ORIGINAL RESEARCH

A mixed methods analysis of predictors of a toxic culture among nurses

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ABSTRACT

Objective: The three-year Workforce Engagement for Compassionate Advocacy, Resiliency, and Empowerment (WE CARE) project targets well-being and resilience of post-pandemic nurses in a hospital environment as part of a 2020 grant-funded collaborative agreement with the Health Resources and Services Administration. This project aims to examine extrinsic factors associated with the perception of a toxic work environment among post-pandemic nursing personnel and further describe the toxicity present at work.

Methods: A mixed methods design was conducted at an academic medical center in the Southeastern United States to assess nursing well-being. An open-ended question to explore nurses' perceptions of toxic work environment was added to an annual email survey on well-being topics. All nursing personnel were solicited and 1,359 responded.

Results: A total of 366 individuals (27%) selected toxic work environment as a stressor and 50 respondents commented contributing 218 instances of themes. Lack of leadership was the most frequent theme identified (63/218, 28.9%) but others included, in descending order, relational aggression, negative attitudes, lack of job accountability, gossip, favoritism, lack of teamwork, attitudes/bullying, negative work environment, cliques, and lack of trust. The respondents who perceived a toxic culture also reported significantly lower perceived organizational support (M = 7.22) than who did not (M = 9.21) ($p < .001$, Cohen's D = 0.64); and other significantly worse outcomes including burnout (60.9% versus 33.5%, Cramer's V = 0.22), and moral distress (34.4% versus 16.8%, Cramer's V = 0.17).

Conclusions: Although this was a single site study and cannot be generalized, the findings of 27% of nursing personnel experiencing a toxic work environment is notable. Perceived lack of leadership was the most prominent theme. Those reporting a toxic culture also reported lower indicators of well-being. This project should provide an impetus for others to investigate this phenomenon among their respective workforces.

Key Words: Toxic culture, Nursing, Mixed methods

1. INTRODUCTION

Healthcare providers have faced enormous stressors over the last three years specific to the pandemic.[1–3] The healthcare environment during COVID-19 was distressing for many healthcare workers due to exponential stressors that included loss of work-life balance, emotional trauma, moral distress,

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and exhaustion from lack of respite associated with a limited workforce and heavy workloads.[4–6] Nurses may be more prone to moral distress and burnout because of their 24/7, frontline patient care delivery presence in the hospital setting and direct experience with patient deaths. One early pandemic study of hospital-based physicians, advanced practice providers, administrators, nurses, clinical support staff, and medical trainees found that nurses experienced the most distress and had the highest number of clinical and non-clinical stressors of all groups.[1] Unfortunately, the effects of the mass trauma of the COVID-19 pandemic on nurses have been slow to subside.[4, 7]

Yet, nurses are some of the most resilient healthcare providers.[1] Although resilience supposedly "enables nurses to positively adapt to workplace stressors, avoid psychological harm, and continue to provide safe, high-quality patient care,"[8](p.567) the intense amounts of stress nurses have experienced may overwhelm any level of measured resilience.[1, 4] Nevertheless, nurses are human beings and may be suffering silently, harboring significant emotional and behavioral health needs. Healthcare leaders must be proactive in assessing the well-being of all staff but given that nurses constitute the largest volume of providers in a hospital, nurses' well-being is paramount.

Well-being is the experience of positive perceptions of oneself and involves the presence of constructive conditions at work enabling workers to thrive and achieve their full potential.[9] Nurse well-being is impacted by a variety of intrinsic and extrinsic factors. Intrinsic factors include personal physical and emotional health, personal stressors and motivators, and other individual influences.[10] Extrinsic factors of nurse well-being include organizational structures and processes that impact the practice of nursing.[10] For example, the culture of the nursing unit where a nurse practices influences well-being. Positive, supportive work cultures have been associated with nurse well-being and low nurse turnover. On the contrary, toxicity in a work environment could be potentially detrimental to longevity of anyone in any setting or profession.[4] However, given the requirements for teamwork, delegation, and civility for the successful delivery of patient care, toxic work environments may be especially problematic for hospitals, nurses and patients.

