

The Associations Between Life Satisfaction and Health-related Quality of Life, Chronic Illness, and Health Behaviors among U.S. Community-dwelling Adults

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Abstract The primary purpose of this article was to examine the associations between life satisfaction level and health-related quality of life (HRQOL), chronic illness, and adverse health behaviors among adults in the U.S. and its territories. Data were obtained from the 2005 Behavioral Risk Factor Surveillance System, an ongoing, state-based, random-digit telephone survey of the noninstitutionalized U.S. population aged ≥ 18 years. An estimated 5.6% of U.S. adults (about 12 million) reported that they were dissatisfied/very dissatisfied with their lives. As the level of life satisfaction decreased, the prevalence of fair/poor general health, disability, and infrequent social support increased as did the mean number of days in the past 30 days of physical distress, mental distress, activity limitation, depressive symptoms, anxiety symptoms, sleep insufficiency, and pain. The prevalence of smoking, obesity, physical inactivity, and heavy drinking also increased with decreasing level of life satisfaction. Moreover, adults with chronic illnesses were significantly more likely than those without to report life dissatisfaction. Notably, all of these associations remained significant after adjusting for sociodemographic characteristics. Our findings showed that HRQOL and health risk behaviors varied with level of life satisfaction. As life satisfaction appears to encompass many individual life domains, it may be an important concept for public health research.

Keywords Life satisfaction · Health behaviors ·
Quality of life · Chronic illness · Surveillance

Disclaimer: The findings and conclusions in this article are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention.

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Introduction

Life satisfaction is the cognitive evaluation of one's life as a whole [1]. Research indicates that characteristics such as race, socioeconomic status, marital status, education, and social involvement [2–8], as well as level of self-esteem, presence or absence of depression, and locus of control may influence life satisfaction [9, 10]. Research further suggests that levels of life satisfaction may be mediated by cultural and social values [11–14] and may depend on whom one is comparing one's life to, as well as experiences in the past decade and expectations of the future [15].

Life satisfaction is a predictor of longevity and psychiatric morbidity, with a dose-response relationship evident between life dissatisfaction and all-cause disease, injury, and mortality [16]. In addition, life satisfaction is related to other health predictors such as favorable self-reported health, social support, and positive health behaviors [16]. Despite the importance of these findings, there are few recent U.S. prevalence estimates available for life satisfaction, and very little is known about the relationship between life satisfaction, health behaviors, chronic illness, and health-related quality of life (HRQOL) among community dwelling adults throughout the United States and its territories.

Most life satisfaction research conducted in the United States has focused on subpopulations—persons with chronic illnesses, such as spinal cord injury [17–24] and cancer [25, 26], older adults [27–35], and persons of specific racial/ethnic identities [36–38]. We found only a few studies that examined life satisfaction in the general U.S. population [3, 6, 39, 40], and these were conducted in the early to mid-1970s. Because significant social changes have occurred since then, we used data from the 2005 Behavioral Risk Factor Surveillance System (BRFSS) to examine the associations between life satisfaction level and HRQOL, chronic illness, and adverse health behaviors among adults in the U.S. and its territories.

Methods

The BRFSS is an ongoing, state-based telephone survey conducted by random-digit dialing of noninstitutionalized U.S. adults. BRFSS monitors the prevalence of key health- and safety-related behaviors and characteristics [41, 42]. In 2005, trained interviewers in the 50 states, the District of Columbia, Puerto Rico, and the US Virgin Islands administered identical questionnaires about life satisfaction, social and emotional support, HRQOL, disability, chronic illness, and health behaviors over the telephone to an independent probability sample of adults aged 18 years or older. Data from all states and areas were pooled to produce national estimates. BRFSS methods, including the weighting procedure, have been described elsewhere [43].

