ORIGINAL RESEARCH

Prehospital Spirituality: How Well Do We Know Ambulance Patients?

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Abbreviations:
ED = emergency department
EMS = emergency medical services
EMT = emergency medical technician
MS = Minneapolis-St. Paul, Minnesota
OR = odds ratio
SL = St. Louis, Missouri

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Abstract

Objective: To assess the religious spirituality of EMS personnel and their perception of the spiritual needs of ambulance patients.

Methods: Emergency medical technicians (EMTs) and paramedics presenting to an urban, academic emergency department (ED) were asked to complete a three-part survey relating to demographics, personal practices, and perceived patient needs. Their responses were compared to those of ambulance patients presenting to an ED during a previous study period and administered a similar survey.

Results: A total of 143 EMTs and 89 paramedics returned the surveys. There were 161 (69.4%) male and 71 (30.6%) female respondents with a median age range of 26–35 years old. Eighty-seven percent believed in God, 82% practiced prayer or meditation, 62% attended religious services occasionally, 55% belonged to a religious organization, 39% felt that their beliefs affected their job, and 18% regularly read religious material. This was similar to the characteristics of ambulance patients.

However, only 43% felt that occasionally ambulance patients presented with spiritual concerns and 78% reported never or rarely discussing spiritual issues with patients. Contrastingly, >40% of ambulance patients reported spiritual needs or concerns at the time of ED presentation, and >50% wanted their providers to discuss their beliefs. Twenty-six percent of respondents reported praying or meditating with patients, while 50% reported praying or meditating for patients.

Females were no more religious or spiritual than males, but were more likely to engage in prayer with (OR = 2.38, p = 0.0049) or for (OR = 6.45, p <0.0001) patients than their male counterparts.

Conclusion: EMTs and paramedics did not perceive spiritual concerns as often as reported by ambulance patients, nor did they commonly inquire about the religious/spiritual needs of patients.

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Introduction

Religion and spirituality have gained a growing presence in the medical literature.[1] A patient's beliefs, values, and attitudes often influence their "decision to seek treatment, treatment compliance, and, ultimately, satisfaction and recovery".[2] Yet, spiritually related research has been absent from the prehospital emergency medical services (EMS) literature, despite the frequency of critical illness, psychiatric problems, and end-of-life issues that paramedics and emergency medical technicians (EMTs) face on a daily basis.

Practice patterns relating to spirituality in medicine have been assessed among family physicians,[2,3] but only one study has assessed the spirituality of EMTs, and that sample population was limited to the Minneapolis-St. Paul area.[4] The purpose of this study was to assess the religious/spirituality

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Are you __Male or __Female?
Are you __18–25 __26–35 __36–45 __46–55 __56–65 __>65?
Are you an __EMT or __paramedic?
Do you believe in God? __Yes __No
Do you belong to a religious organization? __Yes __No
How often do you attend religious services? __Never __Occasionally __Frequently __Daily
Do you pray or meditate? __Yes __No
Do you regularly read religious material? __Yes __No
Do your beliefs affect your job? __Yes __No
How often do you think ambulance patients present with spiritual concerns? __never __rarely __occasionally __frequently __usually
How often do you discuss religious or spiritual issues with patients? __never __rarely __occasionally __frequently __usually
Have you ever prayed or meditated with patients? __Yes __No
Have you ever prayed or meditated for patients? __Yes __No

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Table 1—Survey instrument (EMT = emergency medical technician)

of EMS field personnel serving a large, urban, midwest city, and to compare their perception of the religious/spiritual concerns of ambulance patients to the self-reported religious/spiritual concerns of ambulance patients who were seen in the ED during a prior study period.[4]

Methods

Study Design—This was a cross-sectional survey of EMTs and paramedics providing transport to an urban, academic emergency department (ED) in the Midwest. Consecutive EMTs and paramedics arriving at the ED on each of eight different shifts—two weekday days, two weekday nights, two weekend days, and two weekend nights—were asked by trained research assistants to complete a survey relating to demographics, personal practices, and perceived patient needs (Figure 1). Consecutive field personnel also were surveyed at ambulance headquarters on eight different morning change-of-shifts.

The data were maintained in Microsoft Excel with descriptive analysis using StatView and VassarStats. The Human Subjects Committee at both Washington University and Abbott Ambulance approved this study.

