Identification of Leadership Behaviors that Impact General Surgery Junior Residents' Well-being: A Needs Assessment in a Single Academic Center

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OBJECTIVE: Emerging literature has started to link leadership with the well-being of team members; however, this link during residency training has not been studied. The objective of this study was to perform a needs assessment to identify leadership behaviors among senior residents and evaluate the impact that these behaviors have on junior residents' well-being.

DESIGN: A semi-structured question script was developed and ~60 minute virtual focus groups were held during protected educational time, until data saturation was reached. Data analysis was performed in the tradition of grounded theory.

SETTING: This study was performed at Oregon Health & Science University, one of the largest general surgery programs.

PARTICIPANTS: Participants enrolled in the general surgery residency program from July 2020 to February 2021 were included. 35 general surgery residents participated in the focus groups.

RESULTS: Two major themes resulted from the data analysis: (1) Effective leadership behaviors and their positive consequences, and (2) Ineffective leadership behaviors and their negative consequences. Effective and ineffective leadership were characterized by the presence or absence of 6 main behaviors: supportive and empowering, team building, management skills, emotional intelligence, effective communication, and teaching. Effective and ineffective leadership positively and negatively impacted residents' well-being, individual growth, and psychological safety.

CONCLUSIONS: The results from this study identified leadership behaviors from senior residents and demonstrated that those behaviors have a significant short-term and long-term positive and negative impact on junior residents' well-being. These results fill a gap in the literature, and can serve as a guide for surgical educators to develop evidence-based leadership curricula. (J Surg Ed 79:86–93. © 2021 Association of Program Directors in Surgery. Published by Elsevier Inc. All rights reserved.)

KEY WORDS: leadership, well-being, wellness, behaviors, needs assessment, curricula

COMPETENCIES: Medical Knowledge, Professionalism, Interpersonal and Communication Skills

INTRODUCTION

Over the last few years increasing awareness of the overwhelming burnout rates among medical professionals, including surgeons, has become a priority among healthcare institutions due to the personal (e.g., depression, suicidal ideation, suicide) and institutional (e.g., medical errors, poor patient outcomes, unprofessional behavior) adverse consequences.[1] In surgeons, reported rates of burnout have ranged from 28% to 75%, and in surgery residents', rates have been reported as high as 69%.[1,2] Thus, addressing well-being has become an essential requirement for training programs by the Accreditation

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Council for Graduate Medical Education (ACGME).[3] After the ACGME program requirements were instituted, an increasing number of efforts to address this issue have emerged.[4] A significant amount of well-being curricula to address burnout have been implemented; however, the ideal intervention(s) are yet to be elucidated.[2,5] Most of these well-being curricula are focused on individual-level skills but not on ways residents can impact each other's well-being. Even though the role and power that organizational leadership has on individuals' well-being seems obvious; it was not until a few years ago that the evidence of the relationship between leadership and its impact on faculty well-being started to appear in the medical education literature.[6] Moreover, some of the current well-being programs for residents have included leadership components.[2] To our knowledge, the impact that leadership has on residents' well-being has not been elucidated and remains as a gap in the literature. Consistent with best educational practice, we elected to perform a needs assessment before creating a leadership development program.[7] Our needs assessment included an evaluation of the impact of leadership activities on the junior residents. Additionally, we sought to identify those resident leadership behaviors that should be the focus of the leadership development program and evaluate the impact that these behaviors have on junior residents' well-being. This study will help to clarify the relationship of leadership and well-being in general surgery residents and may help as a base to develop an evidence-based leadership curriculum suited for general surgery trainees.

METHODS

This study was performed at a single academic institution and one of the largest residency programs (74 general surgery residents) located in the Northwestern region of the United States. The core research team was composed of 2 surgical faculty members with expertise on surgical education, a social scientist with expertise on education and qualitative research, and a surgical research fellow. Participants met inclusion criteria if they were enrolled in the general surgery residency program at any postgraduate year (PGY) level, including research year (Research). The study was performed from July 2020 to February 2021.