Life satisfaction was evaluated by asking the respondent, “In general, how satisfied are you with your life?” Possible responses were: very satisfied, satisfied, dissatisfied, and very dissatisfied. For analysis, we divided responses into three groups: very satisfied, satisfied, or dissatisfied/very dissatisfied.

Four HRQOL questions with demonstrated validity and reliability for population health surveillance were examined [44–46]. General health was assessed by asking respondents to rate their health on a scale from excellent to poor. We divided responses into two groups: excellent/very good/good or fair/poor. The remaining three questions were about the respondent's own assessment of his or her health in the previous 30 days: “How many days was your physical health, which includes physical illness or injury, not

good?” (recent physical distress), “How many days was your mental health, which includes stress, depression, and problems with emotions, not good?” (recent mental distress), and “How many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?” (recent activity limitations).

Additionally, a Healthy Days Symptoms module was used in two states: Hawaii, and New York. Questions in this module also referred to the previous 30 days: “How many days did you feel sad, blue, or depressed?” (recent depressive symptoms); “How many days did you feel worried, tense, or anxious?” (recent anxiety symptoms); “How many days have you felt you did not get enough rest or sleep?” (recent sleep insufficiency); “How many days did pain make it difficult to do your usual activities?” (recent pain); and “How many days have you felt very healthy and full of energy?” (recent vitality).

In order to examine important predictors of life satisfaction after adjusting for potential confounders, HRQOL responses were dichotomized into 0–13 (infrequent) and 14–30 (frequent) unhealthy days in each domain, or, in the case of vitality, healthy days. This dichotomy has been used in previous research [47–49], with the term “frequent” representing the respondent’s status for a substantial portion of the month.

The survey assessed social and emotional support by asking the respondent, “How often do you get the social and emotional support that you need?” Possible responses include always, usually, sometimes, rarely, and never. We divided responses into two groups: always/usually/sometimes, or rarely/never.

Two yes/no questions assessed disability: “Are you limited in any way in any activities because of a physical, mental, or emotional problem?” and “Do you have a health problem that requires you to use special equipment such as a cane, a wheelchair, a special bed, or a special telephone?”

The BRFSS respondents were also asked about their smoking habits, physical activity, height and weight, and alcohol consumption. Respondents were considered to be current smokers if they had smoked at least 100 cigarettes in their lifetime and reported being smokers at the time of the interview. Persons were considered to be physically inactive if they had not participated in any leisure-time physical activity or exercise during the past 30 days. Body mass index (BMI = weight [kg] divided by height [m²]) was determined from self-reported height and weight. Persons were considered obese if their BMI was ≥ 30 kg/m². Consistent with the guidelines of the U.S. Department of Agriculture and the U.S. Department of Health and Human Services [50], heavy drinkers were defined as men who reported drinking more than two drinks per day and women who reported drinking more than one drink per day.

Cardiovascular disease (CVD) was assessed using three questions: “Has a doctor, nurse, or other health professional EVER told you that you had a heart attack, also called a myocardial infarction?,” “Has a doctor, nurse, or other health professional EVER told you that you had angina or coronary heart disease?,” and “Has a doctor, nurse, or other health professional EVER told you that you had a stroke?” Persons were considered to have CVD if they responded to all three questions and at least one response was a “yes.” Persons were considered not to have CVD if they answered “no” to all three questions. Diabetes status was accessed using one question: “Have you ever been told by a doctor that you have diabetes?” Women who reported diabetes only during pregnancy were not considered to have diabetes. Persons were considered to have asthma if they responded “yes” to the question “Have you ever been told by a doctor, nurse, or other health professional that you had asthma?” Finally, persons were considered to have arthritis if they responded “yes” to the question “Have you ever

been told by a doctor or other health professional that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?"

Data were available for 340,575 participants in the 50 states and the District of Columbia, Puerto Rico, and the US Virgin Islands who responded to the life satisfaction question. Data were available for 13,483 participants who responded to the life satisfaction question in New York and Hawaii. Prevalence estimates, adjusted odds ratios (AORs), and 95% confidence intervals (95% CI) were computed using SUDAAN (Research Triangle, release 9.0.1, Research Triangle Park, NC, 2007) to account for the complex survey design.

