



Daily Dose of Spirituality: Understanding the Impact of Spiritual Needs on Symptom Management

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Background

- Nearly one million Americans are living with a brain tumor, and approximately 90,000 people are diagnosed with a primary brain tumor in 2020.
- Brain tumors rank the highest in symptom burden.
- Patients with brain tumors have a significant reduction in their quality of life (QoL).
- Due to the unknown etiology and unpredictable future of cancer, patients with cancer have been shown to be at greater risk of spiritual suffering.
- Patients with cancer often find spirituality to be valuable in coping with uncertainty from their illness
- Spiritual coping has been linked to higher levels of well-being and less psychosocial distress in individuals diagnosed with various forms of cancer.
- Therefore, it is of the utmost importance to encompass their unique spiritual needs when caring for cancer patients.

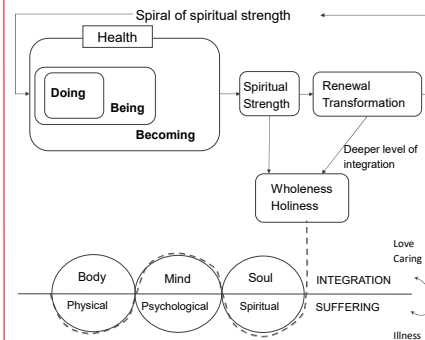
Purpose

- To examine how spirituality is interconnected with other important dimensions of patient care.
- To test a theoretical model of spiritual strength that explains how spiritual needs of patients with brain tumors is affected by symptom burden, psychological distress.

Design

- This study was conducted with a cross-sectional online survey design using standardized questionnaires and reviewing a participant's electronic medical records for data collection.
- Inclusion Criteria were outpatients who are 18 years or older being have been seen at the MD Anderson Neurosurgery clinic and have a diagnosis of a primary or metastatic intracranial or skull-based brain, pituitary, or meningeal lesions.
- This study tested a set of hypothesized relationships within the constructs of the proposed research model using Structural Equation Modeling (SEM).

Theoretical Foundation



[Figure 1. 2] Katie Eriksson's theory of caritative caring: Health and spiritual strength (Adapted from Eriksson, 2006)

- Health is seen as movement among three separate levels: doing, being, becoming.
- Becoming healthy is a dynamic movement towards integrity and wholeness.
- The person advances to different levels of renewal and/or transformation and the movement continues toward a higher awareness.
- Compassion for a fellow human being arises in meeting a suffering human being; therefore, suffering can be alleviated in a relationship characterized by responsibility and a desire to do well.

Measurements

- Spiritual Needs:** Spiritual Needs Assessment for Patients (SNAP) 23-item instrument with domains assessing psychosocial, spiritual and religious needs.
- Psychological Distress:** Hospital Anxiety and Depression Scale (HADS) psycho-emotional distress self-report questionnaire.
- Symptom Burden:** MD Anderson Symptom Inventory-Brain Tumor (MDASI-BT) 13 common symptom items and 6 interference items, 9 brain tumor specific symptoms

Results

- 187 survey was retained for data analysis.
- The participants were 56.7% (n=106) female.
- More than half of participants were older than 50 years.
- Over 80% of participants were married and resided in the Southern U.S.
- Majority of the participants were Caucasian/White.
- 9 out of 10 participants received at least college education.
- Most respondents indicated that they had a religious preference/affiliation.
- 42.8% of participants had a diagnosis of brain tumors less than a year.
- 134 participants (71.7%) had the first diagnosis with brain tumor and 53 participants (28.4%) had two or more diagnosis of cancer including tumor in the brain.
- Nearly 90% of participants had more than one surgical history for their tumors; received either chemotherapy (16%), radiation (11.2%), or both (46.5%) for their brain tumor.

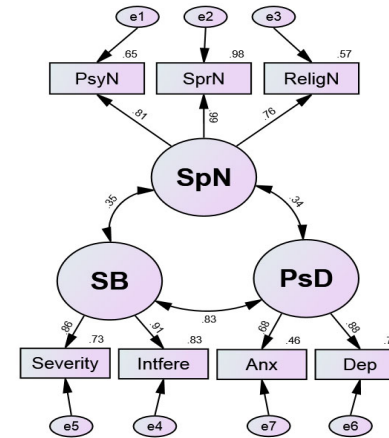


Figure 4. 3 Results of hypothesized relationships in refined structural model

- Spiritual Needs had strong influences on psychological, spiritual and religious needs which the relationship was stronger with spiritual needs.
- Symptom Burden had strong influences on both severity and interference which the relationship was stronger with interference.
- Psychological distress had influences on anxiety and depression which the relationship was stronger with depression.
- Symptom burden and psychological distress showed strong direct positive correlation.
- Spiritual needs were positively correlated with both symptom burden and psychological needs.