A semi-structured question script was developed by the core research team based on the objective of the study. Research participants were asked the following questions: (1) "When you think of a senior resident who has fantastic leadership skills, what does that look like?" (2) "Going back to those moments with a fantastic senior resident leader, do you feel that those skills impacted your well-being and how?" (3) "When you think of a senior resident that has struggled as a leader, what does that look like?" (4) "Do you feel that the lack of leadership skills impacted your well-being and how?"

The semi-structured script served as a guide for the focus groups. Six focus groups were then conducted by 2 members of the core research team. One serving as the moderator and the other taking field notes. The focus groups were divided by PGY level to create an environment where participants would feel comfortable sharing personal information and to be able to target the needs based on PGY level. The focus groups were scheduled by the residency coordinator during protected time on the educational day for the general surgery residents, and each focus group lasted approximately 60 minutes. At the time of the study no in-person meetings were allowed, so all focus groups were performed virtually using the institution's web conferencing software. Participation was optional and no financial compensation was provided. Institutional Review Board approval was obtained prior to the initiation of the study and informed consent was obtained from all study participants. Focus group interviews were video and audio recorded, the data was anonymized, and transcribed for analysis. Data analysis was performed in the tradition of grounded theory.[8] The number of focus groups conducted was determined through ongoing preliminary analysis until data saturation was reached. Transcripts were read iteratively by individual members of the core research team and selective coding was conducted. The entire transcript was coded using Dedoose Version 8.3.41.[9] The analysis was performed and refined through constant comparison of the data by the core research team members individually, as well as scheduling analytical weekly meetings until consensus of the codes and themes was achieved.

RESULTS

From a total of 74 general surgery residents, 35 (47%) residents participated in the focus groups. Of the total, 22 (63%) were women and 13 (37%) were men. From the total number of participants, 10 residents were PGY-1, 6 residents were PGY-2, 5 residents were PGY 3, 5 residents were PGY4, 5 residents were research residents, and 4 residents were chiefs. Participants represented the overall residency program. Two major themes resulted from the data analysis: (1) Effective leadership behaviors and their consequences, and (2) Ineffective leadership behaviors and their consequences.

