptive and bivariate

Descriptive and bivariate results are presented in Table 1. About 47% of HSA owners in the sample identified as male and 53% as female. Approximately 64% of HSA owners reported Non-Black, Non-Hispanic race/ethnicity followed by about 22% Black race and 13% Hispanic ethnicity. The average age of HSA owners was 53.34 (*SD* = 2.26) years old and approximately 70% of this sample was married. About 35% of HSA owners reported a family size of two persons, 20% reported a three-person family size, about 18% reported either a one- or four-person family size, and a little more than 8% reported a family size of five or more persons. Almost all (99%) of HSA owners indicated they owned a home and 81% lived in an urban environment. About 40% of HSA owners reported they lived in the South, about 30% lived in the North Central, and about 15% lived in either the West or the Northeast region of the U.S. Approximately 67% of HSA owners in this sample indicated they attended college and had an average income of $126,853 (*SD* = $122,994).

In regard to chronic disease status, about 75% of HSA owners in this sample reported they did not have a chronic disease. The average SF-12 (Ware et al., 1996) physical Health Score for HSA owners was 53.61 (*SD* = 5.95) for respondents who completed the age 40 survey and 52.29 (*SD* = 6.99) for respondents who completed the age 50 survey. The average SF-12 (Ware et al., 1996) Mental Health Score for HSA owners was 53.45 (*SD* = 7.56) for respondents who completed the age 40 survey and 53.91 (*SD* = 7.34) for respondents who completed the age 50 survey.

Table 1. Descriptive Statistics of Participants Who Owned an HSA and Did Not Own an HSA.

Descriptive Statistic	Owned HSA		Did not own HSA	
	n	%/SD	n	%/SD
Gender				
Male	626	46.96	3225	49.31
Female	707	53.04	3315	50.69
Race/Ethnicity				
Hispanic	179	13.43	1346	20.58
Black	300	22.51	2153	32.92
Non-Black, Non-Hispanic	854	64.07	3041	46.50
Average Age	53.34	2.26	53.32	2.29
Marital Status				
Never married	118	8.85	1139	17.42
Married	929	69.69	3292	50.34
Separated	26	1.95	356	5.44
Divorced	233	17.48	1551	23.72
Widowed	27	2.03	202	3.09
Family Size				
1 person	247	18.53	1861	28.46
2 persons	462	34.66	2158	33.00
3 persons	264	19.80	1239	18.94
4 persons	243	18.23	788	12.05
5 or more persons	117	8.78	494	7.55
Residence				
Owns home	1319	98.95	6228	95.27
Does not own home	14	1.05	309	4.73
Region				
Northeast	197	14.80	963	14.88
North Central	410	30.80	1359	21.00
South	520	39.07	2817	43.53
West	204	15.33	1333	20.60
Urban/Rural				
Urban	1070	81.00	5011	78.84
Rural	251	19.00	1345	21.16
Education				
Did not attend college	437	32.78	3731	57.05
Attended college	896	67.22	2809	42.95
Income	126,853	122, 994	66,156	81, 210
Chronic Disease status[a]				
Yes	336	25.21	2057	31.45
No	997	74.79	4483	68.55
SF-12 Mental Health				
Score average				
Age 40 survey	53.45	7.56	52.91	8.50
Age 50 survey	53.91	7.34	52.65	9.19
Alcohol: Drinks alcohol				
Yes	901	67.80	3416	52.53
No	428	32.20	3087	47.47
Binge drinks alcohol				
Yes	86	6.45	505	7.72
No	1247	93.55	6035	92.28
Smoking				
Not at all	435	70.50	2147	56.29
Occasionally	55	8.91	456	11.96
Daily	127	20.58	1211	31.75
Diet: Eats fast food				
Never	591	44.34	2732	41.77
1–3 times a week	657	49.29	3290	50.31
4–6 times a week	63	4.73	318	4.86
6 or more times a week	22	1.65	200	3.06

(*Continued*)

Table 1. (Continued).

