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Survey article

Resilience, hope and flourishing are inversely associated with burnout among members of the Society for Gynecologic Oncology

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A B S T R A C T

Purpose: In this study we sought to: 1) determine rates of burnout and other associated indices of psychosocial distress such as alcohol and substance abuse, 2) establish the baseline performance of gynecologic oncologists on several positive psychology metrics, 3) determine if increased hope, resilience, and flourishing are associated with decreased burnout.
Methods: A survey of members of the Society of Gynecologic Oncology (SGO) was conducted in spring of 2017. Participants were sent an electronic questionnaire consisting of 82 items measuring burnout, depression, substance abuse, flourishing, resilience, hope, and psychological wellbeing.
Results: A total of 1745 members were invited and 374 (21.4%) responded. Overall, 23.0% of respondents scores above clinical cutoffs indicating burnout. Almost 50.0% of participants screened positive for depression, 17.0% screened positive for alcohol abuse and 12.0% screened positive for substance abuse. Respondents meeting criteria for burnout were more likely to screen positive for depression (p < .001) and substance abuse (p < .001). Participants not meeting criteria for burnout had higher resilience, flourishing, hope, and wellbeing scores (p < .001). Male respondents had higher levels of hope, resilience, and wellbeing while married participants had higher flourishing and wellbeing scores than their unmarried counterparts. Parents had higher levels of resilience and wellbeing compared to non-parents.
Conclusion(s): Burnout and associated indices of physiological distress continue to affect a large segment of SGO membership. Participants not meeting the criteria for burnout had higher scores on resilience, flourishing, hope, and wellbeing metrics. This suggests new targets for evidence-based interventions to mitigate burnout among members of SGO.

1. Introduction

Burnout is a significant issue affecting medical providers in all specialties and is characterized by high rates of emotional exhaustion, depersonalization, and low personal accomplishment (Maslach et al., 2001). A 2014 study established a rate of burnout in members of the Society of Gynecologic Oncology (SGO) of 32% (Rath et al., 2015). Burnout is associated with numerous negative consequences including reduced quality of care, poor patient outcomes, early retirement, and increased rates of depression and suicide (Cass et al., 2016). Furthermore, a recent decision analysis found that burnout is associated with decreased productivity with disproportionate rates of lost relative value units among females (Turner et al., 2017).

Given the high rates of burnout in healthcare professionals, there is increasing interest in developing burnout interventions. Of the studies published looking at interventions to address burnout in physicians,

most are physician-directed interventions centered on mindfulness or improving communication skills designed to mitigate the effects of stress and burnout (Busireddy et al., 2017). However, there has been minimal investigation into evaluating evidence-based interventions centered on promoting wellness rather than combating the effects of burnout.

Positive psychology is the scientific study of flourishing and includes the study of resilience, hope and optimism (Seligman, 2011). Evidence-based interventions have been developed to improve the aforementioned areas and have been demonstrated to positively impact wellbeing and reduce psychosocial distress (Seligman, 2011; Bolier et al., 2013). Recently, these principles have been applied to the development of a resilience and stress management training program for internal medicine faculty. In this small randomized control trial, a single 90-min resilience training session resulted in a durable improvement in resilience, stress, anxiety and quality of life (Sood et al.,

2011)

With the success of positive psychology-based interventions in improving the wellbeing of a wide variety of populations, the study was designed with the following aims: to determine current rates of burnout, depression and substance abuse in SGO members, to establish the baseline performance of SGO members on several positive psychology metrics, and to determine if increased hope, resilience, and flourishing are associated with decreased burnout.

2. Methods

2.1. Participants

All members of SGO who had a working email address listed in the SGO member directory were invited to participate in the study. Participation was elective and responses were anonymous. This study was approved by the Ohio State University Institutional Review Board.

2.2. Instrument development/data collection

An 82-question instrument was developed upon review of the literature. Data was collected via an anonymous electronic survey sent to SGO members via email between June and August 2017. Two reminder emails were sent following the initial invitation.