Study Population and Sample—All EMTs and paramedics were eligible for inclusion regardless of age, gender, ethnicity, or experience level. Emergency medical technician students were excluded, as were ride-along observers. A target enrollment of 240 EMS personnel was calculated so as to sample 10% of the EMS providers serving the city.

	Males		Females	
Total	**161**	**(69.4%)**	**71**	**(30.6%)**
Emergency medical technicians	101	(62.7%)	42	(59.2%)
Paramedics	60	(37.3%)	29	(40.8%)
Median age range	26–35		26–35	
Modal age range	26–35		26–35	

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Table 2—Demographics

	Yes		No	
	n	(%)	n	(%)
Do you believe in God?	202	(87)	30	(13)
Do you belong to a religious organization?	128	(55)	104	(45)
Do you pray or meditate?	191	(82)	41	(18)
Do you regularly read religious material?	42	(18)	190	(82)
Do your beliefs affect your job?	91	(39)	141	(61)

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Table 3—Spiritual indices of emergency medical technicians and paramedics (n = number)

How often you think ambulance patients present with spiritual concerns?	Occassionally 99 (42.7%)	Rarely 67 (28.9%)
How often you discuss religious or spiritual issues with patients?	Never 103 (44.4%)	Rarely 77 (33.2%)
Have you ever prayed or meditated with patients?	Yes 60 (25.9%)	No 172 (74.1%)
Have you ever prayed or meditated for patients?	Yes 115 (49.6%)	No 117 (50.4%)

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Table 4—Spiritual practices of emergency medical services personnel and their perception of patient needs

Survey Development and Theoretical Construct—The survey had three components. The first component gathered demographic information of EMT status, age, and gender. The second related to personal religious/spiritual practices. These questions mirrored the portion of the Minneapolis-St. Paul survey[4] relating to factors subsequently identified as pertaining to religious coping.[5] The third component addressed EMT/paramedic perceptions and practices with

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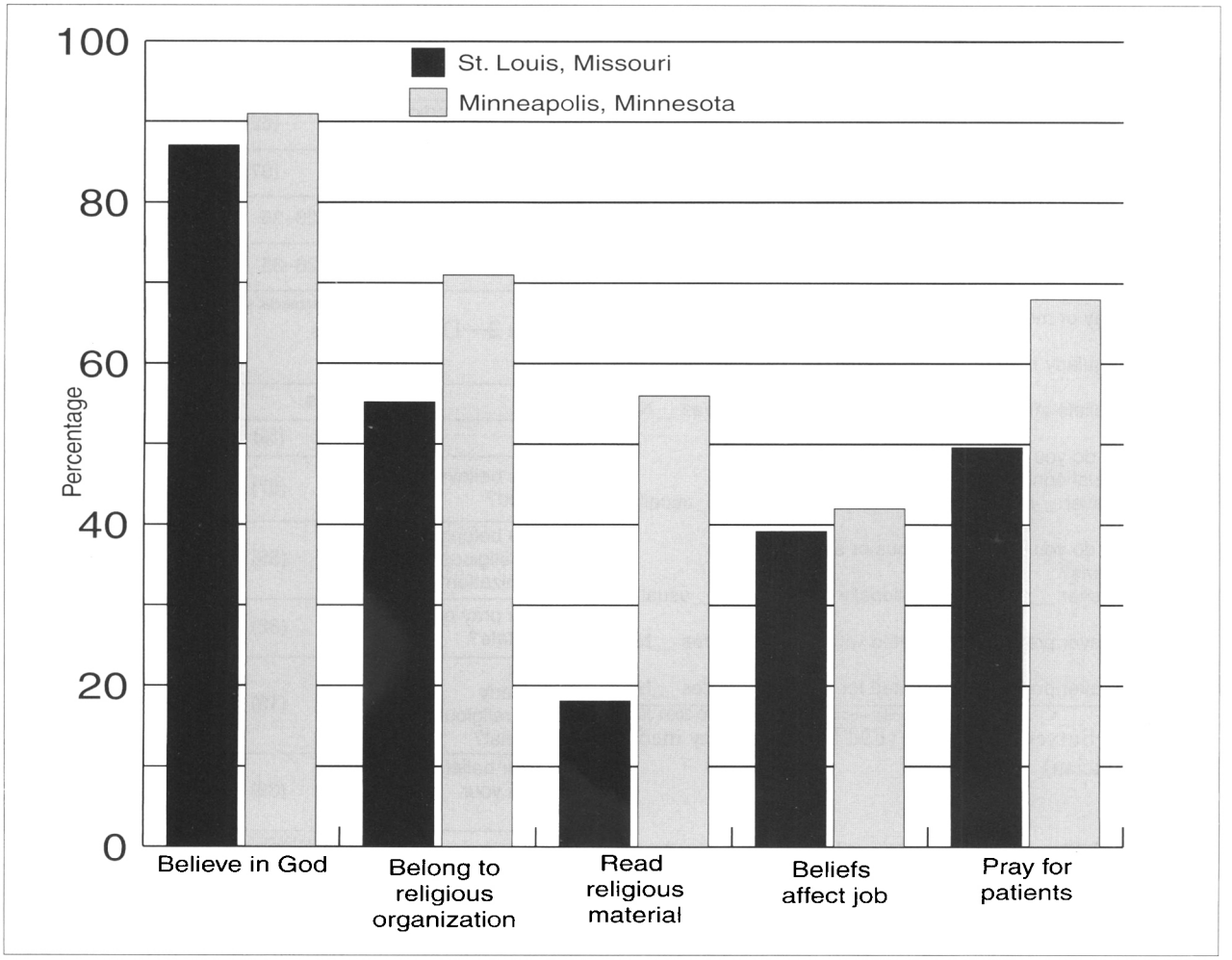