1.1 Background

Historically, toxic workplaces were job sites where workers were exposed to harmful conditions, such as mines, labs, and chemical processing plants. Not until 1980 was the term 'toxic work environment' coined in a law review article citing exposure of pregnant women to toxins at work.[11, 12] Over time, toxic work environments were branded as hostile workplaces with "high levels of interpersonal conflict, lack of worker autonomy, and a high level of disorganization."[13](p.455) Toxic environments are different from difficult work environments where conditions are merely unpleasant or irritating.[11] To better understand these differences, researchers have suggested five qualities of a toxic culture. These cultures are: disrespectful, non-inclusive, unethical, cutthroat and abusive.[4] Thompson characterizes toxic cultures as having: cynicism and distrust; poor communication; corruption and narcissism; and high turnover.[15] The distrust leads to fear and silence on the part of staff, contributing to serious patient issues.[15] Poor communication remains a leading factor in medical errors according to The Joint Commission,[16] yet in a toxic environment, communication can degrade into hostility which may lead to further patient safety issues. Corruption and scandals in organizations are often blamed on toxic workplaces, where individuals are afraid to speak out.[17] Finally unsatisfactory work environments are frequently cited by nurses as their reasons for intending to or leaving an organization.[18]

Poor leadership has been identified as the factor explaining the largest variance in the perceptions of a toxic culture, followed by social norms and work design.[14] Productive and compassionate healthcare environments require positive, encouraging and supportive leaders to motivate and empower an engaged and qualified staff. The resulting synergy of supportive leadership and empowered staff creates a safe, high-quality organization where patients heal and nurses and other healthcare workers thrive.

In the absence of high culture and leadership characteristics, researchers Bhandarker and Rai[19] have described toxic leaders as placing their own interests above the needs of others while ignoring the work environment. Laguda[20] also describes the perceived lack of justice created and perceived by staff who work under the supervision of these poorly performing managers. When toxic leadership occurs, there is often a lack of staff commitment and high turnover,[4] all of which create an unsafe healthcare delivery system. In an environment where staffing shortages threaten the ability to deliver safe care to patients, it is crucial for organizations to evaluate the impact of toxic leadership and the perceived lack of organizational justice.

1.2 Purpose

In 2020, our organization was the recipient of a Health Resources and Services Administration (HRSA) collaborative agreement to examine and improve nurse resilience. The three-year Workforce Engagement for Compassionate Advocacy, Resiliency, and Empowerment (WE CARE) project targets well-being and resilience of nurses in a hospital envi-

ronment. The purpose of this paper is to examine extrinsic factors associated with the perception of a toxic work environment among nursing personnel and to further describe the toxicity present at work.

2. METHODS

2.1 Design

Our mixed methods design used both quantitative survey data from our semi-annual well-being survey and an additional qualitative field in which we asked respondents to further elaborate on what they perceived to be the toxic work environment they were experiencing.

2.2 Setting

This project took place at a 1207-bed academic medical center in the Southeastern United States, which serves as a major referral center and employer in the region.

2.3 Data collection

The voluntary, web-based survey was prepared using Qualtrics, administered in July 2023 and contained 80 questions with seven open-ended response items. It was administered through organizational email to all nursing personnel.

Survey respondents were asked whether a toxic work environment was one of their major work-related stressors in the past three months. For respondents selecting yes, a follow-up open-ended question asking them to describe the perceived toxicity of the work environment. The open-ended item on toxicity of the work environment was one of six fields used to obtain specific nurse feedback on intrinsic and extrinsic factors that influence nurse well-being.

2.4 Variables and instruments

Demographics (job role, age, gender, and race) and additional nine interested variables were included in this paper including well-being, perceived organizational support (POS), resilience, net promoter score (NPS), distress, post-traumatic stress disorder (PTSD), intent to leave, burnout, and moral distress.

Well-being index (WBI) is a validated tool that measures burnout, mental, physical, and distress.[21] The WBI scores range from -2 to 9, with lower scores indicate lower degree of distress, higher meaning in work, and higher satisfaction with work-life balance. The POS consisted of three items that was selected from original eight item POS Scale.[22] Each item scores from 1 (Strongly disagree) to 5 (Strongly agree). The sum score was calculated as overall POS ranging from three to 15. The 2-item Connor Davidson Resilience Scale (CD-RISC) is a short version of the original 25 items of the CD-RISC, with responding to 0 (Not true at all) to 4 (True nearly all of the time). The sum score of the CD-RISC-2 ranges from 0 to 8.

