Identifying risk in a high-risk population: A mixed methods study of suicidal ideation in patients with head and neck cancer

Jaishree C Palanisamy, DO, Samantha Tam, MD, MPH, Amy Williams, PhD, LP, Eric Adjei, PhD, Amani El-Edlebi, BSW, Tamer Ghanem, M.D., PhD, Vivian Wu, M.D., M.P.H., Suhael Momin, M.D., Steven Chang, M.D., Shivangi Lohia, M.D.

McLaren Oakland, Michigan State University, Henry Ford Health

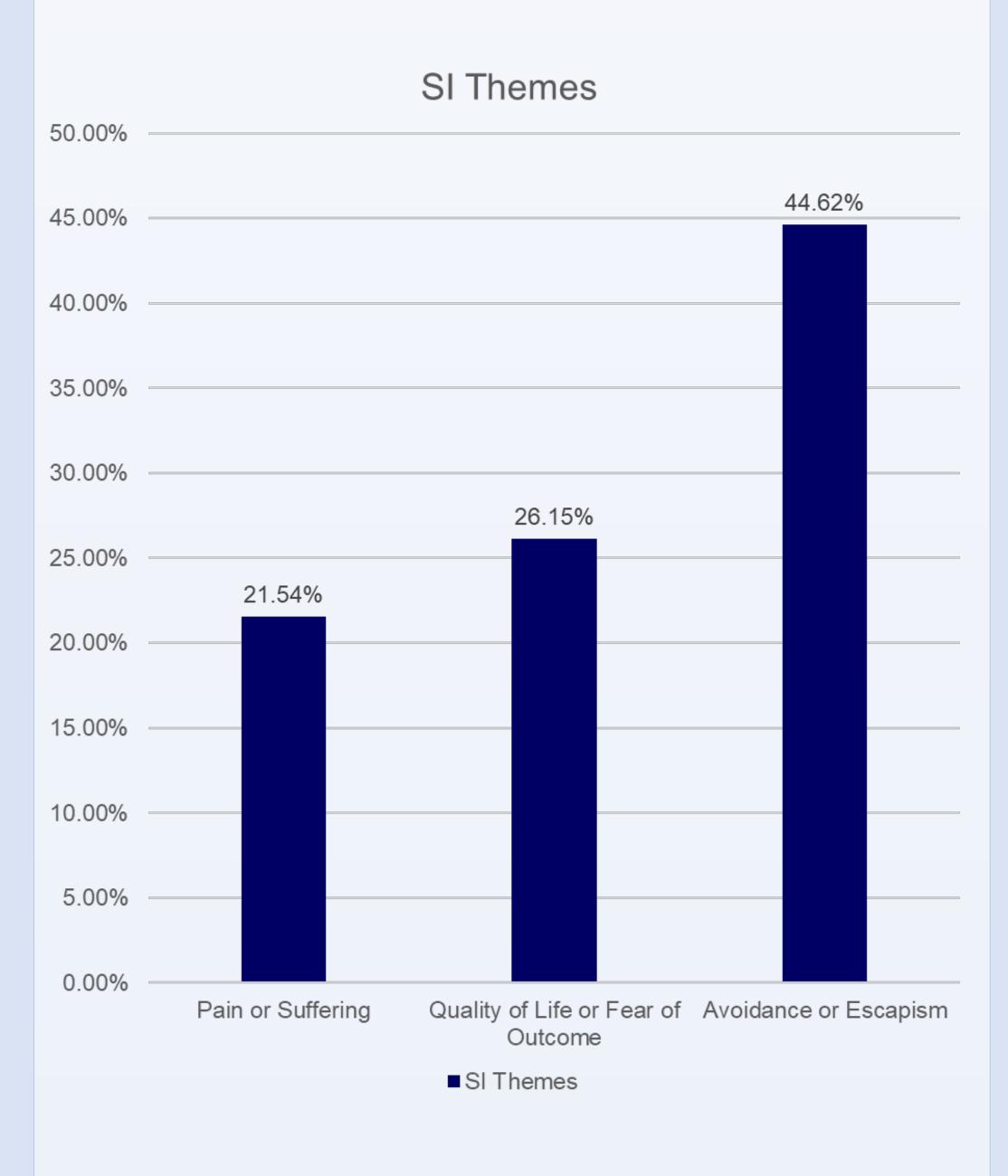
Introduction

There are > 430,000 head and neck cancer (HNC) survivors in the USA, accounting for 3% of the overall population of cancer survivors. Suicide mortality among individuals with HNC is double that of individuals with cancer of other sites and 4 times that of the general population. Previous research identified suicide risk factors in the general population, including males, White race, unpartnered (i.e., widowed/divorced/separated), and those ≥70 years old. These risk factors are highly represented in patients diagnosed with HNC. The current mixed methods study explored