Descriptive Statistic	Owned HSA		Did not own HSA	
	n	%/SD	n	%/SD
Exercise: Light/Moderate				
No exercise	184	13.80	1196	18.29
Less than 1 time a week	83	6.23	576	8.81
1 to 3 times a week	416	31.21	1661	25.40
3 to 5 times a week	189	14.18	709	10.84
5 or more times a week	461	34.58	2398	36.67
Exercise: Vigorous				
No exercise	245	18.38	1643	25.12
Less than 1 time a week	131	9.83	868	13.27
1 to 3 times a week	469	35.18	1875	28.67
3 to 5 times a week	239	17.93	693	10.60
5 or more times a week	249	18.68	1461	22.34
Debt: Owes money[a]				
Yes	393	29.48	1852	28.32
No	940	70.52	4688	71.68
Average range of debt owed	$6,000–7,999		$5,000–6,999	

Note. N = 3,400. Yes or No = HSA Ownership status

[a]Chronic disease status and debt chi-square result is significant ($\chi^2 = 15.86$, $p < .001$) for respondents who owned an HSA and those who did not ($\chi^2 = 117.62$, $p < .001$)

More than half (67.8%) of HSA owners reported they drink alcohol but only a little more than 6% of HSA owners indicated they binge drink alcohol. Slightly more than 70% of HSA owners reported they did not smoke at all and almost 50% of HSA owners indicated they eat fast food one to three times per week. About 35% of HSA owners reported they exercise at a light or moderate level five or more times a week compared to about 35% of HSA owners who indicated they exercise vigorously one to three times per week. Almost three quarters (about 70%) of HSA owners reported they do not have health-related debt. For HSA owners who did report health-related debt, the average range owed was $6,000 to $7,999. The chronic disease status and debt chi-square result was significant ($\chi^2 = 15.86$, $p < .001$) for respondents who owned an HSA and those who did not ($\chi^2 = 117.62$, $p < .001$).

Weighted logistic regression

Weighted logistic regression results are presented in Table 2. Results indicate chronic disease status and debt are not significantly associated with owning an HSA. Additional results indicate that divorced and widowed marital status, north central region of residence, urban/rural, education, income, SF-12 (Ware et al., 1996) physical health score average (Age 50), and light/moderate exercise are significantly associated with owning an HSA. A divorced person is estimated to be .53 times less likely than a never married person to own an HSA ($p < .05$, 95% CI = .25–1.15). A widowed person is estimated to be 2.15 times more likely than a never married person to own an HSA ($p <. 001$, 95% CI = 1.42–3.25). A person living in the north central region is 2.41 times more likely than a person living in the west region to own an HSA ($p <. 001$, 95% CI = 1.53–3.80). Respondents living in an urban area are 1.69 times more likely to own an HSA compared to those living in a rural area ($p < .001$, 95% CI = 1.31–2.18). Respondents who attended college are 2.17 times more likely than those who did not attend college to own an HSA ($p < .001$, 95% CI = 1.67–2.81). For each $10,000 increase in

Table 2. Logistic Regression Results for Associations with Owning an HSA.

Variable	β	SE_β	t	p	OR	95% CI
Intercept*	−5.04	1.82	−2.77	.01	-	-
Gender	.20	.12	1.69	.09	1.23	[.97, 1.55]
Race/Ethnicity (Non-Black, Non-Hispanic ref)	−.15	.13	−1.19	.24	.69	[.48, .98]
Hispanic	-.07	.12	-.57	.57	.75	[.54, 1.04]
Black						
Average Age	−.01	.03	−.39	.70	.99	[.94, 1.05]
Marital Status (Never married ref)	−.15	.33	−.45	.65	.93	[.40, 2.17]
Married	.21	.15	1.43	.16	1.33	[.86, 2.04]
Separated	-.70	.30	−2.33	.02	.53	[.25, 1.15]
Divorced*	.70	.15	4.72	<.001	2.15	[1.42, 3.25]
Widowed***						
Family Size	−.07	.06	−1.32	.19	.93	[.83, 1.04]
Home Ownership	.84	.72	1.18	.24	2.32	[.57, 9.50]
Region (West ref)	−.07	.12	−.59	.56	1.40	[.90, 2.18]
Northeast	.47	.12	3.88	.001	2.41	[1.53, 3.80]
North Central**	.01	.10	.09	.93	1.52	[1.01, 2.30]
South						
Urban/Rural***	.53	.13	4.08	<.001	1.69	[1.31, 2.18]
Education***	.77	.13	5.85	<.001	2.17	[1.67, 2.81]
Income***	.03	.01	3.83	<.001	1.03	[1.02, 1.05]
Chronic Disease status	.02	.15	.15	.88	1.02	[.77, 1.37]
SF-12 Physical Health Score average	−.03	.01	−.33	.74	.97	[.82, 1.16]
Age 40 survey	.33	.08	4.44	<.001	1.40	[1.20, 1.62]
Age 50 survey***						
SF-12 Mental Health Score average	−.06	.08	−.74	.46	.94	[.80, 1.11]
Age 40 survey	.05	.08	.68	.50	1.05	[.91, 1.21]
Age 50 survey						
Drinks Alcohol	.26	.13	2.01	.05	1.30	[1.01, 1.67]
Binge Drinks Alcohol	.04	.22	.19	.85	1.04	[.68, 1.60]
Smoking (Daily ref)	.15	.09	1.67	.10	1.20	[.92, 1.58]
Not at all	-.11	.14	-.81	.41	.93	[.59, 1.46]
Occasionally						
Diet: Eats fast food	.01	.09	.15	.88	1.01	[.85, 1.21]
Exercise: Light/Moderate*	−.10	.04	−2.56	.01	.91	[.84, .98]
Exercise: Vigorous	.02	.04	.37	.71	1.02	[.93, 1.11]
Debt: Owes money	.06	.15	.39	.69	1.06	[.79, 1.42]