Table 4. 1 Comparison of means by gender, age, religious preference/affiliation

	Gender		Age		Religious preference/affiliation	
	male (n=79)	female (n=105)	Age <50y.o (n=71)	Age ≥50y.o (n=113)	No (n=28)	Yes (n=152)
Severity	37.6	48.9	56.4	36.3	40.0	43.5
Intere	13.7	16.8	20.2	12.6	15.6	15.2
Anx	5.1	6.8	7.5	5.1	6.7	5.8
Dep	3.5	4.9	5.4	3.6	4.9	4.1
PsyN	5.8	7.7	7.7	6.4	7.2	6.8
SpN	13.1	16.6	15.3	14.9	13.3	15.2
ReligN	3.8	4.7	4.1	4.3	2.5	4.5

- The mean scores of MDASI-BT (severity, intere) were higher for those who were female, aged younger than 50, and expressed religious preference/affiliation.
- The mean scores of both HADS-A and HADS-D were higher for those who were female, aged younger than 50, and expressed no religious preference/affiliation.
- Overall, the mean scores of SNAP (PsyN, SprN, ReligN) were higher for those who were female, aged younger than 50, and expressed religious preference/affiliation.

Conclusions

- The factors identified has led to validate a theory-based conceptual model with constructs which include spiritual needs, psychological distress, and symptom burden.
- Symptoms that interfere daily living, spiritual needs, and depression could be main determinants that lead to the state of becoming healthy.

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Can You See Me Speaking?

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Introduction

Effective communication is necessary to establish trust and build rapport in the patient -doctor relationship. It may also be the cornerstone of the medical intervention itself, as is the case for patients undergoing awake craniotomy surgery with intraoperative language mapping. Deaf individuals presenting for such interventions require special consideration and preparation unique to this patient population.

Case Report

A 45-year-old deaf male presented for resection of a right cerebral hemisphere glioma. Resection was accomplished via an awake craniotomy with language mapping for functional preservation of the language centers. The patient used American Sign Language (ASL) to communicate. A certified registered nurse anesthetist (CRNA) fluent in ASL volunteered to participate in the case. The anesthetic plan was modified from the standard asleep-awake-asleep technique to awake-awake-asleep, only anesthetizing the patient post resection. The CRNA wore a clear face shield, no mask, provided good lighting, strategically positioned the surgical drapes, and sat inches from the patient. Conscious sedation was provided with Dexmedetomidine 0.3 – 0.05mcg/kg/hr and Remifentanyl 0.05mcg/kg/min infusions throughout with intermittent boluses of Fentanyl and Midazolam. A Propofol infusion 50mcg/kg/min was added mid-case and increased to 100mcg/kg/min for the asleep phase post resection. The CRNA stayed with the patient throughout the procedure and accompanied him to the Intensive Care Unit. There were no complications.



Discussion

Facial expression is foundational in ASL, therefore adequate lighting, face to face orientation, and eye contact are essential. ASL also requires appropriate sign execution with correct hand-shape, location in relation to the body, movement of the hands, and palm orientation.¹ Challenges faced to achieve these requirements included the patient's side-lying position, cranial fixation, surgical drapes limiting the available sign space, lighting, surgical face mask protocol, and the hazards of the sedation itself. To address these challenges the CRNA interpreter wore a clear face shield in lieu of the standard surgical face mask, such that the patient could see the entirety of her face. She also sat within inches of the patient to ensure eye contact. To address the limited sign space and ambient lighting, the surgical drapes were positioned to maximize space and visibility. The patient was able to see adequately and sign with both hands.

In contrast to hearing individuals who are anesthetized with a laryngeal mask airway during the initial asleep phase, our patient received conscious sedation. The inability of the deaf patient to audibly receive language complicated the anesthetic. Whereas sedated hearing patients can be stimulated to wake when spoken to, deaf patients require more time to fully recover from sedatives/hypnotics and could remain disoriented until fully awake and able to visually focus on an interpreter. As Chhabra et al found, their deaf patient became agitated during the first asleep phase and communication with ASL became difficult.² This agitation and inability to participate in language exchange poses a physical danger to a patient in cranial pins. Keeping the patient sedated yet awake eliminates this risk while providing comfort and safety.