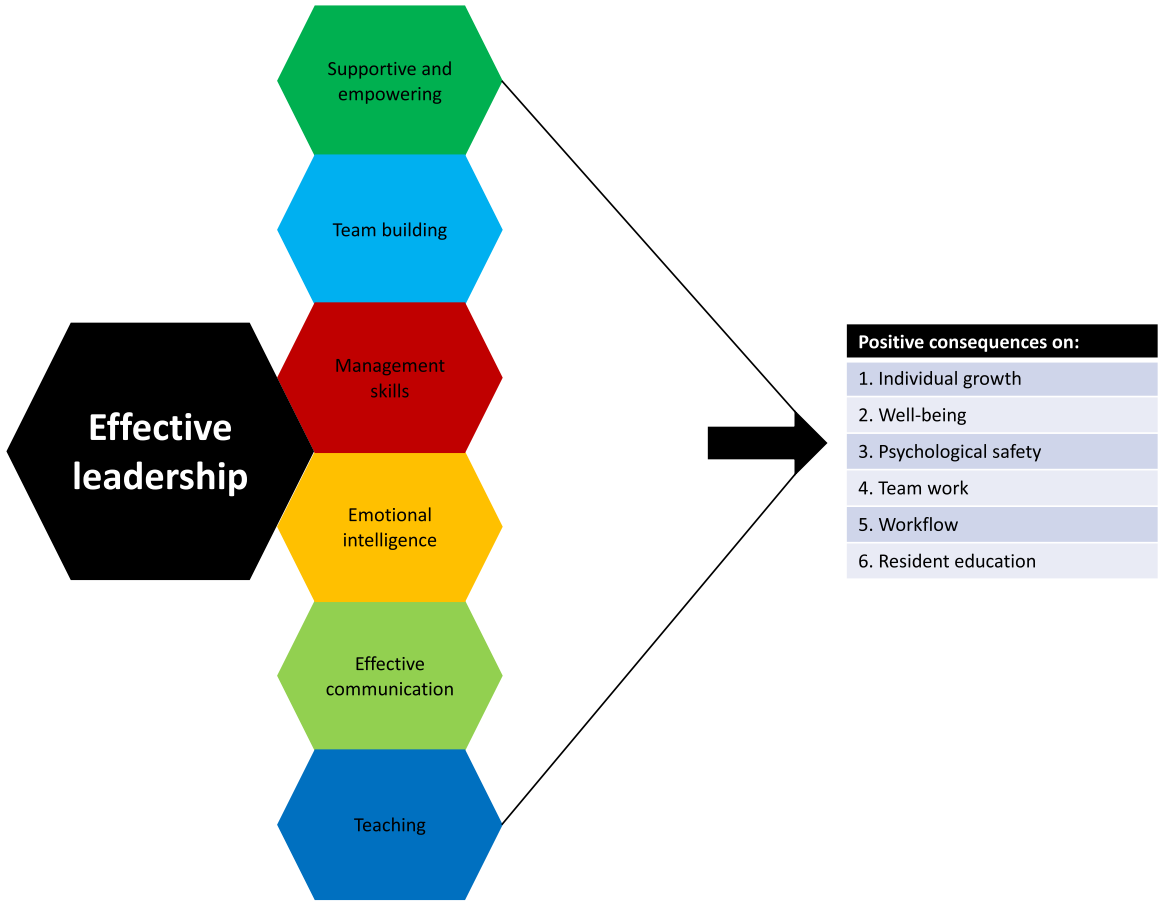

FIGURE 1. Effective leadership behaviors and its positive consequences on team members.

Effective Leadership Behaviors

The effective leadership components corresponded to 6 behaviors that characterized an "ideal general surgery resident leader" (Fig. 1). Ideal general surgery resident leaders emphasize the following behaviors during their daily work:

Being supportive and empowering was an overarching behavior seen throughout the stories of what makes an ideal leader. The participants described this support and empowerment as being approachable, always being willing to help even when a task was "below" the leader, and importantly, being acutely aware of and committed to their team members' growth.

"Residents who help you to improve what you are working on and support you in getting to the next level (PGY 4)"

"...allowing the people that are working with you to ask questions and kind of understand your thought process, I think that goes a long way (PGY 5)"

Ideal leaders focused energy on team building by creating a common goal, promoting psychological safety, showing camaraderie, and caring for team members.

"Setting an environment so everyone feels like being on the team is like having a second home (Research)"

Ideal leaders showed proficient management skills by setting appropriate expectations, creating clear plans, effectively delegating tasks, and providing feedback.

"Great leaders have a sense of balance. Balance between being very laser-focused on the clinical care of the patient and able to really set out clear expectations of those cares and have a clear picture of what they want to achieve, and being clear and concise and focused on that (PGY 5)"

"I think I've been feeling appreciated or that my work was appreciated when feedback seems unsolicited (PGY 1)"

Ideal leaders showed high levels of emotional intelligence by being humane, empathetic, mindful, kind, self-aware, and non-judgmental.

"Just being kind and generous it really does a lot, it really does (Research)"

"I think our job is hard and I think sometimes we lose track of the fact that we're all humans and just treat each other the way you want to be treated (PGY 5)"

Ideal leaders had clear understanding of the importance of effective communication both delivering a clear message, but also listening to junior residents' plans.

"Listening, but not just listening to check the box but actively listening, engaging, even asking clarifying questions about things so you can get to the crux of the problem or concern is super crucial and critical (PGY 3)"

"People who are equal and fair and good communicators so you know exactly what everyone is doing so you know what the thoughts and expectations are (PGY 5)"

Ideal leaders acknowledge that an important aspect as a resident leader is teaching. Therefore, proactively engaging in teaching junior levels is a priority.