Figure 1—Comparison to Minneapolis Sample[4] (The Minneapolis survey asked if they "read religious material", but the St. Louis survey asked if they "regularly read religious material.")

regard to religious/spiritual interactions with patients. Dichotomous questions were developed based on the findings of King and Bushwick relating to the spiritual needs, beliefs, and preferences of patients.[6]

It was predetermined to compare these data to prior work among ambulance patients from the same ED, in which patient self-report determined religious/spiritual concern or need.[7] This was the most appropriate comparison group and was made necessary by the lack of other studies relating to the religious/spiritual needs and concerns of ambulance patients.

Results

One-hundred, forty-three EMTs and 89 paramedics consented to participate in this study and returned surveys, accounting for almost 10% of the EMS personnel serving the city. Eight EMTs and five paramedics declined participation. The sample included 161 males (69.4%) and 71 females (30.6%) with a median age range of 26–35 years (Table 2).

The results of the religious/spiritual indices of EMS personnel in St. Louis (SL) are listed in Table 3 and compared to the Minneapolis-St. Paul (MS) cohort in Figure 1. The majority of EMS providers in the studies (SL = 87%; MS = 91%) believe in God, belong to a religious organization (SL = 55%; MS = 71%), and pray or meditate (SL = 82%). However, a minority attend religious services regularly (SL: never = 21%, occasionally = 62) or feel that their beliefs affected their job (SL = 61%; MS = 61%). In addition, in SL, 17% attend services regularly or daily and 83% never or occasionally attend religious services.

The perceptions of EMT/paramedics of the religious/spiritual needs of their patients are listed in Table 4 and are compared to a cohort of ambulance patients from the same ED during a prior study period (Figure 2). The majority (78%) of EMS personnel reported "never" or "rarely" discussing religious/spiritual issues with patients and most (74%) have never prayed or meditated with ambulance patients. In fact, almost three-fourths (72%) of the personnel believe patients rarely or occasionally present

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	Females	Males	Odds Ratio	*p*-value
Do you believe in God?	Yes 60 (84.5%)	Yes 142 (88.2%)	0.730	0.439
Do you belong to a religious organization?	Yes 39 (54.9%)	Yes 89 (55.3%)	0.986	1.0
How often do you attend services? (median)	Occassionally 48 (20.7%)	Occassionally 91 (56.5%)	--	--
Do you pray or meditate?	Yes 65 (91.5%)	Yes 126 (78.3%)	3.009	0.014
Do you regularly read religious material?	Yes 10 (14.1%)	Yes 32 (19.9%)	0.661	0.292
Do your beliefs affect your job?	Yes 25 (35.2%)	Yes 66 (41.0%)	0.782	0.406

	Female	Males	Odds Ratio	*p*-value
How often you think ambulance patients present with spiritual concerns? (median)	Occassionally 39 (54.9%)	Rarely 61 (37.9%)	--	--
How often you discuss religious or spiritual issues with patients? (median)	Rarely 33 (46.5%)	Rarely 43 (26.7%)	--	--
Have you ever prayed or meditated with patients?	Yes 27 (38.0%)	Yes 33 (20.5%)	2.38	0.0049
Have you ever prayed or meditated for patients?	Yes 56 (78.9%)	Yes 59 (36.6%)	6.45	<0.0001

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Table 5—Survey answers by gender, odds ratio for females compared to males

with spiritual concerns. Essentially half of the personnel at sometime have prayed or meditated for their patients as a means of expressing their concern for their welfare.