References

¹ Colwell, E. *Complete American Sign Language Dictionary*. New York, Barnes Books (2002).

² Challenges and Alternatives during Awake Craniotomy in a patient with complete hearing loss – Our experience and Review of Literature Chhabra, S. et al. (2022). *Journal of Neurological Anesthesiology*, 54(4):452.



Racial and Ethnic-Based Differences in Postoperative Nausea and Vomiting Prophylaxis

Authors: Miller M; Muthukumar A; Gundre S; Idowu O; Diaz N; Wright C; Zavala AM; Cata JP; Owusu-Agyemang P.

Background

- Postoperative nausea and vomiting (PONV) may be associated with significant adverse events and patient dissatisfaction.
- Thus, PONV prophylaxis is essential in anesthesia practice. Studies across medicine suggest the existence of racial/ethnic-based disparities in the receipt of medications.²
- In this study, we aimed to determine whether there were racial/ethnic-based differences in **PONV prophylaxis** of adult patients who had undergone oncologic surgery.
- We hypothesized that **PONV prophylaxis** would not vary across racial/ethnic groups.

Methods

Multivariable logistic regression was used to assess the association between race/ethnicity and antiemetic administration in the **preoperatively and during surgery**.

Results

Of the 60,595 patients included, 8431 (14%) were Hispanic/Latino, 3053 (5%) were non-Hispanic (NH)-Asian, 5376 (9%) were NH-Black, 42,533 (70%) were NH-White, and 1202 (2%) belonged to 'Other' NH-racial groups. Median age was 60 years (IQR, 49 – 69) and 56% were female. In the adjusted model, antiemetic administration **preoperatively and during surgery** were each associated with race/ethnicity ($p < 0.0001$). Compared to NH-Blacks, NH-Asians (OR, 1.272 [95%CI, 1.124-1.440]), Hispanics/Latinos (OR, 1.302 [95%CI, 1.181-1.435]), and NH-Whites (OR, 1.582 [95%CI, 1.456-1.720]) had significantly greater odds of receiving an **antiemetic preoperatively** (all $p < 0.001$).

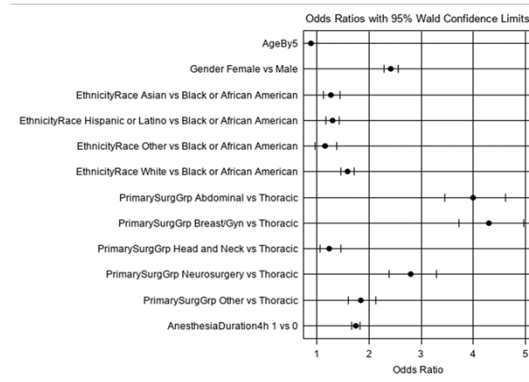


Table 1: Association between ethnicity/race and status of anti-emetic use with respect to different parameters.

Odds Ratio Estimates and Wald Confidence Intervals				
Effect	p-value	OREstimate	95%CI for OR	
Age	<.0001	0.863	0.856	0.871
GenderFemale vs Male	<.0001	0.899	0.853	0.947
Ethnicity Race Asian vs Black or African American	0.0822	1.118	0.986	1.267
Ethnicity Race Hispanic or Latino vs Black or African American	<.0001	1.246	1.131	1.373
Ethnicity Race Other vs Black or African American	<.0001	1.664	1.360	2.037
Ethnicity Race White vs Black or African American	0.0036	1.122	1.038	1.213
Primary Surg Grp Abdominal vs Thoracic	0.1200	1.089	0.978	1.214
Primary Surg Grp Breast/Gyn vs Thoracic	0.8044	0.987	0.887	1.098
Primary Surg Grp Head and Neck vs Thoracic	0.3504	0.949	0.850	1.059
Primary Surg Grp Neurosurgery vs Thoracic	<.0001	4.859	3.937	5.998
Primary Surg Grp Other vs Thoracic	0.7572	1.016	0.919	1.124
Minimally Invasive yes vs no	<.0001	1.198	1.131	1.269
Anesthesia Duration4h 1 vs 0	<.0001	1.523	1.451	1.599

Table 2: Multivariable logistic regression analysis to estimate the effects of important covariates on status of intraoperative anti-emetic use.

Results., Contd..