"Being dedicated to teaching and using every possible moment as a teaching moment because that can really help with the overall team, both their learning but also their personal development (PGY 5)"

Well-being Consequences of Effective Leadership

The participants provided a clear linkage between what they endorsed as effective leadership and their aspects of their own well-being including: individual growth, general well-being, and psychological safety (Fig. 2).

The most frequently stated benefit of having good leaders in a surgery residency was that these leaders promote individual growth. When their leaders have a mindset focused on supervisees' growth, the junior residents reported an increase in confidence and feeling like they are set up for success. This also inspired them to increase their involvement and participation as part of the surgical team.

"I felt set up for success, which just makes the rotation more enjoyable and a good learning experience (PGY 1)"

"someone who tells you exactly what to expect of you from day one so that you would kind of aim for that, and even higher (PGY 1)"

Effective leadership was directly linked with resident's well-being and helped residents to prioritize their own well-being, enjoy rotations, feel valued and calm, and reduced stress and anxiety.

"As a leader on the team your personality and your positivity will have probably the biggest major effect on how the team is doing"

"You're less stressed at work which translates to less stress out of work and overall makes you feel better (PGY 3)"

"I think there's a cool downstream effect that happens when you see, somebody, that's a senior to you modeling well-being and kind of prioritizing that (PGY 1)"