factors associated with suicidal ideation (SI) among patients diagnosed with HNC. Additional factors given for not planning or enacting plans for suicide among those who endorsed SI (i.e., protective factors) were examined. Finally, themes of SI content and protective factors were described.

Characteristic	Overall, N=988	No, N= 923	Yes, N=65	P-Value
Age	63 (12)	63 (12)	62 (12)	0.8
Sex				0.5
Female	289 (30%)	273 (31%)	16 (26%)	
Male	664 (70%)	618 (68%)	46 (74%)	
Race				0.2
Other	223 (24%)	213 (24%)	10 (16%)	
White	709 (76%)	658 (76%)	51 (84%)	
Emotional Supp.				0.2
No	209 (30%)	192 (29%)	17 (40%)	
Yes	490 (70%)	465 (71%)	25 (60%)	
Task Support				0.006
No	169 (17%)	149 (16%)	20 (31%)	
Yes	818 (83%)	773 (84%)	45 (69%)	
Hopelessness				<0.001
No	771 (78%)	749 (81%)	22 (34%)	
Yes	219 (22%)	173 (19%)	43(66%)	
Depression				<0.001
No	871 (88%)	830 (90%)	41 (63%)	
Yes	117 (12%)	93 (10%)	24 (37%)	
Cannabis Use				0.008
Never	546 (55%)	521 (57%)	25 (28%)	
Current	173 (18%)	154 (17%)	19 (29%)	
Past	267 (27%)	246 (27%)	21 (32%)	

