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# Health Care Avoidance among People with Serious Psychological Distress: Analyses of 2007 Health Information National Trends Survey

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## **Abstract**

Using data of 2007 Health Information National Trends Survey, we investigated the association between individuals' psychological distress and their reported avoidance of medical care and assessed whether people with serious psychological distress (SPD) were more likely to report psychosocial barriers to care. After controlling for demographic and health characteristics, individuals with SPD were more likely than those without SPD to report having avoided visiting a doctor even when they suspected they should (OR=1.64, 95% CI=1.08–2.48). The distressed individuals were also more likely to agree that they avoided a doctor because of fear of having a serious illness (OR=1.99, 95% CI=1.15–3.44) or thinking about dying (OR=2.15, 95% CI=1.12–4.11). Further understanding of the mechanism under which an individuals' mental health status may influence their perceived need for health and their use of medical services would improve the interface between mental health and primary care services.

## **Keywords**

Psychological distress; health care; health needs; access to care

Health care avoidance is a kind of patient disengagement that impedes an individual's health behaviors or causes them to delay obtaining health care, and thus can negatively influence an individuals' well-being. While lack of health insurance and a usual source of care have been consistently identified as major barriers to getting timely care, 2-4 research has also stressed the importance of psychosocial components in explaining patterns of health care

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utilization.<sup>5-7</sup> According to Lauver's Theory of Care-Seeking Behavior, a series of psychosocial variables (e.g., anxiety, denial, social norms, values) play a significant role in whether or not an individual seeks necessary health care.<sup>8</sup> The pursuit of a better understanding of psychosocial factors that predict health care-seeking or avoidance is essential for promoting positive health outcomes and preventing disease.

Serious psychological distress (SPD) is an important individual and public health burden. It is a non-specific indicator of mental health problems such as mood or anxiety disorders and is intended to identify individuals with mental health problems severe enough to cause moderate to serious impairment in social, occupational, or school functioning. According to major national health surveys (e.g., National Health Interview Survey, Behavioral Risk Factor Surveillance System), approximately 3.2% to 4.0% of the American adult population (18 years and older) have experienced SPD in the past 30 days. People with lower socioeconomic status are often more vulnerable to SPD, 10-12 since they are more likely to experience undesirable life events and financial problems, which can negatively influence mental health. Mental health disorders are negatively associated with health care experiences and satisfaction with care. Multiple challenges have been documented in the effort to detect and manage psychological distress successfully, such as physicians' lack of knowledge, 16 and cultural barriers and stigma among patients. 17,18

Studies on the relationship between psychological distress and health services utilization have yielded inconsistent results. There is evidence showing psychological distress is an important predictor of perceived health needs, and may lead to significant or frequent use of health services. <sup>19,20</sup> In a recent study, Dismuke and her associates examine the association between SPD and health service expenditures and utilization for seven categories in the national probability sample of the 2007 Medical Expenditure Panel Survey. Their findings showed that SPD is associated with higher total expenditures and increased use of several categories of health services, except for outpatient and inpatient hospital and dental visits. <sup>21</sup> On the other hand, people who experience symptoms of psychological distress tend to avoid any form of help in general. <sup>22</sup> Specifically, depression and depressive symptoms are significant barriers to health services utilization, including adherence and preventive care. <sup>23-25</sup>

These mixed results warrant further understanding and exploration to determine whether psychological distress may facilitate or hinder health care use. In particular, there is a dearth of research on how patients with SPD perceive their use of health care and psychosocial barriers to use of care. The current study sought to examine the association between individuals' SPD and their reported avoidance of medical care, and to assess whether people with SPD are more likely to report psychosocial barriers to care compared with non-SPD individuals.

# **Methods**

#### **Procedure**

Data used for this study were drawn from the 2007 Health Information National Trends Survey (HINTS), a biennial, cross-sectional, nationally-representative survey of American

adults.<sup>26</sup> The 2007 HINTS was conducted using a random-digit-dial telephone survey using a Computer Assisted Telephone Interview or a mailing sent to a random sample of addresses selected from the United States Postal Service. The survey had English and Spanish versions. The household response rate and the within-household response rate to the mailed survey were 40.0% and 77.4% respectively. For the random-digit-dialing sample, the response rate for the initial screener and the response rate for the full interview were 42.4% and 57%, respectively.

