Mobility Limitations and Complementary and Alternative Medicine: Are People with Disabilities More Likely to Pray?

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Attendance at religious services by persons with functional disabilities is related to subsequent improvement in functioning.[1] One conceptual model for such relationships between religion and improved outcomes is "religious coping," ranging from general commitment to religious beliefs to application of religious beliefs to specific personal difficulties.[2] One application of religious beliefs to personal difficulty is using prayer as complementary and alternative medicine (CAM). It may be hypothesized, therefore, that difficulty in physical functioning may be associated with the use of prayer as CAM. This study examines that hypothesis by asking (1) whether mobility limitation is related to the use of prayer as CAM, and (2) whether such a relationship can be attributed to other predictors of CAM use.

The data are from the National Health Interview Survey (NHIS), which conducts face-to-face interviews with nationally representative samples of community-dwelling families.[3] In 1999, 1 adult in each family was asked about specific CAM services they used for their own health care during the previous year, including "prayer or spiritual healing." (The others were acupuncture, relaxation, massage, imagery [creating images or colors in the mind], diet, herbs, homeopathy, energy healing, biofeedback, and hypnosis.) From these data, 3 categories of CAM were created: did not use any CAM; used CAM, but not prayer; and used prayer with or without use of other CAM.

Mobility limitation was measured by asking questions about activities: "By yourself and without using any special equipment, how difficult is it for you to [name of activity; e.g., 'sit for about 2 hours']—not at all difficult, only a little difficult, somewhat difficult, very difficult, or can't do it at all?" Measures were constructed of 3 mobility functions, as defined by the International Classification of Functioning, Disability, and Health (ICF).[4] The ICF mobility functions and the NHIS questions about activities used to measure each are (1) "changing and maintaining body position," ICF codes a410–a415 (NHIS questions on standing, sitting, reaching, pushing, and stooping); (2) "carrying, moving, and handling objects," ICF codes a430–a439 (NHIS questions on carrying and grasping); and (3) "walking and moving around," ICF codes a450–a455 (NHIS questions on walking and climbing).

If any of the specific NHIS activities in an ICF functional type were reported to be "very difficult" or "unable to do," the degree of limitation for that type was coded "severe-complete." If the limitation was not coded severe-complete, but "a little" or "some" difficulty was reported for any of the activities defining a mobility type, the degree of limitation was coded "mild-moderate." The remaining cases reported no difficulty in any of the activities defining an ICF type, and were coded "no limitation" for that type.

Population statistics were estimated using Stata procedures that adjust for the complex sample design of the NHIS.[5] Table 1 shows the percentage distributions of adults by CAM use categories according to the type and degree of mobility limitation. In this brief report, attention is focused on the column headed "Used Prayer With or Without Other CAM." The main findings are that (1) persons with mobility limitations were significantly more likely than those without limitations to use prayer as CAM (2-tailed

TABLE 1—Degree of Mobility Limitation of American Adults, by Use of Complementary and Alternative Medicine: United States, 1999

Mobility Function (With ICF Codes) and Degree of Limitation	Percentage Distribution (SE)		
	Did Not Use Any CAM	Used CAM, but Not Prayer	Used Prayer With or Without Other CAM
Changing and maintaining body position (ICF a410–a415) (n = 30 175)			
No limitation	78.2 (0.41)	10.1 (0.27)	11.8 (0.31)
Mild–moderate limitation	63.8 (0.90)	16.3 (0.68)	19.9 (0.72)
Severe–complete limitation	67.9 (0.94)	12.5 (0.65)	19.6 (0.87)
Carrying, moving, and handing objects (ICF a430–a449) (n = 30 204)			
No limitation	77.1 (0.39)	10.6 (0.27)	12.3 (0.30)
Mild–moderate limitation	63.6 (1.11)	15.7 (0.83)	20.7 (0.93)
Severe–complete limitation	67.6 (1.16)	12.1 (0.77)	20.3 (0.98)
Walking and moving around (ICF a450–a455) (n = 30 183)			
No limitation	75.9 (0.40)	11.2 (0.27)	12.9 (0.30)
Mild–moderate limitation	70.9 (1.10)	11.9 (0.76)	17.3 (0.89)
Severe–complete limitation	71.1 (1.07)	9.9 (0.68)	19.0 (0.96)

Note. CAM = complementary and alternative medicine; ICF = International Classification of Functioning, Disability, and Health.

test, $P<.05$); (2) among persons with mobility limitations, there was no significant difference in the use of prayer as CAM between those with mild-moderate limitations and those with severe-complete limitations; (3) these findings applied to each of the 3 mobility types considered.