Note. N = 3,400. Df = 226. *HSA Ownership status frequency* (yes = 514; no = 2,886).
* $p < .05$. ** $p < .01$. *** $p < .001$.

income the odds of owning an HSA increased by 1.03 ($p < .001$, 95% CI = 1.02–1.05). For each 10 unit increase in the SF-12 (Ware et al., 1996) physical health score average for respondents who answered the age 50 survey, the odds of owning an HSA increased by 1.40 ($p < .001$, 95% CI = 1.20–1.62). For each unit decrease in light/moderate exercise, the odds of owning an HSA decreased by .91 ($p < .05$, 95% CI = .84 – .98).

The debt item (a) Do you [or] [Spouse/partner's name] currently owe money to any other businesses, such as stores, doctor's offices, hospitals, or banks? yielded perfect collinearity with the debt item (b) After the most recent payments were made on these accounts, what was the balance still owed? As such, the debt item (b) was omitted from the weighted logistic regression model. According to Dormann and colleagues (2013), perfect collinearity among predictors indicates a misspecification of the model and one variable should be deleted.

Discussion

The research question addressed in this study is whether health and debt variables are associated with HSA ownership status. Our results indicate that no, the health, and debt variables included in this study are not significantly associated with HSA ownership status. Most HSA owners in this study did not have a chronic disease (are healthier) and reported higher income. Thus, it appears that as currently structured, these accounts may benefit populations that need them the least. Further, individuals included in this sample appear to have money to put away in an HSA that is not taxed, occupying a higher income level that one does not find in financial trouble when a health crisis may hit them, or of a working-class family, who does not have employer-based health insurance. While anyone may contribute to these accounts (i.e., friends, employer, family member), that is not a regular occurrence for low-to-moderate income working families, nor is there currently data to support that phenomenon.

Consistent with this study's results, previous researchers found the characteristics of HSA owners were consistently younger, healthier, higher income working adults (under age 65; American Academy of Actuaries, 1995; Congressional Budget Office, 1997; Feldman et al., 2005; Hudson et al., 2017; Minicozzi, 2006; Phelan et al., 2010; Thorpe, 1995; Zabinski et al., 1999). However, none of the aforementioned studies examined associations between HSA ownership (structural), health (individual lifestyle factors), and debt (employment and living conditions). This study fills that gap.

If an individual has a chronic disease, health care costs may present a significant financial burden that HSAs may not completely relieve. The CDC reports that chronic diseases account for about 75% ($5,300 per person) of spending on health care in the U.S. (National Association of Chronic Disease Directors, n.d.). Further, the cost to treat chronic diseases for Medicare and Medicaid (public insurance) is higher at 96 cents per dollar (Medicare) and 83 cents per dollar (Medicaid) (NACDD, n.d.). According to the National Association of Chronic Disease Directors (n.d.), about 45% of all people living in the U.S. reported a diagnosis of at least one chronic disease.

At the same time other countries were building an infrastructure for universal health insurance in the 19th century, the U.S. decided to privatize the health care system (Mitchell & Dowe, 2019). As a result, a huge gap of expensive, disconnected, inequitable insurance options and mixed health outcomes now exist (Mitchell & Dowe, 2019). In terms of health care reform, if HSAs are indeed not associated with health status (measured as chronic disease in this study) and health related debt as found in this study, then the purpose of the accounts may be misleading. According to the U.S. Centers for Medicare and Medicaid Services (n.d.-a), HSAs are personal savings accounts intended to allow account owners to save tax-free money for health care costs, resulting in reduced expenses for account owners.