# Sample

A total of 7,674 adults completed the 2007 HINTS. We excluded those who did not provide an answer to the question related to health care avoidance or did not have a score for psychological distress (n=598). Thus, the final sample included in the study was 7,076 adults.

## **Measures**

**Psychological distress**—The Kessler-6 (K-6) instrument was used to measure nonspecific psychological distress. The six questions assess psychological distress symptoms (feeling nervous, restless, hopeless, so sad that nothing could cheer them up, so sad that everything was an effort, and worthless) during the past 30 days with a total score from 0 to 24. If an individual scores 13 or greater on the K-6 scale, they are classified as having serious psychological distress.<sup>27</sup> K-6 has demonstrated excellent realiability (Cronbach's alpha=0.89).<sup>28</sup>

**Health care avoidance**—Health care avoidance was assessed with a question: "Some people avoid visiting their doctor even when they suspect they should. Would you say this is true for you, or not true for you?" Respondents chose between true or not true. Among those who reported health care avoidance, they were asked they were asked, "How much do you agree with the following statement: I avoid seeing my doctor a) because I feel uncomfortable when my body is being examined; b) because I fear I may have a serious illness; c) because it makes me think about dying." Responses to these statements included: strongly agree, somewhat agree, somewhat disagree, and strongly disagree.

**Covariates**—Sociodemographic variables included sex, age (18–34 years, 35–49 years, 50–64 years, 65 years old or older), education (lower than high school, high school, higher than high school), race (Hispanic, non-Hispanic White, non-Hispanic Black, Asian, and other races), household income (less than \$20,000, \$20,000 to less than \$50,000, \$50,000 to less than \$75,000, \$75,000 or more), insurance (insured, uninsured), reported health status (poor-fair, good-excellent), and usual source of care (excluding psychiatrists and other mental health professionals, whether or not respondents have a particular doctor, nurse, or other health professional that they see most often).

# Statistical analyses

We used cross-tabulations to compare the characteristics of individuals who reported health care avoidance with those who did not. We used odds ratios and 95% confidence intervals from logistic regression models to assess associations between psychological status and

reported health care avoidance after controlling for sociodemographic variables. Among those who avoided seeing a doctor, both univarable and multivariable logistic regressions were conducted to examine whether SPD is related to three psychosocial reasons for avoiding health care. All analyses were conducted with SUDAAN 10.0 (RTI International, Research Triangle Park, NC), which allows for weighting of the estimates of the U.S. adult population by taking into account the complex sampling design. All p-values are two-tailed, with values less than .05 considered statistically significant.

# Results

Based on the 2007 HINTS, approximately 36.4% of American adults avoided seeing a doctor even when they suspected they should. Table 1 presents the characteristics of the study population and the bivariate associations between individual characteristics and health care avoidance. There are substantial differences in care avoidance according to demographic and socioeconomic characteristics of the sample. When compared with people who did not report health care avoidance, health care avoiders were more likely to be men, to be younger (18–34, or 35–49), to have lower than high school education, to have an income that is lower than \$20,000, to be uninsured, to have no usual source of care, or to report poorer health status. Moreover, health care avoidance was significantly associated with severe psychological distress.

Table 2 shows the relationships between health care avoidance and psychological distress, which were further examined in a logistic model incorporating control of sociodemographic covariates. Those with SPD were significantly more likely to have avoided visiting a doctor (OR=1.64, 95% CI=1.08–2.48). In addition, sex, age, health insurance status, access to usual source of care, and health status remained predictors for health care avoidance, whereas important indicators of socioeconomic status, including education and income, were no longer significant.

We also examined whether SPD is related to three psychosocial reasons for avoiding health care. All bivariate analyses show that people with SPD were likely to agree or somewhat agree with the statements that they avoided a doctor because of feeling uncomfortable when their body is being examined, or fear of having a serious illness, or thinking about dying (Table 3). Table 3 also shows the adjusted odds ratios (ORs) from logistic regressions for these reasons. Serious psychological distress was positively associated with fear of having a serious illness (OR=1.99, 95% CI=1.15–3.44) and thinking about dying (OR=2.15, 95% CI=1.12–4.11).