This is in contrast to the high percentage of ambulance patients who express religious/spiritual needs or concerns at the time of transport and want providers to address their beliefs or needs (Figure 2). The most striking differences in perceptions between the ambulance personnel and the patients were in the frequency. Spiritual issues are discussed between patients and the personnel, praying with patients, reading of religious materials, and spiritual concerns. Little differences exist in their respective beliefs in a god or in their membership in a religious organization.

Females were not more religious or spiritual than males (Table 5), and were more likely to pray with patients (Odds Ratio (OR) = 2.38, p = 0.0049) and for patients (OR = 6.45, p <0.0001).

Discussion

The religious/spiritual indices of EMTs and paramedics in the current sample were consistent with those reported previously for EMS personnel in Minneapolis-St. Paul and similar to those of the general population.[8] However, the EMTs and paramedics in the current sample underestimated the religious/spiritual needs and concerns of ambulance patients presenting to the same ED. The EMT/paramedics underestimated the frequency with which ambulance patients presented with religious/spiritual concerns and usually did not meet their expectations/ preferences for religious/spiritual dialogue and interaction.

There only has been one study published regarding the religions/spirituality of ambulance patients,[7] but it was consistent with prior studies from other settings in demonstrating that many patients think that their beliefs and needs should be considered, and that consideration of these needs can impact the presentation and experience of illness.[6,9,10] While extrapolation of data from other settings to the prehospital environment may not be valid, those studies form a consistent background against which the prior study of ambulance patients and the current study of EMS personnel in St. Louis can be interpreted. It may be that EMTs and paramedics in this sample were unaware of the frequency with which ambulance patients presented with religious/spiritual concerns and needs.

It also is of interest that a possible gender difference was suggested by the data. Females were more likely to pray with patients and pray for patients than were their male counterparts. The reason for this difference is not clear. The female cohort may have thought that patients presented more often with religious/spiritual needs than did the male cohort (Table 5), but this possibility has not been established.

The findings of this study suggest several areas for further research. First, what is the current practice pattern—if there is one—of EMTs and paramedics regarding spirituality in EMS care? This would be important as there have