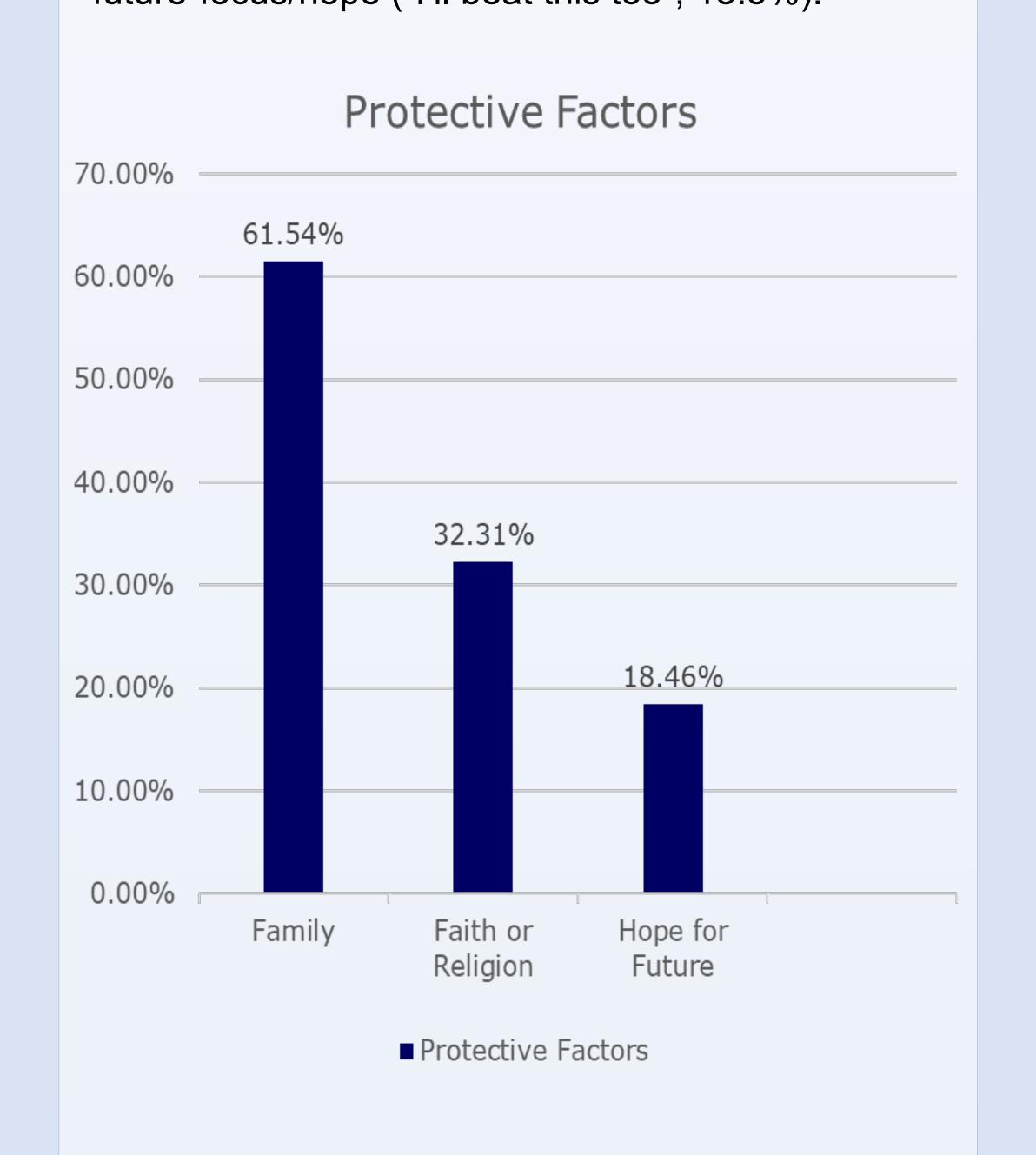
Methods

This was a retrospective cohort study of 988 consecutive patients presenting for pretreatment psychosocial evaluation by the HNC psychoncologist between 2015 and 2021. The psychosocial evaluation was a semi-structured interview and queried social support, psychiatric symptoms, substance use, and suicide risk. On chart review, the verbatim description of SI content and protective factors was recorded from the psych-oncology note and independently coded for themes by three authors (AW, EAB, and AEE) using inductive coding. Consensus on themes for content and protective factors were established, and saturation reached, creating three content and three protective factor themes. Factors associated with SI were examined using logistic regression.



Results

Of the 988 patients included, mean age was 63years-old (SD=12), majority male (70%) and White (76%). Seven percent endorsed SI (n=69). Decreased SI was associated with more education (aOR:0.81, CI:0.71-0.92) and more perceived/identified task support (aOR:0.5, CI:0.27-0.96). Increased SI was associated with feelings of hopelessness (aOR:7.16, CI:3.79-13.8), more depressive symptoms (aOR:1.80, CI:0.99-3.55), and current or past cannabis use (aOR:1.95, CI:0.98-3.88). Themes of the content of SI included avoidance/escapism ("It would be easier to not wake up/not be a burden"; reported by 44.6% with SI), fear of future outcomes/QoL ("It's not worth living if X happens"; 26.1%), and pain/suffering ("I can't take this (pain) anymore"; 21.5%). Themes of the protective factors included family/relationships ("I wouldn't do that to my family"; reported by 61.5% with SI), faith/religion ("You go to Hell"; 32.3%) and future-focus/hope ("I'll beat this too"; 18.5%).