#### Discussion

Consistent with many previous studies, these data show that both health insurance and usual source of care are negatively linked to health care avoidance for the overall population. Both are positive facilitating factors for obtaining medical consultation and receiving preventive care. However, these facilitating conditions cannot entirely explain the variation in health care avoidance.

Our main finding is an association between severe psychological distress and reported health care avoidance. Even after controlling for sociodemographic factors, people with SPD were more likely to report ever avoiding visiting a doctor when they suspected they should. Our findings are consistent with previous observations that people with mental health problems are more likely to engage in poor personal health behaviors, including necessary medical care utilization. However, these results should be interpreted with caution, since psychological well-being also contributes to illness perception. Depressed or psychologically distressed patients have higher demand for medical care and may initiate excessive acute medical service use. Health care avoidance in this study is merely based on the participants' own perception of health care needs rather than the results of a medical evaluation; it is possible that people with SPD perceive higher health care needs for a symptom than people without SPD, and when they do not initiate a doctor visit for the symptom, they would consider it an avoidance of care.

Psychosocial factors such as stigma and fear of the medical establishment negatively affect the use of health services. We found that certain psychosocial barriers are particularly likely to be reported by psychological distressed adults as reasons for not seeking medical care. While psychological distress, particularly anxiety, can sometimes lead to preoccupation with health problems and hypochondriasis, it can also lead to avoidant behaviors and fear of being diagnosed with a serious medical condition. In addition, mental health and certain medical conditions (such as HIV/AIDS, fibromyalgia, and epilepsy) are subject to greater levels of societal stigma, and thus may lead to avoidance of health care system use. 34-36

There are several potential limitations to our study. Our data did not provide information on the type of health professionals or services that the respondents reported avoiding. Additionally, because the data were self-reported, we were unable to assess whether reported health needs were based on rational and actual health care needs, or if they were based more on heightened perception of needs (stemming from excessive concern about symptoms). We are also unable to control of co-morbidities, which may increases both SPD and the need for health care use. Furthermore, low response rates may limit the application of the results to the whole population.

Health care avoidance can represent a significant barrier to health promotion and has a negative impact on the overall well-being of the adult population. More evidence is needed to identify the mechanism under which an individuals' mental health status may influence his or her perceived need for health and their use of medical services. Previous studies used quite different sample frames (ranging from frequent primary care visitors <sup>19,20</sup> to population-based samples <sup>37,38</sup>), and this affects interpretation of data and causes difficulties in comparing results from different studies. Research is also needed to examine whether the health care avoidance differs by types of medical care (e.g., preventive care *vs.* disease care). Some researchers have hypothesized that poor mental health may increase health care use for certain types of services, such as acute services, while reducing the use of preventive services. <sup>38</sup>

There is an even greater need for research on interventions or models for reducing barriers to medical care among people with psychological distress. Collaborative care, or other models of integrating behavioral health and primary care, has demonstrated improved outcomes for mental health conditions such as depression. Presumably, the behavioral health support and "warm hand-offs" from behavioral health back to primary care may also have a positive impact on appropriateness of use of primary care and preventive services as well.<sup>39-41</sup>

In summary, our findings, particularly findings on psychosocial barriers to health care utilization provide caregivers and policymakers with information on the impact of psychological distress on health care services at the population level. Studies are needed to develop models that specify the relationship between health care avoidance and factors related to access to care for both people with and without psychological distress. Future interventions should target addressing attitudes and fears about health care within psychologically distressed populations, and/or improving the interface between mental health and primary care services.