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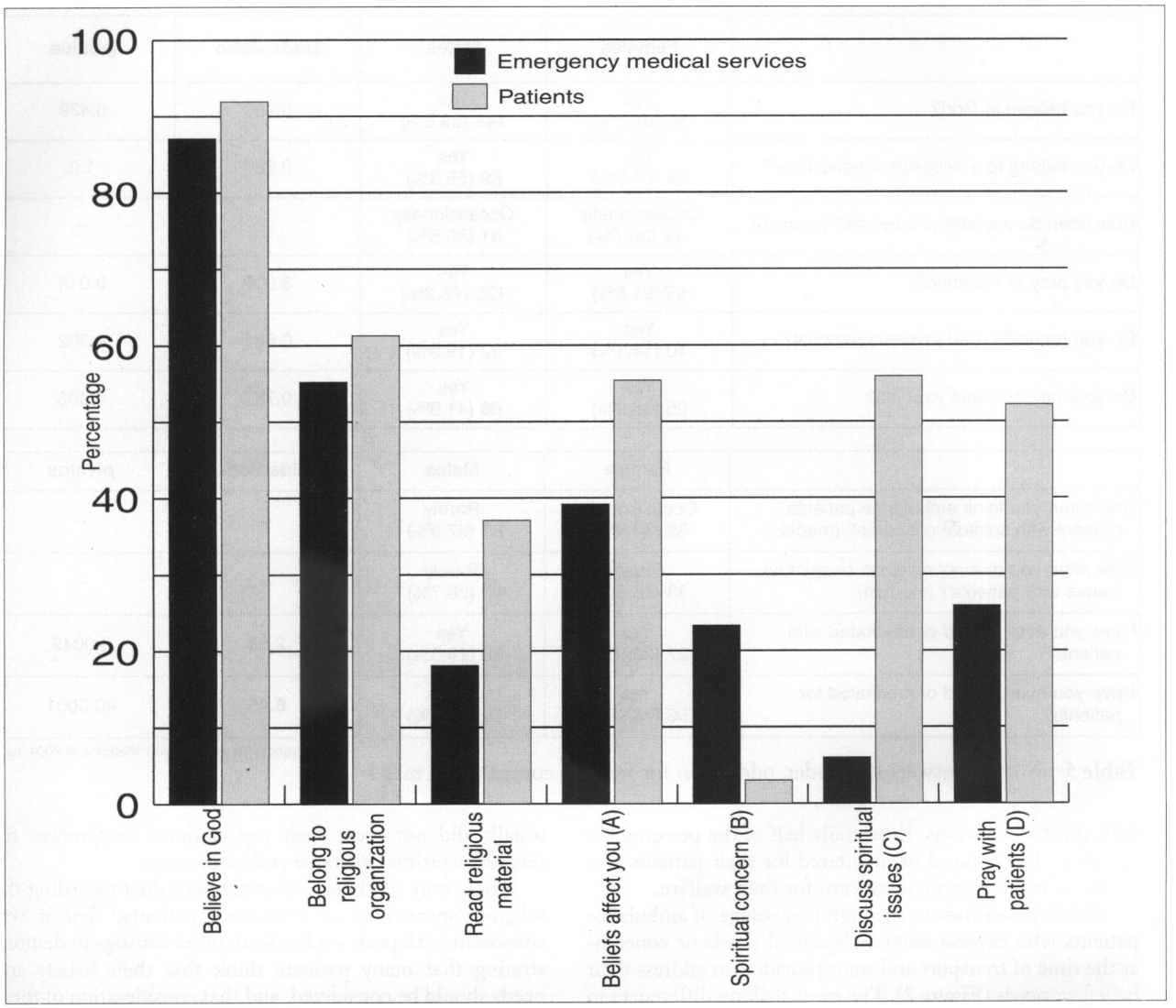

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Figure 2—Comparison of emergency medical technicians/paramedics and ambulance patients (*Data for ambulance patients obtained from Jang *et al*[7]; A = Patients responded to "Do your beliefs affect your healthcare choices and decisions?" while EMT/paramedics responded to "Do your beliefs affect your job?"; B = percent of patients reporting they had spiritual concerns at the time of ambulance transport vs. the percent of EMT/paramedics who said patients presented with spiritual concerns "frequently" or "usually"; C = percent of patients reporting that they wanted a provider to ask about their spiritual beliefs or needs vs. the percent of EMT/paramedics who discuss spiritual issues with patients "frequently" or "usually"; D = percent of patients wanted a provider to pray or meditate with them "today" vs. percent of EMT/paramedics who have ever prayed or meditated with patients)

been greater emphases on patient-centered guidelines. Second, what kind of religious or spiritual beliefs most likely affect job performance, perception of patient needs, and prehospital practice patterns? It may be that certain kinds of believers are more likely to perceive a need on the part of patients than others. Third, would the use of patient-sensitive care models utilizing spiritual dialogue lead to improved patient care and outcomes or impact refusals of transport? This has been suggested,[11] but never has been examined in the EMS literature. Likewise, should there be a standardized set of religious/spiritual screening questions that could be passed on to hospital personnel when presenting to hospitals? Finally, given the previous suggestions,[4] what role might spirituality have on job satisfaction and critical incident stress debriefing?

Limitations

There were several limitations to this study. It was a single-center study done at an urban, academic medical center in the Midwest. Regional variations previously have been suggested in the medical literature,[2] and would be expected among EMS personnel as well. A large, multi-center

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study would be helpful in establishing the true practice pattern for prehospital care. In addition, this study was weighted towards males and EMTs. It is unclear how a greater proportion of females or paramedics would have impacted the findings, as this has not been explored in the literature. Finally, the definitions of "God", "prayer or meditation", and "religious services" are culturally bound and precise meanings were not assigned. This was done in order to avoid biasing the study towards any particular belief system, but also limited the conclusions that can be drawn.

Conclusion

Emergency medical technicians and paramedics in this sample did not think that ambulance patients commonly presented with religious/spiritual concerns and did not commonly ask patients about their religious or spiritual concerns. This contrasts with data on patient self-report of religious/spiritual needs and preferences. The effect, if any, this may have on outcomes or satisfaction requires further study.

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