Conclusion

In the current study, 7% of patients endorsed SI. Of those reporting SI, the majority were White males – a population at higher risk for death by suicide in the general population. The content of the ideation involved themes of pain/suffering, fear of outcomes/QoL, and avoidance/escapism. Additionally, these patients listed family/relationships, faith/religion, and futurefocus/hope as protective factors. This information gives insight into drivers of ideation in patients with HNC and possible interventions to decrease suicide risk. While suicide risk screening and prevention strategies should be a part of routine clinical care, in practice, screening is infrequent. By identifying higher-risk populations, teams may be able to proactively identify and intervene on issues that increase risk, such as pain, outcome expectations, and coping strategies.

References

- 1. Osazuwa-Peters N, Simpson MC, Zhao L, et al. Suicide risk among cancer survivors: Head and neck versus other cancers. Cancer. 2018;124(20):4072-4079. doi:10.1002/cncr.31675
- 2. Gormley M, Creaney G, Schache A, Ingarfield K, Conway DI. Reviewing the epidemiology of head and neck cancer: definitions, trends and risk factors. Br Dent J. 2022;233(9):780-786. doi:10.1038/s41415-022-5166-x
- 3. Damgacioglu H, Sonawane K, Zhu Y, et al. Oropharyngeal Cancer Incidence and Mortality Trends in All 50 States in the US, 2001-2017. JAMA Otolaryngol Head Neck Surg. 2022;148(2):155-165. doi:10.1001/jamaoto.2021.3567
- 4. Osazuwa-Peters N, Arnold LD, Loux TM, Varvares MA, Schootman M. Factors associated with increased risk of suicide among survivors of head and neck cancer: A population-based analysis. Oral Oncol. 2018;81:29-34. doi:https://doi.org/10.1016/j.oraloncology.2018.03.017
- 5. Dunne S, Mooney O, Coffey L, et al. Psychological variables associated with quality of life following primary treatment for head and neck cancer: a systematic review of the literature from 2004 to 2015. Psychooncology. 2017;26(2):149-160. doi:10.1002/pon.4109
- 6. Lydiatt WM, Moran J, Burke WJ. A review of depression in the head and neck cancer patient. Clin Adv Hematol Oncol. 2009;7(6):397-403.
- 7. Kam D, Salib A, Gorgy G, et al. Incidence of suicide in patients with head and neck cancer. JAMA Otolaryngol Head Neck Surg. 2015;141(12):1075-1081. doi:10.1001/jamaoto.2015.2480
- 8. Chang DC, Chen AWG, Lo YS, Chuang YC, Chen MK. Factors associated with suicidal ideation risk in head and neck cancer: A longitudinal study. Laryngoscope. 2019;129(11):2491-2495.
- 9. Sun L, Lin C, Shen W, Kao C. Suicide attempts in patients with head and neck cancer in Taiwan. Psychooncology. 2020;29(6):1026-1035.
- 10. Osazuwa-Peters N, Barnes JM, Okafor SI, et al. Incidence and Risk of Suicide among Patients with Head and Neck Cancer in Rural, Urban, and Metropolitan Areas. JAMA Otolaryngol Head Neck Surg. 2021;147(12):1045-1052. doi:10.1001/jamaoto.2021.1728
- 11. Liu Q, Wang X, Kong X, et al. Subsequent risk of suicide among 9,300,812 cancer survivors in US: A population-based cohort study covering 40 years of data. Published online 2022. doi:10.1016/j
- 12. Nugent SM, Morasco BJ, Handley R, et al. Risk of Suicidal Self-directed Violence among US Veteran Survivors of Head and Neck Cancer. JAMA Otolaryngol Head Neck Surg. 2021;147(11):981-989. doi:10.1001/jamaoto.2021.2625
- 13. Schneider KL, Shenassa E. Correlates of suicide ideation in a population-based sample of cancer patients. J Psychosoc Oncol. 2008;26(2):49-62.

Funding: None
Conflicts of Interest: None