Results

Approximately 5.6% (95% CI: 5.5–5.8%) of the U.S. adult population reported that they were dissatisfied or very dissatisfied with their lives. Persons aged 45–54 years were

Table 1 Level of life satisfaction among adults aged 18 years or older by selected sociodemographic characteristics

Characteristics	Very satisfied % (95% CI)	Satisfied % (95% CI)	Dissatisfied/very dissatisfied % (95% CI)
Overall	44.6 (44.3–44.9)	49.8 (49.5–50.1)	5.6 (5.5–5.8)
Age			
18–24 years	39.3 (38.0–40.6)	54.5 (53.1–55.8)	6.3 (5.6–7.0)
25–34 years	43.8 (43.0–44.7)	51.3 (50.4–52.2)	4.9 (4.5–5.3)
35–44 years	43.7 (43.0–44.5)	50.4 (49.7–51.2)	5.9 (5.5–6.2)
45–54 years	44.1 (43.3–44.8)	49.2 (48.4–49.9)	6.8 (6.5–7.1)
55–64 years	48.0 (47.2–48.7)	46.2 (45.4–46.9)	5.9 (5.5–6.3)
65–74 years	50.7 (49.8–51.6)	45.2 (44.3–46.0)	4.2 (3.9–4.5)
75+ years	45.8 (44.8–46.8)	50.2 (49.2–51.2)	4.0 (3.6–4.5)
Sex			
Male	44.5 (43.9–45.0)	50.2 (49.7–50.8)	5.3 (5.1–5.6)
Female	44.7 (44.3–45.1)	49.4 (49.0–49.8)	5.9 (5.7–6.1)
Race/ethnicity			
White non-Hispanic	47.4 (47.1–47.8)	47.5 (47.1–47.8)	5.1 (5.0–5.3)
Black non-Hispanic	37.0 (35.9–38.1)	54.6 (53.4–55.8)	8.4 (7.7–9.1)
Hispanic	37.5 (36.2–38.7)	56.7 (55.4–58.0)	5.9 (5.3–6.5)
Other non-Hispanic ^a	40.7 (39.1–42.3)	52.7 (51.1–54.4)	6.6 (5.8–7.5)
Education			
<High school	32.4 (31.3–33.6)	58.3 (57.1–59.5)	9.3 (8.6–10.0)
High school graduate	39.7 (39.1–40.3)	54.1 (53.5–54.7)	6.2 (5.9–6.5)
>High school	49.6 (49.2–50.1)	45.8 (45.4–46.3)	4.5 (4.4–4.7)
Marital status			
Married	51.8 (51.3–52.2)	44.9 (44.5–45.3)	3.4 (3.2–3.5)
Previously married ^b	33.3 (32.7–33.9)	56.6 (55.9–57.2)	10.1 (9.7–10.5)
Never married	34.4 (33.5–35.3)	57.5 (56.6–58.4)	8.1 (7.6–8.6)
Employment status			
Employed	46.0 (45.6–46.5)	49.9 (49.5–50.4)	4.1 (3.9–4.2)
Unemployed	27.2 (25.6–28.8)	57.2 (55.4–58.9)	15.7 (14.5–16.9)
Retired	50.2 (49.5–50.8)	46.1 (45.5–46.8)	3.7 (3.5–4.0)
Unable to work	21.3 (20.1–22.6)	54.5 (53.0–55.9)	24.2 (23.0–25.5)
Homemaker/student	46.5 (45.4–47.5)	49.2 (48.1–50.2)	4.4 (4.0–4.9)

^a Asian, non-Hispanic; Native Hawaiian/Pacific Islander, non-Hispanic; American Indian/Alaska Native, non-Hispanic; other race, non-Hispanic; multirace, non-Hispanic