# **Notes**

- 1. Byrne SK. Healthcare avoidance: a critical review. Holist Nurs Pract. Sep-Oct;2008 22(5):280–92. [PubMed: 18758277]
- Baker DW, Shapiro MF, Schur CL. Health insurance and access to care for symptomatic conditions. Arch Intern Med. May; 2000 160(9):1269–74. [PubMed: 10809029]
- 3. DeVoe JE, Fryer GE, Phillips R, et al. Receipt of preventive care among adults: insurance status and usual source of care. Am J Public Health. May.2003 93(5)
- 4. Kasper JD, Giovannini TA, Hoffman C. Gaining and losing health insurance: strengthening the evidence for effects on access to care and health outcomes. Med Care Res Rev. Sep; 2000 57(3): 298–318. [PubMed: 10981187]
- 5. Kouzis AC, Eaton WW. Absence of social networks, social support, and health service utilization. Psychol Med. Nov; 1998 28(6):1301–10. [PubMed: 9854271]
- 6. Preville M, Potvin L, Boyer R. Psychological distress and use of ambulatory medical services in the Quebec Medicare system. Health Serv Res. Jun; 1998 33(2 Pt 1):275–86. [PubMed: 9618672]
- 7. Reifenstein K. Care-seeking behaviors of African American women with breast cancer symptoms. Res Nurs Health. Oct; 2007 30(5):542–57. [PubMed: 17893935]
- 8. Rankin, SH.; Stallings, KD.; London, F. Patient education in health and illness. Lippincott Williams & Wilkins; New York, NY: 2005.
- 9. Reeves WC, Strine TW, Pratt LA, et al. Mental illness surveillance among adults in the United States. MMWR Surveill Summ. Sep 2; 2011 60(Suppl 3):1–29. [PubMed: 21881550]
- 10. Mathews KA, Gallo LC. Psychological perspectives on pathways linking socioeconomic status and physical health. Annu Rev Psychol. 2011; 62:501–30. [PubMed: 20636127]
- 11. Pratt LA, Dey AN, Cohen AJ. Characteristics of adults with serious psychological distress as measured by the K6 scale: United States, 2001-2004. Adv Data. Mar 30.2007 (382):1–18. [PubMed: 17432488]
- 12. Ulbrich PM, Warheit GJ, Zimmerman RS. Race, socioeconomic status, and psychological distress: an examination of differential vulnerability. J Health Soc Behav. Mar; 1989 30(1):131–46. [PubMed: 2723379]
- 13. Desai RA, Stefanovics EA, Roseheck R. The role of psychiatric diagnosis in satisfaction with primary care: data from the Department of Veterans Affairs. Med Care. Dec; 2005 43(12):1208–16. [PubMed: 16299432]
- 14. Hermann RC, Ettner SL, Dorwart RA. The influence of psychiatric disorders on patients' ratings of satisfaction with health care. Med Care. May; 1998 36(5):720–7. [PubMed: 9596062]

15. Ye J, Shim R. Perceptions of health care communication: examining the role of patient's psychological distress. J Natl Med Assoc. Dec; 2010 102(12):1237–42. [PubMed: 21287905]