The NPS is a single item measuring how likely a participant is to recommend working at their institution to a friend or acquaintance and reported a number ranging from 0 to 10. Distress was dichotomized from WBI scores, a WBI ≥ 2 is considered "high distress."[21] The PTSD is measured with a 2-item adaptation of the 17 item PTSD Checklist-Civilian Version.[23] The sum of two items on a 5-Likert scale (score ranges 0-8) with ≥ 4 is considered "PTSD." A single item for intent to leave their position was answered on No, I do not have plans to leave my job; Yes, within 12-36 months; Yes, within 12 months; Yes, within 6 months[24] then was recategorized to be "No plan to leave" and "Yes plan to leave". Burnout was measured by an item from Mini-Z asking a participant to rate their burnout level.[25] If respondents rated at least one or more burnout symptoms, they were considered as "burnout". Lastly, a single item of moral distress from the Veterans Affairs (VA) All-Employee Survey was asked a participant "could not carry out what [they] believed to be the right thing."[26] Respondents were rated on scale of 1 (None) to 6 (Almost every workday). The responses at least a few times per month indicated as "moral distress".

2.5 Data analysis

Data were obtained in Excel™ format from the project team statistician. The participant entries were assigned a unique identifier by the project statistician. Two members of the project team, a PhD-prepared nurse improvement scientist (SP) and a PhD-prepared researcher in health services administration (KM) reviewed all comments obtained from the survey toxic work environment comment field and completed a thematic analysis.

The nurse reviewer (SP) examined each row of responses from the pulse survey toxicity question in the data file to extract all associated themes. For each respondent comment there could be one or more associated themes. The reviewer assigned comment themes and added a second layer of specificity to the overarching theme to provide additional context. A primary theme was assigned first based on order documented in the respondent comment. The reviewer created additional fields and collected additional themes when the respondent listed more than one theme per comment. The reviewer (SP) collected the thematic qualitative data in Excel™ and provided the file to the second reviewer (KM) who reviewed the assignment by the first reviewer (SP) and denoted her findings for comparison with the initial reviewer (SP) The two reviewers had an 83% agreement. The team statistician reviewed the themes of both reviewers and incorporated additional codes into the qualitative findings, thus

serving as a third reviewer.

Upon completion of the qualitative analysis, the file was provided to the team statistician for additional analysis. The team statistician was able to connect the qualitative data using the unique identifier to the quantitative survey data from the remaining sections of the pulse survey.

Using the unique identifier, the team statistician merged the qualitative data to the quantitative survey data for additional analysis. Demographics and variables of interest were tabulated for the overall sample (N = 1,359), those who indicated perception of a toxic culture (n = 366), and who did not indicate the presence of a toxic culture (n = 993). The comparison tests and effect size calculations were conducted on demographics and variables of interest to compare those who perceived a toxic culture and those who did not. Independent *t*-tests and Cohen's D were examined for the WBI, POS, CD-RISC, and NPS. Chi-squared tests and Cramer's V were examined for role, gender, race, distress, PTSD, intent to leave, mini-Z, and moral distress. Fisher's exact test was examined for age. Lastly, the frequency and percentages were calculated for qualitative themes.

2.6 Human subjects protections

Our organization's Institutional Review Board designated and approved this project as operational quality improvement.

3. Results

A total of 1,359 participants responded to the survey with 366 identifying toxic work environment as a stressor, a rate of 26.9%. Of those, 50 respondents provided comments related to the toxic work environment question, representing a 13.6% (50/366) comment rate. The reviewers found that respondents either entered a single theme or multiple themes per comment. Overall, there were 43 themes across all comments.

The majority of respondents who perceived toxic culture were female (71%) with ages between 20-29 years old (35.5%) (see Table 1).

Table 1. Participants' demographics: Frequency (Percentage)

	Total	Perceived Toxic Culture	
		Yes	No
Samples	1,359	366	993
Role			
Nurse Leader	182 (13.4%)	48 (13.1%)	134 (13.5%)
Nurse- Staff	744 (54.7%)	189 (51.6%)	555 (55.9%)
Nursing Professional	102 (7.5%)	32 (8.7%)	70 (7.0%)
Others*	287 (21.1%)	85 (23.2%)	202 (20.3%)
Missing	44 (3.2%)	12 (3.3%)	32 (3.2%)
Age			
≤ 19 years	11 (0.8%)	4 (1.1%)	7 (0.7%)
20-29 years	382 (28.1%)	130 (35.5%)	252 (25.4%)
30-39 years	298 (21.9%)	92 (25.1%)	206 (20.7%)
40-49 years	217 (16.0%)	52 (14.2%)	165 (16.6%)
50-59 years	159 (11.7%)	31 (8.5%)	128 (12.9%)
≥ 60 years	69 (5.1%)	16 (4.4%)	53 (5.3%)
Missing	223 (16.4%)	41 (11.2%)	182 (18.3%)
Gender			
Female	924 (68.0%)	260 (71.0%)	664 (66.9%)
Male	140 (10.3%)	35 (9.6%)	105 (10.6%)
Transgender or another gender	12 (0.9%)	6 (1.6%)	6 (0.6%)
Prefer not to answer	115 (8.5%)	40 (10.9%)	75 (7.6%)
Missing	168 (12.4%)	25 (6.8%)	143 (14.4%)
Race			
Black or African American	235 (17.3%)	64 (17.5%)	171 (17.2%)
White	705 (51.9%)	193 (52.7%)	512 (51.6%)
Others	249 (18.3%)	81 (22.1%)	168 (16.9%)
Missing	170 (12.5%)	28 (7.7%)	142 (14.3%)