^b Previously married includes those divorced, widowed or separated

most likely to report dissatisfaction with life (6.8%) followed by those aged 18–24 years (6.3%) (Table 1). Females (5.9%) were slightly more likely to report dissatisfaction with life than males (5.3%) as were black non-Hispanics (8.4%) compared to other race/ethnicities. There was an inverse relationship between educational attainment and life dissatisfaction (9.3% among those with less than a high school education, 6.2% among those with a high school education, and 4.5% among those with greater than a high school education). Those previously married (10.1%) and never married (8.1%) were significantly more likely to report dissatisfaction with life than those currently married (3.4%). Finally, 24.2% of those unable to work, and 15.7% of those unemployed reported life dissatisfaction as compared to 4.1%, 3.7% and 4.4% respectively of those employed, retired, and homemakers or students.

Decreased level of life satisfaction was inversely related to mean number of days in the past 30 days of poor mental health (1.5 days in the past 30 days among those who are very satisfied with their lives, 3.8 days in the past 30 days among those who are sometimes satisfied with their lives, and 13.7 days among those who are dissatisfied/very dissatisfied with their lives), depressive symptoms (1.2, 3.4, and 14.4 days, respectively), and anxiety symptoms (3.0, 5.7, and 17.0 days, respectively), as well as with somatic complaints including poor physical health (2.4, 4.0, and 9.9 days, respectively), sleep insufficiency (6.8, 9.5, and 16.2 days, respectively), pain (1.9, 2.9, and 8.6 days, respectively), and activity limitations (1.1, 2.3, and 8.8 days, respectively) (Table 2). As life satisfaction decreased, so did the mean number of days of vitality in the past 30 days (21.4, 15.4, and 7.6 days, respectively).

Notably, after adjusting for sociodemographic characteristics, persons who reported that they were dissatisfied/very dissatisfied with their lives were 4.4 times more likely to have physical distress, 17.5 times more likely to have mental distress, 7.7 times more likely to have activity limitations, and 41.4 times more likely to have depressive symptoms for 14 or more of the past 30 days as compared to those who were very satisfied with their lives. Moreover, they were 24.7 times more likely to report anxiety symptoms, 7.6 times more likely to report insufficient sleep, and 5.7 times more likely to have pain for 14 or more of the past 30 days than those who were very satisfied with their lives. Conversely, persons who were very satisfied with their lives were 14.4 times more likely to report 14 or more days in the past 30 days of vitality as compared to those dissatisfied/very dissatisfied with their lives.

Decreased life satisfaction was also associated with an increased prevalence of fair/poor general health (Table 3). After adjusting for sociodemographic characteristics, persons who were dissatisfied/very dissatisfied with their lives were 6.2 times more likely than those very satisfied with their lives to report fair/poor general health, 11.1 times more likely to report rarely or never receiving the social and emotion support they need, 5.4 times more likely to report limitations due to physical, mental, or emotional problems, and 2.7 times more likely to have a health problems that requires special equipment than those who were very satisfied with their lives.

As the level of life satisfaction decreased, the prevalence of obesity, smoking, drinking heavily, and physical inactivity increased (Table 4). Persons who were dissatisfied/very dissatisfied with their lives were 2.3 times more likely than those very satisfied to smoke, 1.5 times more likely to be obese, 1.6 times more likely to drink heavily, and 2.2 times more likely to be physically inactive. Additionally, persons who were dissatisfied/very dissatisfied with their lives were more likely than those very satisfied with their lives to have asthma (AOR = 1.7), arthritis (AOR = 2.0), diabetes (AOR = 1.8), and heart disease (AOR = 2.2).