- 16. Howe AC. "I know what to do, but it's not possible to do it"—general practitioners' perceptions of their ability to detect psychological distress. Fam Pract. 1996; 13(2):127–31. [PubMed: 8732322]
- 17. Cape J, McCulloch Y. Patients' reasons for not presenting emotional problems in general practice consultations. Br J Gen Pract. 1999; 49:875–9. [PubMed: 10818651]
- 18. Good MJ, Good BJ, Cleary PD. Do patient attitudes influence physician recognition of psychosocial problems in primary care. J Fam Pract. Jul; 1987 25(1):53–9. [PubMed: 3598479]
- 19. Bellon JA, Delgado A, Dio Luna JD, et al. Psychosocial and health belief variables associated with frequent attendance in primary care. Psychol Med. Nov; 1999 29(6):347–57.
- 20. Katon W, Von Korff M, Lin E, et al. Distressed high utilizers of medical care: DSM-III-R diagnoses and treatment needs. Gen Hosp Psychiatry. Nov; 1990 12(6):355–62. [PubMed: 2245919]
- 21. Dismuke CE, Egede LE. Association of serious psychological distress with health services expenditures and utilization in a national sample of U.S. adults. Gen Hosp Psychiatry. Jul-Aug; 2011 33(4):311–7. Epub 2011 May 6. [PubMed: 21762826]
- 22. Wilson C. General psychological distress symptoms and help-avoidance in young Australians. Adv Ment Health. Aug; 2010 9(1):63–72.
- 23. Aro AR, de Koning HJ, Absetz P, et al. Two distinct groups of non-attenders in an organized mammography screening program. Breast Cancer Res Treat. Nov; 2001 70(2):145–53. [PubMed: 11768605]
- 24. Druss BG, Rosenheck RA, Desai MM, et al. Quality of preventive medical care for patients with mental disorders. Med Care. Feb; 2002 40(2):129–36. [PubMed: 11802085]
- 25. Thomp JM, Kalinowski CT, Patterson ME, et al. Psychological distress as a barrier to preventive care in community-dwelling elderly in the United States. Med Care. 2006; 44(2):187–91. [PubMed: 16434919]
- Cantor, D.; Coa, K.; Crytal-Mansour, S., et al. Health Information National Trends Survey (HINTS) 2007. National Cancer Institute; Washington, DC: 2009.
- 27. Kessler RC, Baker PR, Colpe LJ, et al. Screening for serious mental illness in the general population. Arch Gen Psychiatry. Feb; 2003 60(2):184–9. [PubMed: 12578436]
- 28. Kessler, RC.; Berglund, PA.; Glantz, MD., et al. Estimating the prevalence and correlates of serious mental illness in community epidemiological surveys. In: Manderscheid, RW.; Henderson, MJ., editors. Center for Mental Health Services. Mental health, United States, 2002. Substance Abuse and Mental Health Services Administration; Rockville, MD: 2002.
- 29. Leiferman JA, Pheley AM. The effect of mental distress on women's preventive health behaviors. Am J Health Promot. Jan-Feb;2006;20(3):196–9.
- 30. Lim K, Taylor L. Factors associated with physical activity among older people—a population-based study. Prev Med. Jan; 2005 40(1):33–40. [PubMed: 15530578]
- 31. Frostholm L, Fink P, Christensen KS, et al. The patients' illness perceptions and use of primary health care. Psychosom Med. Nov-Dec;2005;67(6):997–1005.
- 32. Himelhoch S, Weller WE, Wu AW, et al. Chronic medical illness, depression, and use of acute medical services among Medicare beneficiaries. Med Care. Jun; 2004 42(6):512–21. [PubMed: 15167319]
- 33. Mohamed IE, Williams KS, Tamburrino M, et al. Understanding locally advanced cancer: what influences a women's decision to delay treatment. Prev Med. Aug; 2005 41(2):399–405. [PubMed: 15890396]
- 34. Chesney MA, Smith AW. Critical delays in HIV testing and care. Am Behav Sci. Apr; 1999 42(7): 1162–74.
- 35. Looper KJ, Kirmayer LJ. Perceived stigma in functional somatic syndromes and comparable medical conditions. J Psychosom Res. Oct; 2004 57(4):373–8. [PubMed: 15518673]
- 36. Ablon J. The nature of stigma and medical conditions. Epilepsy Behav. Dec; 2002 3(6S2):2–9. [PubMed: 12609300]

37. Rowan PJ, Davidson K, Campbell JA, et al. Depressive symptoms predict medical care utilization in a population-based sample. Psychol Med. Jul; 2002 32(5):903–8. [PubMed: 12171384]

- 38. Witt WP, Kahn R, Fortuna L, et al. Psychological distress as a barrier to preventive healthcare among U.S. women. J Primary Prevent. 2009; 30(5):531–47. Epub 2009 Aug 19.
- 39. Gunn WB, Blount A. Primary care mental health: a new frontier for psychology. J Clin Psychol. Mar; 2009 65(3):235–52. [PubMed: 19156779]
- 40. Mitchell P. Mental health care roles of non-medical primary health and social care services. Health Soc Care Community. Feb; 2009 17(1):71–82. Epub 2008 Aug 11. [PubMed: 18700871]
- 41. Walker BB, Collins CA. Developing an integrated primary care practice; strategies, techniques, and a case illustration. J Clin Psychol. Mar; 2009 65(3):268–80. [PubMed: 19137578]

Table 1
PATIENT CHARACTERISTICS BY REPORTED HEALTH CARE AVOIDANCE (N=7076)