*Others = Patient Care Tech/Certified Medical Assistant/Unit Secretary

Age was the only demographic data that was significantly different between those who perceived a toxic culture and who did not (p = .005, Cramer's V = 0.11). The respondents who perceived a toxic culture also reported significantly lower perceived organizational support (M = 7.22) than who did not (M = 9.21) (p < .001, Cohen's D = 0.64); however, there was no significant difference for resilience. Furthermore, the respondents who perceived a toxic culture also reported significantly worse outcomes including WBI (M = 3.2 versus 1.32, Cohen's D = 0.73), NPS (M = 5.70 versus 7.38, Cohen's D = 0.68), distress (70.5% versus 39.3%, Cramer's V = 0.24), PTSD (29.2% versus 15.9%, Cramer's V = 0.13), intent to leave (53.3% versus 30.5%, Cramer's V = 0.18), burnout (60.9% versus 33.5%, Cramer's V = 0.22), and moral distress (34.4% versus 16.8%, Cramer's V = 0.17) (see Table 2).

Table 2. Comparing interested factors by perceived toxic culture

	Perceived Toxic Culture				
	Overall (N = 1,359)	**Yes (n = 366)**	**No (n = 993)**	***p*-value***	**Effect Size**
	M (SD)			**Independent *t*-test**	**Cohens' D**
Well-being Index	1.86 (2.73)	3.20 (2.72)	1.32 (2.53)	< .0001	0.73
POS	8.64 (3.23)	7.22 (2.98)	9.21 (3.15)	< .0001	0.64
CD-RISC	6.64 (1.19)	6.55 (1.15)	6.68 (1.21)	.0728	0.11
Net Promoter Score	6.90 (2.57)	5.70 (2.61)	7.38 (2.39)	< .0001	0.68
	Frequency (%)			**Chi-squared**	**Cramer's V**
Distress (Yes)	648 (47.68%)	258 (70.49%)	390 (39.27%)	< .0001	0.68
PTSD (Yes)	265 (19.50%)	107 (29.23%)	158 (15.91%)	< .0001	0.31
Intent to leave (Yes)	498 (36.64%)	195 (53.28%)	303 (30.51%)	< .0001	0.28
Mini-Z (Yes)	556 (40.91%)	223 (60.93%)	333 (33.53%)	< .0001	0.44
Moral Distress (Yes)	293 (21.56%)	126 (34.43%)	167 (16.82%)	< .0001	0.25

Notes. POS = Perceived Organizational Support; CDRISC = Connor-Davidson Resilience Scale; PTSD = Post-traumatic Stress Disorder; **p*-values of comparison tests between perceived and did not perceive toxic culture groups.

Table 3. Themes from toxic work environment comment (n = 218)

Theme	Count	%
Lack of leadership	63	28.9
Relational aggression	44	20.2
Negative attitudes	36	16.5
Lack of job accountability	34	15.6
Gossip	24	11.0
Favoritism	23	10.6
Lack of Teamwork	23	10.6
Attitudes/bullying	17	7.8
Cliques	16	7.3
Negative work environment	16	7.3
Lack of Trust	11	5.0
Poor communication	9	4.1
Toxic culture	9	4.1
Fear of Retaliation	8	3.7
Burnout/emotional exhaustion	7	3.2
Lack of Professionalism	7	3.2
Lack of Respect	7	3.2
Patient attitude/patient violence	7	3.2
Inequitable assignments	6	2.8
Lack of gratitude	6	2.8
Lack of staff support	6	2.8

Respondents documented "lack of leadership" as the most frequent theme (n = 63/218, 28.9%) listed in the toxic column. Themes of "relational aggression" (n = 44/218, 20.2%), "negative attitudes" (n = 36/218, 16.5%), "lack of job accountability" (n = 34/218, 15.6%), and "gossip" (n = 24/218, 11.0%) were the top 5 toxic themes documented. Other themes with instances of 11-24 responses included: "favoritism", "lack of teamwork", "attitudes/bullying", "negative work environment", "cliques", and "lack of trust" (see Table 3).