Table 2 Mean number of impaired health-related quality of life days in the past 30 days, prevalence of ≥ 14 or more impaired days, and adjusted odds of ≥ 14 impaired health-related quality of life days, by level of life satisfaction, 2005

Characteristics	Very satisfied Mean (95% CI)	Satisfied Mean (95% CI)	Dissatisfied/very dissatisfied Mean (95% CI)
<i>Questions asked in 50 states, DC, the Virgin Islands and Puerto Rico</i>			
Physical distress			
Mean (95% CI)	2.4 (2.3–2.5)	4.0 (3.9–4.0)	9.9 (9.6–10.2)
% (95% CI) ≥ 14 days	6.8 (6.6–7.1)	11.9 (11.6–12.2)	33.4 (32.1–34.7)
AOR (95% CI) ^a	Referent	1.7 (1.6–1.8)	4.4 (4.0–4.7)
Mental distress			
Mean (95% CI)	1.5 (1.4–1.5)	3.8 (3.8–3.9)	13.7 (13.4–14.1)
% (95% CI) ≥ 14 days	3.7 (3.5–3.9)	11.3 (11.0–11.6)	48.2 (46.8–49.7)
AOR (95% CI) ^a	Referent	3.0 (2.8–3.2)	17.5 (16.0–19.1)
Activity limitations			
Mean (95% CI)	1.1 (1.1–1.2)	2.3 (2.2–2.3)	8.8 (8.5–9.1)
% (95% CI) ≥ 14 days	3.2 (3.0–3.4)	6.8 (6.6–7.0)	30.2 (29.0–31.5)
AOR (95% CI) ^a	Referent	1.9 (1.8–2.0)	7.7 (7.0–8.5)
<i>Questions asked in New York and Hawaii</i>			
Depressive symptoms			
Mean (95% CI)	1.2 (1.0–1.4)	3.4 (3.0–3.7)	14.4 (12.7–16.1)
% (95% CI) ≥ 14 days	2.2 (1.5–3.4)	7.9 (6.5–9.5)	50.1 (42.1–58.1)
AOR (95% CI) ^a	Referent	3.5 (2.2–5.7)	41.4 (23.7–72.2)
Anxiety symptoms			
Mean (95% CI)	3.0 (2.7–3.4)	5.7 (5.3–6.2)	17.0 (15.1–18.8)
% (95% CI) ≥ 14 days	6.1 (4.8–7.6)	15.5 (13.6–17.6)	59.3 (51.1–67.0)
AOR (95% CI) ^a	Referent	2.8 (2.1–3.8)	24.7 (15.8–38.7)
Insufficient sleep			
Mean (95% CI)	6.8 (6.3–7.4)	9.5 (8.9–10.0)	16.2 (14.4–17.9)
% (95% CI) ≥ 14 days	19.5 (17.3–21.9)	30.4 (27.9–33.0)	67.0 (53.2–68.3)
AOR (95% CI) ^a	Referent	1.8 (1.5–2.2)	7.6 (5.1–11.2)
Pain			
Mean (95% CI)	1.9 (1.6–2.2)	2.9 (2.6–3.3)	8.6 (7.0–10.2)
% (95% CI) ≥ 14 days	5.7 (4.6–6.9)	8.7 (7.4–10.1)	29.7 (23.3–37.1)
AOR (95% CI) ^a	Referent	1.5 (1.1–2.0)	5.7 (3.4–9.5)
Vitality			
Mean (95% CI)	21.4 (20.8–21.9)	15.4 (14.9–16.0)	7.6 (6.0–9.3)
% (95% CI) ≥ 14 days	81.9 (79.5–84.1)	58.6 (56.0–61.3)	25.3 (19.0–32.9)
AOR (95% CI) ^a	14.4 (9.6–21.7)	4.5 (3.1–6.7)	Referent

^a Adjusted by age, sex, race/ethnicity, education, marital status, and employment status