- **During surgery**, Hispanics/Latinos (OR, 1.243 [95%CI, 1.128-1.370]), NH-Whites (OR, 1.127 [95%CI, 1.043-1.218]), and patients of 'Other' NH-race (OR, 1.666 [95%CI, 1.361-2.039]) had significantly greater odds of receiving an antiemetic than NH-Blacks (all $p < 0.0001$ except $p=0.0026$ for NH-Whites).
- **During surgery**, Hispanics/Latinos (OR, 1.243 [95%CI, 1.128-1.370]), NH-Whites (OR, 1.127 [95%CI, 1.043-1.218]), and patients of 'Other' NH-race (OR, 1.666 [95%CI, 1.361-2.039]) had significantly greater odds of receiving an antiemetic than NH-Blacks (all $p < 0.0001$ except $p=0.0026$ for NH-Whites).

Conclusions

In this study, there were significant differences in **PONV prophylaxis** across racial/ethnic groups.

Discussion

Rodseth et al in a non-controlled observational trial first identified the non-African population as a significant factor for PONV.² A large multicenter perioperative outcome analysis led by White et al in 2023 (n= 5.1 million patients), showed that Black patients were less likely to receive perioperative antiemetic administration compared to Asians and White people.³ Additionally an analysis by Alli et al speculated the possible significance of adding ethnicity to Apfel scoring system.⁴

A genome association evaluated by Reuffert et al found that at least one single nucleotide polymorphism (i.e., either OPRM1 A118G mu-opioid receptor gene and/or HTR3A/HTR3B) associated with PONV. This nuclear variation is comparatively common in black population, making them tolerable to the opioid intensified adverse events.⁵ This might be the possible reason for less incidence of PONV and lesser perioperative requirements of antiemetics in black population.

Our results were in accordance with the hypotheses, suggesting the lesser requirement of perioperative antiemetics by the black population compared to other races.

References

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Assessing Diversity Equity and Inclusion in a Department of Oncological Critical Care

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INTRODUCTION

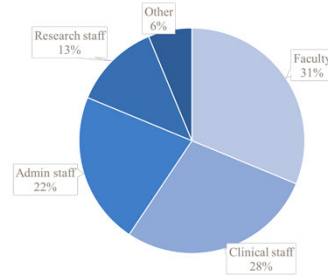
- Many strides have been made to highlight the importance of diversity, equity, and inclusion (DEI) in the workplace.
- Critical care encompasses a complex environment that requires a multidisciplinary coordination to provide patient care.
- We conducted a survey to assess DEI satisfaction in the Department of Critical Care Medicine.

METHODS

- We used the Diversity Engagement Survey, which was created by University of Massachusetts Medical School and the AAMC.
- The survey is based on a Likert scale. Strongly agree and agree responses were considered favorable responses.
- REDCap was used to administer the survey and store the anonymous answers.

RESULTS

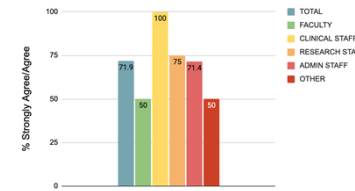
• There were 32 responses out of 45 employees (71% response rate).



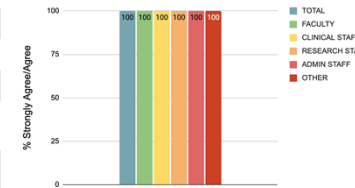
	Faculty	Clinical Staff	Research Staff	Admin Staff	Other
Gender					
Females	4	4	0	7	2
Males	6	5	4	0	0
Ethnicity					
Asian	2	2	0	0	1
Black/ African American	0	0	1	3	0
Hispanic/ Latinx	2	1	1	2	0
American Indian/Alaska Native	0	1	0	0	0
White	6	6	2	2	1
Other	1	0	0	0	0
Generation					
Traditional	0	0	0	0	0
Baby Boomers	3	0	0	3	0
Generation X	7	5	0	3	1
Millennials	0	4	4	1	1

Most participants (>60%) responded favorably to all the questions.

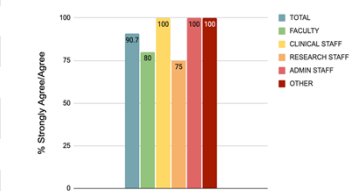
In this institution, there are opportunities for me to engage in service and community outreach.



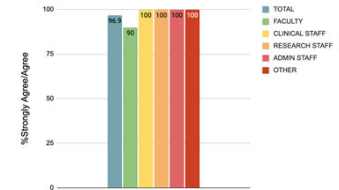
I trust my institution to be fair to all employees and students



Someone at work/school seems to care about me as an individual.