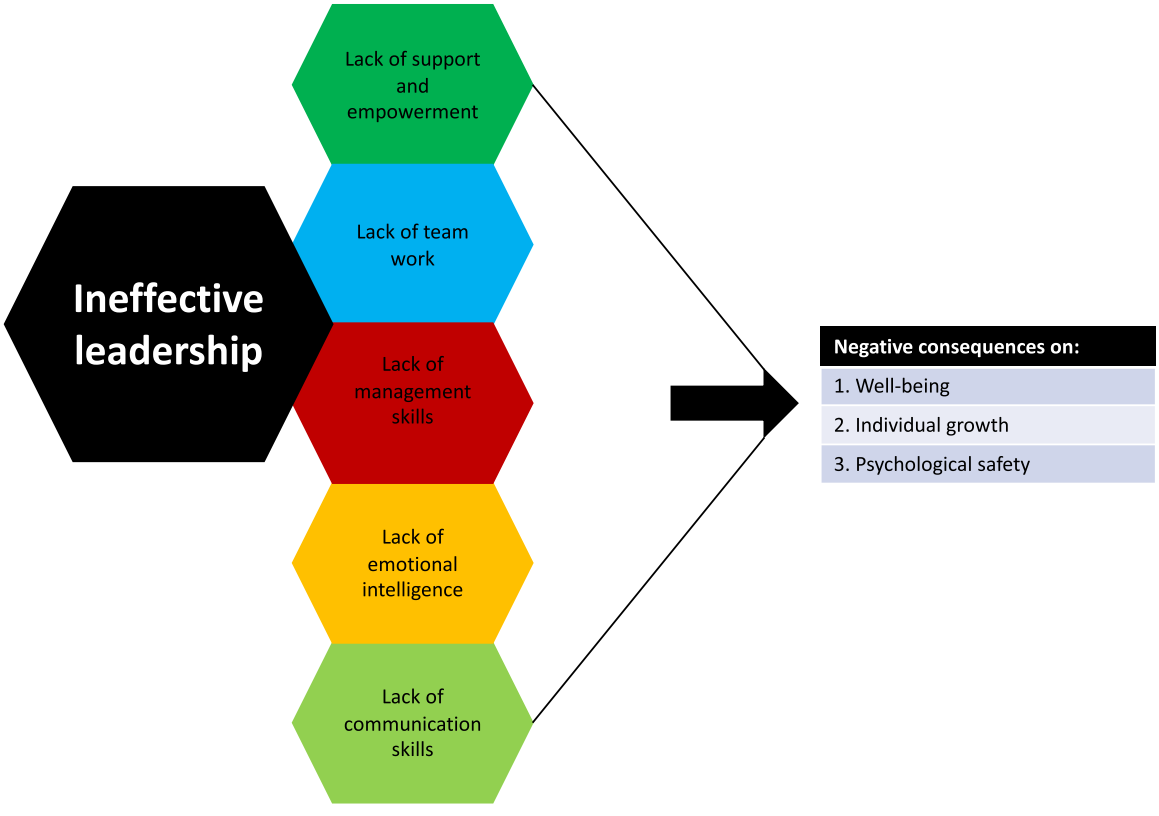

FIGURE 2. Ineffective leadership behaviors and its negative consequences on team members.

"it can take some of the stress and anxiety away (PGY 2)"

As expected, effective leadership positively impacted the psychological safety of the team.

"When we are rounding and they ask me for my plan and ask me a question, and they say pretend I'm not here, what would you decide to do? Really encouraging me to think on my own and, like, creating a safe space to be wrong if I'm wrong. But also, like, when I give a plan that they're like, okay, that's reasonable. Let's do that. It's also really validating and helps me build my own confidence (PGY 1)"

Lastly, ideal resident leaders also effectively impacted team work, workflow, resident education, and perceived patient outcomes. All of these consequences were also linked to the resident's well-being.

"When they are good leaders I felt like part of the team, and I think that's a huge part of my well-being feeling like I'm contributing and valued (PGY 1)"

"it seems so silly, but the senior has like everything going on and they're still thinking about my well-being, that is kind of very impactful. I think incorporating more and more of these things where, you're checking in, on your interns and things that are beyond just work, things that are for their own personal well-being shows that you don't just care about the work, but you care about the team, and I think that kind of helps a little bit with the team building component (PGY 2)"

"The leaders setting the tone, encouraging us, being available, allowed me to feel more comfortable in my role, knowing I had that support and knowing, and I had the established culture of the team, set forth by the leader, I think that helped us have better outcomes for the patient (PGY 3)"

Ineffective Leadership Behaviors

Just as there are effective leadership behaviors among residents, the participants also reported leadership behaviors that were either ineffective or directly harmful. Ineffective leadership corresponded to 5 behaviors that characterized a resident that "struggled as a leader" (Fig. 2). The characteristics of these residents were the opposite of what was considered effective. Ineffective leaders lack or do not routinely emphasize the following behaviors during their daily work:

Ineffective leaders do not support and empower their team members, but rather are unapproachable, not willing to help, do not prioritize team member's growth, and do not advocate for junior levels.

"The worse type of leader (specifically chief) doesn't instill a level of support to their rest of their team, not only junior residents, but to the nursing staff, attendings and to patients (PGY 4)"

"Not giving you the opportunity to speak up when rounding, or in the OR not letting you do basic operations (PGY 5)"

"Chiefs who have been terrifying to approach with questions or issues or even just a question if you're unclear about the plan on your routine care of a patient (Research)"

Ineffective leaders lack communication skills and do not focus their energy on creating a team work environment.

"Once there is no good communication in a team, I think that breaks down the whole efficiency of the team (PGY 1)"

"I think somebody who gets the team involved, who is engaging people not just kind of isolating and doesn't really interact with the team (PGY 2)"

Ineffective leaders lack management skills characterized by poor feedback skills, struggling with time management, being unorganized, micromanaging, and having unrealistic expectation of team members.

"In situations where there is a lot of hesitancy in terms of how the senior is leading the team and then I feel like I am just constantly on edge on those days where it's like, I have no idea what you want me to do (PGY 1)"

"Organizational skills are not the best, and that trickles down to the whole team (PGY 1)"

Ineffective leaders lack emotional intelligence which manifests in them being unaware of the team environment, arrogant, unempathetic, and constantly projecting a negative attitude.