	Ye	es (n=2199)	No (n=4877)		
Characteristics	n	Weighted %	n	Weighted %	p values
Sex					=.01
Men	923	52.5%	1833	46.2%	
Women	1276	47.5%	3044	53.8%	
Age (years)					<.001
18–34	406	35.0%	636	29.0%	
35–49	633	33.1%	1080	27.5%	
50-64	743	22.4%	1570	24.4%	
65 +	406	9.5%	1560	19.1%	
Marital status					=.01
Married/living as married	1546	63.4%	3532	67.7%	
Divorced/widowed/separated	247	6.9%	694	8.7%	
Single, never married	400	29.7%	633	23.6%	
Race					=.08
Hispanic	223	15.3%	369	11.2%	
Non-Hispanic White	1588	67.9%	3723	71.2%	
Non-Hispanic Black	204	10.9%	431	11.1%	
Non-Hispanic Asian	60	3.7%	131	4.9%	
Other	81	2.2%	129	1.7%	
Education					<.001
Lower than high school	261	15.8%	360	11.8%	
High school	583	28.5%	1143	25.1%	
Higher than high school	1356	55.8%	3363	63.1%	
Household Income (\$)					<.001
<20,000	402	22.1%	657	17.0%	
20,000-49,999	632	32.9%	1233	29.2%	
50,000-74,999	371	18.3%	818	20.2%	
75,000	555	26.7%	1464	33.6%	
Health insurance					<.001
Yes	1777	75.9%	4436	87.5%	
No	390	24.1%	381	12.5%	
Usual source of care					<.01
Yes	1507	60.0%	4047	75.2%	
No	670	40.0%	808	24.8%	
Health status					<.01
Poor-fair	452	20.1%	670	14.2%	
Good-excellent	1743	79.9%	4196	85.8%	

		Avoidance of Care			
	Yes (n=2199)		No (n=4877)		
Characteristics	n	Weighted %	n	Weighted %	p values
Serious psychological distress					<.01
No	1988	88.3%	4674	94.4%	
Yes	211	11.7%	203	5.6%	1

Table 2
RESULTS OF WEIGHTED MULTIVARIABLE LOGISTIC REGRESSION
ANALYSES OF HEALTH CARE AVOIDANCE IN THE 2007 HINTS SAMPLE

1.22 (1.04, 1.44) 1 1.96 (1.45, 2.65) 2.31 (1.74, 3.06) 1.88 (1.48, 2.38)
1 1.96 (1.45, 2.65) 2.31 (1.74, 3.06)
1.96 (1.45, 2.65) 2.31 (1.74, 3.06)
2.31 (1.74, 3.06)
2.31 (1.74, 3.06)
1.88 (1.48, 2.38)
1
0.91(0.69, 1.20)
1.07 (0.73, 1.58)
1
0.87 (0.50, 1.51)
0.96 (0.61, 1.50)
0.72 (0.41, 1.23)
0.67 (0.31, 1.43)
1
1.10 (0.82, 1.47)
1.21 (0.97, 1.49)
1
1.29 (0.89, 1.86)
1.27 (0.95, 1.69)
1.12 (0.89, 1.41)
1
0.70 (0.51, 0.95)
1
0.61 (0.51, 0.75)
1
1.35 (1.08, 1.69)
1

Characteristics	Multivariate-adjusted odds ratio (95% Confidence Interval)
No	1

Table 3
CRUDE AND ADJUSTED ODDS RATIOS (OR) AND 95% CONFIDENCE
INTERVALS (CI) FOR VARIABLES OF REASONS FOR AVOIDING NECESSARY
HEALTH CARE COMPARING PEOPLE WITH SPD WITH THOSE WITHOUT SPD

	People with Psychological Distress				
Reasons for Health Care Avoidance	Crude OR	95% CI of Crude OR	Adjusted OR <sup>a</sup>	95% CI of Adjusted OR	
I avoid seeing my doctor because I feel uncomfortable when my body is being examined (agree)	1.68	1.05–2.70	1.15	0.66–2.01	
I avoid seeing my doctor because I fear I may have a serious illness (agree)	2.26	1.34–3.81	1.99	1.15-3.44	
I avoid seeing my doctor because it makes me think about dying (agree)	2.99	1.74–5.16	2.15	1.12-4.11	

 $<sup>^{</sup>a}\mathrm{ORs}$  adjusted for age, sex, race, education, marital status, income, insurance, usual source of care, and health status.