Discussion

Our results, from a large representative sample of the U.S. population, suggest that life satisfaction may be an important public health construct. We found that over one of every 20 U.S. adults (about 12 million) reported that they were dissatisfied or very dissatisfied with their lives. According to our findings, increased life satisfaction is inversely related to mean number of days in the past 30 days of poor mental health, depressive symptoms, and anxiety symptoms, as well as with somatic complaints including poor physical health, sleep insufficiency, pain, and activity limitations. Even after adjusting for sociodemographic characteristics, HRQOL impairments in 14 or more of the previous 30 days were noted for all domains, with a particularly strong association between life dissatisfaction and depressive and anxiety symptoms; adults who are dissatisfied/very dissatisfied with life were over 41 times more likely to have

Table 3 Prevalence and odds of fair/poor general health, inadequate social and emotional support, and disability by level of life satisfaction, 2005

Characteristics	Very satisfied % (95% CI)	Satisfied % (95% CI)	Dissatisfied/very dissatisfied % (95% CI)
<i>Questions asked in 50 states, DC, the Virgin Islands and Puerto Rico</i>			
General health (fair/poor)			
% (95% CI)	9.3 (9.0–9.6)	19.4 (19.1–19.9)	45.7 (44.2–47.1)
AOR (95% CI) ^a	Referent	2.2 (2.1–2.3)	6.2 (5.7–6.8)
Social support (rarely/never)			
% (95% CI)	4.2 (3.9–4.4)	9.1 (8.8–9.4)	37.4 (35.9–38.8)
AOR (95% CI) ^a	Referent	2.0 (1.8–2.1)	11.1 (10.1–12.3)
<i>Disability</i>			
Limited due to physical, mental, or emotional problem?			
% (95% CI)	12.3 (12.0–12.6)	20.2 (19.9–20.6)	49.2 (47.7–50.6)
AOR (95% CI) ^a	Referent	1.8 (1.7–1.9)	5.4 (5.0–5.9)
Health problem that requires special equipment?			
% (95% CI)	4.3 (4.1–4.5)	6.9 (6.7–7.1)	17.3 (16.4–18.3)
AOR (95% CI) ^a	Referent	1.5 (1.4–1.6)	2.7 (2.4–3.0)

^a Adjusted by age, sex, race/ethnicity, education, marital status, and employment status

Table 4 Prevalence and odds of health risk behaviors and chronic illness by level of life satisfaction among adults aged 18 years or older, 2005

Characteristics	Very satisfied % (95% CI)	Satisfied % (95% CI)	Dissatisfied/very dissatisfied % (95% CI)
Smoking			
% (95% CI)	15.1 (14.7–15.5)	23.2 (22.7–23.6)	37.8 (36.4–39.3)
AOR (95% CI) ^a	Referent	1.2 (1.4–1.5)	2.3 (2.1–2.5)
Obesity			
% (95% CI)	20.8 (20.4–21.2)	25.8 (25.3–26.2)	32.0 (30.7–33.3)
AOR (95% CI) ^a	Referent	1.3 (1.2–1.3)	1.5 (1.4–1.6)
Heavy drinking			
% (95% CI)	4.6 (4.4–4.9)	5.3 (5.0–5.5)	7.5 (6.7–8.4)
AOR (95% CI) ^a	Referent	1.1 (1.0–1.2)	1.6 (1.4–1.9)
Physical inactivity			
% (95% CI)	19.3 (18.9–19.7)	28.2 (27.8–28.7)	42.4 (41.0–43.8)
AOR (95% CI) ^a	Referent	1.5 (1.4–1.5)	2.2 (2.1–2.4)
Asthma			
% (95% CI)	10.9 (10.6–11.2)	13.3 (12.9–13.6)	21.0 (19.8–22.1)
AOR (95% CI) ^a	Referent	1.2 (1.1–1.3)	1.7 (1.6–1.9)
Arthritis			
% (95% CI)	24.3 (23.9–24.7)	27.6 (27.2–28.0)	39.3 (38.0–40.7)
AOR (95% CI) ^a	Referent	1.3 (1.3–1.4)	2.0 (1.9–2.2)
Diabetes			
% (95% CI)	6.5 (6.3–6.7)	8.3 (8.0–8.5)	13.4 (12.5–14.4)
AOR (95% CI) ^a	Referent	1.3 (1.2–1.4)	1.8 (1.6–1.9)
Heart disease			
% (95% CI)	6.6 (6.4–6.8)	8.3 (8.1–8.6)	14.8 (13.8–15.8)
AOR (95% CI) ^a	Referent	1.3 (1.3–1.4)	2.2 (2.0–2.4)