Reforming the structure of HSAs to allow other populations, for example, lower-income families, not enrolled in a High Deductible Health Plan (HDHP), to own them could offer opportunities that align more closely with the intended purpose of these accounts – to reduce the cost of health care for the account owner. By broadening access to these accounts, less wealthy, sicker families could save for and perhaps reduce their future financial burden of health care costs. Further, additional studies could be conducted to determine whether more inclusive HSAs are associated with health status and health related debt and inform HSA policies.

Limitations

This study has several limitations. The cross-sectional logistic regression provided a descriptive overview of the sample; however, only three years of data spaced approximately two years apart were included in this study. Including additional years over longer or closer periods of time may yield more information that informs the association between HSAs, chronic disease and debt. Further, only one question related to HSAs was available for this study. The amount of money respondents deposited and kept in their HSAs was not collected by the NLSY. As such, we were unable to compare the amount of money held in an HSA to chronic disease status and debt. Future studies may examine and compare the amount of debt among HSA owners and non- HSA owners over time to assess whether the amount of debt an individual has an impact on chronic disease. In addition, the debt questions used in this study included health care-related costs (doctor's offices, hospitals) but also other questions and response options (owe money to any other businesses, such as stores, or banks). Thus, the associations between HSAs and health-related debt were co-mingled with debt related to stores and banks. Future research may examine associations between HSAs and only debt related to health care. Variables related to poverty and health insurance not provided by employers are not available for this study. Future studies may include variables that represent the current role that poverty and non-employee-based insurance play in restricting access to owning an HSA.

Implications for social work profession and individuals, families, and communities served

This study aimed to test whether health and debt are associated with HSA ownership status. Results indicate about 75% of HSA owners reported they did not have a chronic disease or health-related debt and chronic disease status and debt are not significantly associated with owning an HSA. As currently structured, HSAs do not appear to be a good fit for families unable to save for health care expenses. Some researchers argue that families most served by social workers may not have access to or want an HSA because they may not pay taxes or have enough income left over to pay for health care (Clary & Riley, 2017). As structured, predominately higher income, healthier families use HSAs (Gorin, 2006; Park & Greenstein, 2006). Perhaps revising the structure and eligibility criteria to own an HSA would broaden the scope of their impact on health and debt outcomes. Bishop (2012) proposes that families are the ideal consumers of HSAs because individuals are socialized through their family to make the financial health care decisions they do.

The rising costs of health care in the U.S. is an important public health social work issue (Bradley et al., 2016) and creative and financially viable solutions are needed. Many social service, government and private sector agencies are deeply connected to health insurance. Social workers employed in these institutions are well positioned to advocate for protections from health-related debt for clients who are ill and/or have chronic disease. In practice, social workers may serve as gatekeepers for resources that alleviate health and financial burdens. For instance, social workers may assist families access direct financial assistance to pay health care costs, health care debt, and/or apply for adequate health insurance coverage. Social workers should understand how health insurance operates and what HSAs are and whether HSAs are an appropriate fit (or not) for the families they serve. By knowing the

eligibility criteria and health insurance options available, social workers may be better equipped to assist families navigate the U.S. health care market. If HSA policies allowed more financially vulnerable populations to own these accounts, perhaps social workers would consider HSAs as another tool to reduce financial barriers and improve access to health care. Social workers should raise awareness and facilitate partnerships among health care stakeholders (patients, families, clinics, hospitals, health insurance companies) to advocate for revisions to the current structure and eligibility criteria of HSAs. By building coalitions among patients, families, clinics, hospitals, health insurance companies and other interested stakeholders resources, contacts, and knowledge may be shared to gain the momentum needed to create HSA policy change.

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References

Albert, A., & Anderson, J. A. (1984). On the existence of maximum likelihood estimates in logistic regression models. *Biometrika*, *71*(1), 1–10. https://doi.org/10.1093/biomet/71.1.1

Allen, H. (2012). Is there a social worker in the house? health care reform and the future of medical social work. *Health & Social Work*, *37*(3), 183–186. https://doi.org/10.1093/hsw/hls021

American Academy of Actuaries. (1995). *Medical Savings Accounts: Cost implications and design issues*. Academy Public Policy Department. http://www.actuary.org/files/publications/msa_cost%20and%20design_0.pdf. Public Policy 1 Monograph.

Beaton, T. (2017). *What are the pros and cons of consumer directed health plans?* Healthpayer Intelligence. https://healthpayerintelligence.com/news/what-are-the-pros-and-cons-of-consumer-directed-health-plans .