Burnout was assessed using the abbreviated Maslach Burnout Inventory (Maslach et al., 2001). As in other studies of burnout among health care professionals respondents were considered positive for burnout if they had a high score in either emotional exhaustion or depersonalization (Rath et al., 2015). Substance and alcohol abuse were measured by the DAST-10 and CAGE questionnaires (Ewing, 1984; Skinner, 1982). Depression was evaluated using the 2-item PRIME MD/ PHQ2 using a threshold score of 2 or greater (Rath et al., 2015). This threshold score has been demonstrated to have a sensitivity of 0.82 and specificity to 0.80 for the detection of any depressive disorder (Kroenke et al., 2001). Previously validated positive psychology metrics included the Adult Hope Scale (AHS), Brief Resilience Scale (BRS), Ryff's Scales of Psychological Wellbeing (SPWB) and the Flourishing Scale. The AHS is a 12-question instrument measuring agency (goal-directed energy) and pathway (planning to meet goals) with scores ranging from 8 to 64 (Snyder et al., 1991). The BRS is a 6-question Likert scale metric in which the score is averaged among the 6 questions (Smith et al., 2008). Ryff's SPWB consists of 18 questions reflecting six areas of psychological wellbeing including autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance (Ryff and Keyes, 1995). Scores can range from 18 to 108 with higher scores indicating increased subjective wellbeing. Finally, the Flourishing Scale consists of 8 statements with a 7-point Likert scale (Diener et al., 2009). The possible range of scores is 8 (lowest possible wellbeing) to 56 (higher possible wellbeing) with a high score describing a person with many psychological resources and strengths.

2.3. Statistical analysis

Demographic data and performance on various metrics were interpreted using descriptive statistics. Response rates are presented as frequencies and percentages while continuous variables are presented as means and standard deviations. Chi square was used to compare categorical data and to test associations between categorical variables and burnout. Wilcoxon rank sum method was used to test continuous variables across burnout. Correlations between continuous variables were determined using the Pearson correlation coefficient. The critical p value was set at < 0.05.

Table 1
Summary of participant demographic information.

	N	Percent
Age		
25–34	56	16.5
35–44	123	36.3
45–54	71	20.9
55–64	60	17.7
65–74	21	6.2
75 or older	8	2.4
Gender		
Female	198	58.6
Male	140	41.4
Marital status		
Married	283	83
Not Married	58	17
Religious identity		
Religious	231	69
Atheist, agnostic, or nothing in particular	104	31
Parent		
Parent	249	66.6
Not a parent	125	33.4

3. Results

3.1. Demographics

Of 1745 members invited to participate, 374 responded (21.4%). Demographic characteristics are summarized in Table 1. The most frequently reported age group of participants was 35 to 44 (36.3%). Approximately 59% of respondents were female, 83% were married/ partnered, and 66.6% reported having one or more children. A majority of respondents indicated a religious affiliation.

3.2. Burnout and indices of psychosocial distress

Overall, 24% of members were identified as meeting the criteria for burnout defined a scoring high on measures of either emotional exhaustion (17.9%) or depersonalization (15.6%) on the abbreviated MBI. Table 2 demonstrates the distribution of MBI subscores. Only 2.9% of respondents had high levels of emotional exhaustion and depersonalization and a low personal accomplishment score indicative of the most severe burnout. Almost 26% of respondents had low emotional exhaustion and depersonalization with high personal achievement indicating low concern for burnout.

Depression and substance abuse was prevalent among participants as 48.5% of participants screened positive for depression while 17% had a positive CAGE screen. Non-married respondents were more likely to have positive depression and alcohol abuse screens than non-married participants ($\chi^2 = 5.17$, p = .023; $\chi^2 = 5.42$; p = .020). Parents were less likely to have a positive depression screen compared to non-parents ($\chi^2 = 7.27$, p = .007). No other demographic variables were associated with a positive screen for depression or alcohol abuse. Approximately 12% of respondents had a positive substance abuse screen with non-parents and participants identifying as agnostic or atheist more likely to have a positive screen compared to participants who were parents or reported a religious affiliation ($\chi^2 = 15.27$, p < .001; $\chi^2 = 5.04$, p = .025). A positive substance abuse screen was also more common in the younger age groups ($\chi^2 = 15.59$, p < .008).

Table 2
Categorization of respondents' MBI-HSS subscale scores (by percentage).

MBI-HSS Subscale	Low	Moderate	High
Emotional exhaustion	57.5	24.6	17.9
Depersonalization	42.5	37.6	15.6
Personal accomplishment	15.8	25.8	58.4