"'I am a chief now and that task is below me' - that is very hard to work with (Research)" "The ones that forget what the prior level of training was like, right away. There are some people who just like, complete amnesia, like, not knowing any idea of what it's like to be an intern and so on - can't really empathize or help solve problems (Research)"

Well-Being Consequences of Ineffective Leadership

The main consequence of ineffective leaders was an overwhelming amount of negative emotions, followed by a lack of psychological safety, poor team dynamics, and broken workflow (Fig. 2).

Ineffective leaders had a significant impact on the residents' emotions, perception of rotations, and their well-being in general. Their ineffective leadership skills caused extra exhaustion, constant fear and feeling "on edge," increased anxiety and stress, feeling miserable, isolated, tortured, discouraged, depersonalized, not important, depressed, lost, disengaged, resentful, and burnt out. These feelings were not short lived, but rather lasted throughout residency, described as "years of PTSD syndrome" by a chief resident. This sentiment is echoed

by another participant "I still carry these memories and I was an intern so it was 5 years ago-ish (PGY 5)" Some additional quotes which illustrate the impact of ineffective leadership on residents' well-being follow.

"I will say the single greatest determinant of resident well-being is the leadership ability of your chief at any given time (PGY 5)"

"the intern was literally in tears almost every day (PGY 4)"

"absolutely tortured (PGY 4)"

"triple down of stress (PGY 3)"

"constant state of adrenaline and fear (PGY 1)"

"I actually took vacation on this rotation (supervised by a particularly unsupportive senior resident) and it was still the longest 3 weeks I've ever had (PGY 5)"

Ineffective leaders have a negative effect on the psychological safety of the team by creating a hostile and unsafe environment, promoting mistrust and an unwillingness to speak up

"Leads to a toxic work environment (PGY 3)"

"You don't trust their clinical judgement anymore (PGY 5)"

"I'm scared to say something, I'm scared to ask questions. I'm scared they're going to ask me a question I'm not going to know (PGY 1)"

"you might feel like whatever you're gonna say might be taken wrongly, or maybe wrong and then you might be intimidated more if you bring it out. So, in the end, you just kind of keep quiet about it (PGY 1)"

Ineffective leaders disrupt team work by creating conflict and a broken communication. Importantly, the workflow. also gets compromised through ineffective task delegation and inefficiency, that ends up affecting productivity.

"Being in chaos and a number of people trying to complete the same task, and you see just a redundancy inefficiency (PGY 1)"

"I think generally it collapses the team group dynamic (PGY 2)"

Mixed Leadership Behaviors

Some leadership behaviors (authoritarian, hierarchical, or task-focused) were either effective in some ways but ineffective in other ways, or were perceived as effective by some residents and ineffective by others. These behaviors were classified as mixed leadership behaviors.

"Authoritarian leadership style - which is in some ways extremely effective in making things happen but not making you feeling warm and fuzzy. But I would say that that person is an effective leader(Research)."

Findings by PGY Level

When assessing the results by PGY level some characteristics were identified. Interns and juniors focused on the support they need (more feedback, more check-ins, more guidance). Senior residents were more likely to bring up issues of mistrust and not feeling like their teams have their back, dealing with what feels like constant criticism, and the "lasting PTSD" of residency.

DISCUSSION

Traditionally, leaders in healthcare were characterized by clinical excellence, expertise, academic achievements or willingness to lead.[10] The characteristics of a leader have changed to a more team-focused, holistic, and horizontal approach that in fact focuses on the group's goal and accomplishments, rather than a single member of the team.[11] Moreover, the implications of leadership styles in the surgical field have demonstrated that transformational leaders (those who are inspirational, create a collective mission, and consider individual needs/abilities) in comparison to transactional leaders (focused on tasks; performance and rewards; and mistakes and failures) improve team behavior, and have the potential to improve efficiency and patient safety on the operating room.[11] The application of leadership skills happens through interaction with team members. Zhang LM. et al.[12] reported that resident to resident interactions such as camaraderie or mistreatment positively and negatively contribute to surgery residents' well-being. Consistent with the findings by Zhang LM. et al.[12] general surgery residents in this study defined an "ideal or effective leader" as one that has a team-focused approach, supports and empowers team members, and creates a safe environment. Notably, the most stated consequence that effective leadership yielded was team members individual growth, followed by team member's well-being, and psychological safety. Moreover, both consequences (individual growth and psychological safety) have been previously linked to individual well-being, but also importantly to patient safety.[13-15] In contrast, the most stated consequence of ineffective leadership was by far, a negative impact on individual well-being. Even though, ineffective leadership also negatively impacted psychological safety, team dynamics, and workflow, the overwhelming prevalence of negative emotions that residents experienced and then shared in our focus group dominated the conversation, supporting the link between leadership and well-being.