4. Discussion

Toxic work environments form when negative work-related factors affect the well-being and productivity of individuals who work there. The elements that constitute those negative factors are subjective to each individual. However, individuals in a work environment or culture may define the negative factors of a toxic culture with common themes. In our study, common themes emerged to define nursing workplace toxicity including perceived lack of leadership, relational aggression, and negativity. Our findings generally support trends noted across industries, suggesting that leadership and social norms (such as negative attitudes or aggression) are top drivers of toxic cultures at work.[13] We also confirm that the work environment does affect the well-being of individuals

who perceive it to be toxic. Our quantitative results show that those who perceived a toxic culture reported worse outcomes on the following measures: WBI, POS, NPS, distress, PTSD, intent to leave, burnout, and moral distress. This denoted the significance of the work culture as a driving extrinsic factor for nurse well-being. While the aforementioned results were negatively impacted, nurse resilience was not significantly different, denoting the ability of nurses to recover and function in chaotic and challenging environments.

Social norms and leadership are inextricably linked. While individual leadership behaviors may directly cause a toxic work environment, the leader also holds responsibility for establishing, upholding, and modeling norms of behavior on the unit particularly expectations for how colleagues are expected to treat each other. Thus, a leader may indirectly promote a toxic work environment. These findings taken together illustrate the importance of leader selection and development in nursing. However, nurse executives face many challenges in ensuring good leadership for their units and divisions. Persistent nurse shortages and high turnover in the pandemic and endemic periods have impacted nurse leaders' ability to lead well in several ways.[27–29]

First, with rapid turnover during the pandemic, the remaining nurses were often promoted to management and leadership positions despite having little experience or formal training for the role.[27] Second, finding time to dedicate to leadership development and training is difficult. Many nurses in leadership positions are also being asked to step in and fill gaps in bedside nursing, in addition to their administrative duties.[28] Not only does this complicate seeking training and development, but it also leaves less time for the leadership task of culture building and establishing social norms. Additionally, the presence of travel nurses and contract staff means that frequent culture resets and new ways of quickly establishing norms with a transient workforce are needed.[29]

Organizations seeking to address toxic cultures within their nursing units must prioritize the selection and development of their nursing leaders, and ensure they have time and capacity to be adequately developed and to do the important work of leadership. Options may include delegating non-nursing tasks to other members of the clinical and administrative team, such as budgeting and scheduling to allow the nurse leader to focus on culture building and leading effectively.[9] Quantifying recruitment and orientation costs due to the loss of nurses experiencing a toxic culture may promote investment in nurse leadership training programs, and eventually to a more supportive leadership development culture. A positive workplace culture for all health care workers should be a metric for organizational executives.

Leadership is a substantive factor for creating a positive culture for the nurses in this study. The lack of leadership sensed by the respondents in their respective environments was deemed a toxic factor for the nurses. Prioritizing selection and development of nurse leaders is fundamental to addressing toxic culture and improving organizational outcomes.

Limitations

This project occurred at a single health care organization. The findings discussed are specific to the individuals in this particular academic medical center and therefore may not be representative of other organizations. Lastly, the cross-sectional nature of this study does not allow us to explore causality.

5. Conclusions

Toxicity in the work environment is a characteristic that has been associated with almost every profession, with nursing being no exception. In this project we used a mixed methods design to investigate what toxicity of the work environment meant to nursing personnel and what outcomes those personnel were experiencing relative to those who did not experience toxicity on their environment. Our findings identified perceived lack of leadership as the most prominent theme and underscore the importance of positive leadership as a key element of a healthy and productive work culture. Further, this project identified that those who identified toxicity in their respective work environments also experienced worse well-being outcomes than those who did not experience toxicity in their workplaces. People are the most valuable resource in healthcare settings and leaders must make every effort to create positive, safe and satisfying work environments.

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Authors contributions

Drs. Polancich and Montgomery were responsible for study design and revising. Drs. Polancich, Meese, and Montgomery were responsible for qualitative data analysis. Drs. Polancich, Meese, and Montgomery drafted the manuscript. Drs. Patrician, Ruffin, McGuiness, Stewart, Dick, and Layton, along with Ms. Beam, Ms. Blackburn, Woodward, and Mr. Travis revised the manuscript. All authors read and approved the final manuscript. All authors contributed equally to the study based on expertise and ability.

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All authors declare the aforementioned HRSA funding source. There are no other known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

INFORMED CONSENT

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DATA SHARING STATEMENT

No additional data are available.

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