Bishop, J. P. (2012). Families, dependencies, and the moral ground of health savings accounts. *Journal of Medicine and Philosophy*, *37*(6), 513–525. https://doi.org/10.1093/jmp/jhs045

Bradley, E. H., Canavan, M., Rogan, E., Talbert-Slagle, K., Ndumele, C., Taylor, L., & Curry, L. A, et al. (2016). Variation in health outcomes: the role of spending on social services, public health, and health care, 2000–09. *Health Affairs*, *35*(5), 760–768. https://doi.org/10.1377/hlthaff.2015.0814

Buchmueller, T. C. (2009). Consumer-oriented health care reform strategies: A review of the evidence on managed competition and consumer-directed health insurance. The Milbank Quarterly, 87(4), 820–841. https://dx.doi.org/10.1111%2Fj.1468-0009.2009.00580.x

Cabin, W. (2020). Social workers assert medicare home care ignores social determinants of health. *Home Health Care Management & Practice*, *32*(4), 199–205. https://doi.org/10.1177/2F1084822320923988

Centers for Disease Control and Prevention. (2019). *Chronic disease prevention and health promotion*. https://www.cdc.gov/chronicdisease/

Clary, A., & Riley, T. (2017). *Health Savings Accounts-lessons from states; Questions for policymakers*. National Academy for State Health Policy. https://nashp.org/wp-content/uploads/2017/02/HSA-Brief.pdf

Congressional Budget Office. (1997). *A review of reported employer experiments with medical savings accounts*. (CBO Memorandum). U.S. Government Printing Office. https://www.cbo.gov/sites/default/files/105th-congress-1997-1998/reports/1997doc23-entire.pdf

Dormann, C. F., Elith, J., Bacher, S., Buchmann, C., Carl, G., Carré, G., and Lautenbach, S. (2013). Collinearity: A review of methods to deal with it and a simulation study evaluating their performance. Ecography, 36(1), 27–46. https://doi.org/10.1111/j.1600-0587.2012.07348.x

Duerfeldt, A. (2021). *A commonly forgotten tool in retirement planning: Health Savings Accounts*. Cornhusker Economics . https://agecon.unl.edu/commonly-forgotten-tool-retirement-planning-health-savings-accounts

Feldman, R., Parente, S. T., Abraham, J., Christianson, J. B., & Taylor, R, et al. (2005). Health savings accounts: early estimates of national take-up. *Health Affairs*, *24*(6), 1582–1591. https://doi.org/10.1377/hlthaff.24.6.1582

Fronstin, P., Sepúlveda, M. J., & Roebuck, M. C., et al. (2013). Medication utilization and adherence in a health savings account-eligible plan. *The American Journal of Managed Care*, *19* (12), e400–407. https://cdn.sanity.io/files/0vv8moc6/ajmc/5b2113e61070f6fdf501aa11a66610f3c8f6b01f.pdf/AJMC_12_13_Fronstin_e400to407.pdf .

Gorin, S. (2006). The trouble with health savings accounts: A social work perspective. *Health & Social Work*, *31*(4), 309–312. https://doi.org/10.1093/hsw/31.4.309

Hageman, S. A., & St. George, D. M. (2019). Health savings account ownership and financial barriers to health care: what social workers should know. *Social Work in Public Health*, *34*(2), 1–13. https://doi.org/10.1080/19371918.2019.1575310

Hageman, S. A., Tarzian, A. J., & Cagle, J, et al. (2018). Challenges of dealing with financial concerns during life-threatening illness: perspectives of health care practitioners. *Journal of Social Work in End-of-Life & Palliative Care*, *14*(1), 28–43. https://doi.org/10.1080/15524256.2018.1432008

Hudson, S., Perigo, D., & Oeding, J, et al. (2017). An assessment of high deductible health plans and affiliated savings accounts in the current market. *International Journal of Healthcare Management*, *12*(2), 1–6. https://doi.org/10.1080/20479700.2017.1336873

Jost, T. S. (2006). Our broken health care system and how to fix it: An essay on health law and policy. Wake Forest Law Review, 41,537–618. http://wakeforestlawreview.com/wp-content/uploads/2014/10/Jost_LawReview_05.06.pdf

Jost, T. S. (2006). Our broken health care system and how to fix it: An essay on health law and policy. Wake Forest Law Review, 41, 537–618. http://wakeforestlawreview.com/wp-content/uploads/2014/10/Jost_LawReview_05.06.pdf