A few findings were particularly interesting. First, different PGY levels had different needs from their leaders, as shown in the findings by PGY level in the results section. Second, senior residents also reported mimicking or avoiding prior senior resident's leadership or lack of leadership skills, which demonstrated how even through negative experiences some residents reflect on and avoid repeating detrimental behaviors. Third, the identification of mixed leadership behaviors emphasizes the importance of applying different leadership styles in particular situations, for example an emergency in the operating room or in the trauma bay, where a task-focused and directive leadership style is required.[16] Lastly, both effective and ineffective leaders had a positive and negative impact on residents' well-being, individual growth, and psychological safety. However, when discussing effective leadership, participants did not only mention the impact on those 3 dimensions, but also the positive impact it had on team work, workflow, and resident education. This difference suggests that the lack of ineffective leadership might lead to a neutral state, but effective leadership behaviors are still required to have the desired impact on all the 6 consequences of effective leadership.

The link between leadership and well-being established in this study emphasizes the urgent need for leadership curricula in general surgery residency. The behaviors identified in this study which define an effective leader from a resident's perspective can serve as a tool to develop evidence-based leadership content for curricula tailored for residents with the potential of impacting a team's well-being during residency training. In addition to the understandings we gained about which leadership skills are most beneficial for residents, this study also provides the motivation to start developing authentic curriculum which supports good or effective leaders. The emotion of the residents describing their experience with poor leadership in the part of senior residents was a compelling finding from our fieldnotes. It is not a surprise that general surgery training is challenging, but within that reality our data show that we can create learning environments for residents that are less traumatic and more supportive. Shanafelt T. et al.[17] have recently proposed a model and framework of wellness-centered leadership to cultivate leadership behaviors through 3 main elements: care about people always, cultivate individual and team relationships, and inspire change. Frameworks as the one proposed by Shanafelt T. et al.[17] as well as the behaviors identified during this needs assessment focused on trainees, can help framing leadership curricula that may help to develop resident leaders that have a significant impact on their team members well-being. This study focuses on the characteristics of effective and ineffective leaders and their consequences; however, it does not address how are these behaviors acquired and most importantly, what are the barriers to become an effective leader. Future studies can address these aspects that can help surgical educators to address identified barriers in order to develop effective curricula.

This study has several limitations. Even though the study was performed at one of the biggest general surgery residency programs in the United States, the lack of a multicenter study prevents extrapolation of the results to all residency training programs. As mentioned above, it does not address barriers to effective leadership, which will be essential to develop effective leadership curricula. Almost half of the residency participated in the focus groups and data saturation was reached. However, by not having every single general surgery resident involved in the focus groups, some residents' perspectives could have been missed. Lastly, due to the qualitative nature of the study, it is subject to the personal biases and idiosyncrasies of the researchers.[18] For that reason, an expert on qualitative research was part of the research team, and multiple meetings were held constantly to come to a consensus of the data analysis, results, and conclusions.

CONCLUSION

Leadership is one of the core competencies required by the ACGME in all general surgery programs. In recent years, emerging literature has started to link leadership with the well-being of team members. The results from this study identified leadership behaviors from senior residents and demonstrate that those behaviors have a significant short-term and long-term impact on junior residents' well-being. These results fill a gap in the literature, and can serve as a guide for surgical educators to develop evidence-based leadership curricula.

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