Both functional status and the use of prayer as CAM are related to other personal characteristics, including gender, age, race/ethnicity, and health status.[6,7] To investigate the possible confounding effects of these relationships, additional analyses were conducted using multinomial logistic regression. Models of CAM use were estimated for each of the 3 ICF mobility functions, with mobility limitations (none, mild-moderate, severe-complete) as the predictor variables, and controls for sex, age (18 to 24, 25 to 34, 35 to 44, 45 to 54, 55 to 64, and 65 years and older), Hispanic origin and race (non-Hispanic White, Hispanic, non-Hispanic Black, and Other), and change in health status in the past 12 months (better, same, worse). The relative risk ratios and their standard errors are shown in Table 2. The relative risk ratio is the "risk" of using the type of CAM in the column heading relative to the risk of using no CAM.

Focusing on the use of prayer with or without other CAM, the findings are consistent with those from Table 1; that is, even with statistical controls for possible confounders, limitations on mobility function are associated with more frequent use of prayer for CAM; and among those with a limitation, the degree of limitation is not significantly related to the use of prayer.

In conclusion, using prayer as CAM is more common among persons with mobility limitations (approximately 20%) than among persons without such limitations (approximately 12%). Given this finding, providers who serve persons with mobility limitations should consider adopting an orientation of "religious pluralism."[2] Further studies should examine the relationship of CAM to other functional limitations. ■

TABLE 2–Results of Multinomial Regression for Degree of Mobility Limitation, by Use of Complementary and Alternative Medicine: United States, 1999[a]

Mobility Function (With ICF Codes) and Degree of Limitation	Relative Risk Ratio[b] (SE)		
	Did Not Use Any CAM	Used CAM, but Not Prayer	Used Prayer With or Without Other CAM
Changing and maintaining body position (ICF a410–a415)			
No limitation	1.00	0.52 (0.03)	0.49 (0.02)
Mild–moderate limitation	1.00	2.13 (0.13)	2.07 (0.11)
Severe–complete limitation	1.00	1.66 (0.12)	1.96 (0.12)
Carrying, moving, and handling objects (ICF a430–a449)			
No limitation	1.00	0.59 (0.03)	0.53 (0.03)
Mild–moderate limitation	1.00	1.89 (0.13)	1.97 (0.13)
Severe–complete limitation	1.00	1.44 (0.11)	1.81 (0.12)
Walking and moving around (ICF a450–a455)			
No limitation	1.00	*0.92* (0.06)	0.71 (0.04)
Mild–moderate limitation	1.00	*1.15* (0.09)	1.33 (0.09)
Severe–complete limitation	1.00	*1.00* (0.09)	1.52 (0.11)

Note. CAM = complementary and alternative medicine; ICF = International Classification of Functioning, Disability, and Health.
[a]Other variables in models were sex (male, female), race and Hispanic origin (non-Hispanic White, Hispanic, non-Hispanic Black, Other), change in health in the past 12 months (better, same, worse), and age (18–24, 25–34, 35–44, 45–54, 55–64, and 65 years and older).
[b]Relative risk ratios are significantly different from the reference category ($P<.05$, 2-tailed test) unless italicized. In no case are the relative risk ratios for different degrees of limitation significantly different from each other.

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Human Participant Protection

No protocol approval was needed for this study.

References

1. Idler EL, Kasl SV. Religion among disabled and nondisabled persons, II: attendance at religion services as a predictor of the course of disability. *J Gerontol.* 1997;52B:S306-S316.

2. Chatters LM. Religion and health: public health research and practice. *Annu Rev Public Health.* 2000; 21:335–367.

3. *Data File Documentation, National Health Interview Survey, 1999* [machine readable data file and documentation]. Hyattsville, Md: National Center for Health Statistics; 2001.

4. *International Classification of Functioning, Disability, and Health.* Geneva, Switzerland: World Health Organization; 2001.

5. *Stata Statistical Software: Release 7.0* [computer program]. College Station, Tex: Stata Corp; 2001.

6. McNeil JM. *Americans With Disabilities: 1991–1992.* Washington, DC: Bureau of the Census; 1993: 10–11. Current Population Reports.

7. Eisenberg DM, Davis RB, Ettner SL, et al. Trends in alternative medicine use in the United States, 1990–1997: results of a follow-up national survey. *JAMA.* 2000;283:884–886.