^a Adjusted by age, sex, race/ethnicity, education, marital status, and employment status

depressive symptoms than those who are very satisfied with life and adults who are dissatisfied/very dissatisfied with life were over 24 times more likely to have anxiety symptoms than those who are very satisfied with life.

Our study confirmed findings from previous research suggesting that life satisfaction is associated with several sociodemographic characteristics. Factors such as employment [2, 6, 8, 11, 51, 52], marital status [2, 8, 11, 53], race [3] and education [40] have consistently shown associations with life satisfaction in previous research. As summarized by Clemente and Sauer [3] and Hong and Giannakopoulos [9], there have been inconsistent findings with regard to the associations between life satisfaction, sex, and age. We found that young and middle-aged adults have a higher prevalence of life dissatisfaction than older adults and that women are slightly more likely than men to report life dissatisfaction.

Additionally, we found that life dissatisfaction is related to obesity and adverse health behaviors such as smoking, heavy drinking, and physical inactivity. Although we were unable to find research that addressed the association between health behaviors and life satisfaction in the general U.S. adult population, prior research has investigated this association among subpopulations of U.S. adults. Specifically, smoking and drinking among college students were related to decreased life satisfaction [54, 55]; low levels of life satisfaction were predictors of weight gain in older women [56]; and waist/hip circumference ratio was negatively associated with life satisfaction among middle-aged men [57]. Additionally, physical activity was positively related to life satisfaction among older adults [58–60], and there was a dose-response effect between physical activity and psychosocial well-being in adults aged 20–79 [61].

Moreover, after adjusting for sociodemographic characteristics, the associations between life dissatisfaction and asthma, arthritis, diabetes, and heart disease remained significant. In fact, adults who were dissatisfied/very dissatisfied with life were twice as likely as those who were very satisfied with life to have arthritis and heart disease, the two most potentially debilitating conditions we examined in this study. This corroborates existing research suggesting that conditions that cause disability are more likely than conditions that do not to decrease life satisfaction [62].

Our study has several limitations. First, because BRFSS is a telephone survey, it potentially excludes people of low socioeconomic status and people with severely impaired physical or mental health. BRFSS also excludes adults who are institutionalized or hospitalized. Therefore, we might have underestimated dissatisfaction with life in this study. Second, in this investigation, level of life satisfaction was necessarily determined from one question and therefore may not effectively convey the diverse components comprising this construct. Third, five of the HRQOL measures were limited to data from two states, therefore our results for these measures may not be representative of the entire country. Finally, we cannot infer a causal relationship between dissatisfaction with life, impairment in HRQOL domains, adverse health behaviors, or chronic illness, although our cross-sectional data support our conclusion that these characteristics are associated.

These limitations notwithstanding, our results corroborate previous research suggests that life satisfaction is strongly affected by poor mental health, particularly depression and anxiety [63–65], and chronic illness or injury, particularly those that cause disability [62]. Additionally, our research suggests that the prevalence of risk behaviors and level of HRQOL vary with level of life satisfaction. As life satisfaction appears to encompass many individual life domains, it may be an important concept for public health research. Future research should examine in more depth the associations between physical and psychiatric diagnoses and level of life satisfaction as well as the potential utility of life satisfaction as a predictor of mental health and illness.

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