In this institution, I have opportunities to work successfully in settings with diverse colleagues.



CONCLUSION

- The respondents expressed overall positive satisfaction with DEI in the Department of Critical Care.
- However, every effort should be made to improve the satisfaction rate to 100%.
- Further research on implementation and team science are warranted to evaluate the most appropriate interventions to promote DEI in the ICU.

REFERENCES



Gratitude – Keeping My Plate Full

Sabina A. Khan, MD, Assistant Professor, Department of Pediatric Anesthesiology, University of Texas Health Science Center at Houston, Texas

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ABSTRACT

“The Best Attitude Is Gratitude - Keeping My Plate Full” is a personal reflection on my experiences as a pediatric anesthesiologist and the role that gratitude has played in my life and career. I discuss my journey to becoming a physician, including struggles as an immigrant and a mother with a child who was diagnosed with leukemia. The abstract highlights the importance of teamwork and the support and compassion of others in helping me through difficult times. It also discusses my work as a pediatric anesthesiologist, including the challenges and successes I experienced. Through this article, my goal is to emphasize the importance of gratitude that helps overcome challenges and find joy and fulfillment in work.

DISCUSSION

This quote by Melody Beattie, *“Gratitude turns what we have into enough, and more. It turns denial into acceptance, chaos into order, confusion into clarity. It makes sense of our past, brings peace for today, and creates a vision for tomorrow,”* profoundly resonated with me. It took on a deeper meaning during my journey as a pediatric anesthesiologist in the Middle East.

My husband's offer to move to the Middle East for work led me to reflect on my life. I had been through a tumultuous three years since my son's leukemia diagnosis, learning to compartmentalize my emotions while juggling work and caregiving. The support from both my colleagues and fellow parents had been a lifeline. Despite the challenges, I knew I was fortunate, having come to the U.S. as an immigrant, persevered through residency, and found a fulfilling career in anesthesiology.

The residency and fellowship had honed my skills, emphasizing teamwork and patient safety. I faced many challenging cases and learned to stand up for evidence-based practices. My mentors played a crucial role in shaping me into a compassionate and competent physician. However, my move to the Middle East exposed me to substandard practices and team discord.



CONCLUSION

The chaotic journey had finally transformed into a clear path. My vision was within reach, and a profound sense of peace settled in my heart. I had indeed made a significant change, and in the process, I had learned the art of gratitude.

DISCUSSION

I refused to compromise on patient safety and worked tirelessly to establish better practices. I came to realize the profound impact of the exceptional training and mentorship I had received, which was translating into tangible improvements in patient outcomes. There were moments when I stood firm against the pressure to compromise on patient safety for high-risk, complex cases undergoing elective procedures. Through my actions, I demonstrated that it wasn't just our outstanding clinical training, but also our unwavering commitment to patient safety that distinguished us as proficient anesthesiologists.

Each passing day presented increasing isolation and stress due to the challenges I faced. What kept me grounded was the invaluable guidance from my mentors. I felt gratitude towards the system that had instilled in me the courage to stand up in the face of adversity and be a staunch advocate for patients. To channel this gratitude, I started documenting my journey in a journal, filling a page every Friday.

As I navigated the path to achieving excellence and safety in patient care, my gratitude journal continued to expand. I chronicled the unmatched support and love of my husband during our uncertain journey as newlyweds and immigrants. I wrote about cherishing the health of my son, who, despite a major medical diagnosis, received the most advanced treatment. I expressed my appreciation for being surrounded by my ever-supportive family living nearby. I felt proud and thankful for the training I received in the U.S.

I had never before acknowledged or confronted my vulnerabilities, but embracing them only heightened the immense gratitude that now overflowed in my heart. Every morning, I rose after stumbling the day before, never losing faith in my ability to make a difference.

During my two-year tenure there, I introduced and established several safety protocols. While I wasn't in a perfect system, I remained grateful for the training, skills, and, most importantly, the courage that allowed me to transform the situation. I tackled each day one step at a time.

In the fall of 2021, my family and I decided to return to the U.S., and I was warmly welcomed back at my previous workplace. Within days, I escorted a patient to the recovery unit after a neuromuscular scoliosis repair. The mother, with tears in her eyes, embraced me tightly. The resident commended the excellent work and thanked me for a successful day. The surgeon expressed his confidence in having me in the operating room. I humbly attributed the positive outcome to our closely-knit perioperative team's dedication and outstanding teamwork, all geared toward a common goal – patient safety.