Keeler, E. B., Malkin, J. D., Goldman, D. P., & Buchanan, J. L, et al. (1996). Can medical savings accounts for the nonelderly reduce health care costs? *Journal of the American Medical Association*, *275*(21), 1666–1671. https://doi.org/10.1001/jama.1996.03530450056033

Kluender, R., Mahoney, N., Wong, F., & Yin, W, et al. (2021). Medical debt in the US, 2009-2020. *JAMA*, *326*(3), 250–256. https://doi.org/10.1001/jama.2021.8694

Minicozzi, A. (2006). Medical savings accounts: what story do the data tell? *Health Affairs*, *25*(1), 256–267. https://doi.org/10.1377/hlthaff.25.1.256

Mitchell, J. L., & Dowe, P. K. F. (2019). Dissecting perceptions: Exploring the determinants of health-care reform preferences. Social Science Quarterly, 100(1), 245–258. https://doi.org/10.1111/ssqu.12546

National Association of Social Workers. (2006). Health care. In *Social work speaks: National Association of Social Workers policy statements* (7th, pp. 185–193). NASW press, Author. 2006–2009.

Park, E., & Greenstein, R. (2006). *GAO study confirms Health Savings Accounts primarily benefit high-income individuals*. Center on Budget and Policy Priorities. https://www.cbpp.org/sites/default/files/atoms/files/9-20-06health.pdf .

Phelan, J. C., Link, B. G., & Tehranifar, P, et al. (2010). Social conditions as fundamental causes of health inequalities: theory, evidence, and policy implications. *Journal of Health and Social Behavior*, *51*(1_suppl), S28–S40. https://doi.org/10.1177/0022146510383498

Remler, D. K., & Glied, S. A. (2006). How much more cost sharing will health savings accounts bring? *Health Affairs*, *25*(4), 1070–1078. https://doi.org/10.1377/hlthaff.25.4.1070

Robb, J. & Remjeske, E. (2019). 2018 Year-end HSA market statistics & trends executive summary. Devenir Group, LLC. http://www.devenir.com/wp-content/uploads/2018-Year-End-Devenir-HSA-Research-Report-Executive-Summary.pdf

Sasso, A. T. L., Shah, M., & Frogner, B. K, et al. (2010). Health savings accounts and health care spending. *Health Services Research*, *45*(4), 1041–1060. https://doi.org/10.1111/j.1475-6773.2010.01124.x

Schweitzer, M., Hershey, J. C., & Asch, D. A. (1996). Individual choice in spending accounts: Can we rely on employees to choose well? Medical Care, 34(6), 583–593. https://doi.org/10.1097/00005650-199606000-00008

Thorpe, K. E. (1995). Medical savings accounts: design and policy issues. *Health Affairs*, *14*(3), 254–259. https://doi.org/10.1377/hlthaff.14.3.254

U.S. Bureau of Labor Statistics. National Longitudinal Survey Program. (n.d.-b). *National longitudinal survey of youth 1979*. Sample weights & clustering adjustments. https://www.nlsinfo.org/content/cohorts/nlsy79/using-and-understanding-the-data/sample-weights-clustering-adjustments

U.S. Bureau of Labor Statistics. (2016). *National longitudinal survey program*. National longitudinal surveys. https://www.bls.gov/nls/nlsy79.htm

U.S. Centers for Medicare and Medicaid Services. (n.d.-a). *Medicaid*. Medicaid.gov. https://www.medicaid.gov/medicaid/index.html

U.S. Centers for Medicare and Medicaid Services. (n.d.-b). *What's medicare?* Medicare.gov. https://www.medicare.gov/what-medicare-covers/your-medicare-coverage-choices/whats-medicare

U.S. Department of the Treasury. Internal Revenue Service. (2018). Publication 969 (2018), Health Savings Accounts and Other Tax-Favored Health Plans. https://www.irs.gov/pub/irs-pdf/p969.pdf

Ware, J. E., Jr., Kosinski, M., & Keller, S. D, et al. (1996). A 12-item short-form health survey: construction of scales and preliminary tests of reliability and validity. *Medical Care*, *34*(3), 220–233. http://www.jstor.org/stable/3766749. https://doi.org/10.1097/00005650-199603000-00003

Zabinski, D., Selden, T. M., Moeller, J. F., & Banthin, J. S, et al. (1999). Medical savings accounts: microsimulation results from a model with adverse selection. *Journal of Health Economics*, *18*(2), 195–218. http://dx.doi.org/10.1016/S0167-6296(98)00038-1