Published in final edited form as:

Am J Surg. 2017 February ; 213(2): 253–259. doi:10.1016/j.amjsurg.2016.09.042.

It Depends on Your Perspective: Resident Satisfaction with Operative Experience

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Abstract

Introduction: Resident satisfaction is a key performance metric for surgery programs; we studied factors influencing resident satisfaction in operative cases, and the concordance of faculty and resident perceptions on these factors.

Methods: Resident and faculty were separately queried on satisfaction immediately following operative cases. Statistical significance of the associations between resident and faculty satisfaction and case-related factors were tested by Chi-square or Fisher's exact test.

Results: Residents and faculty were very satisfied in 56/87 (64%) and 36/87 (41%) of cases respectively. Resident satisfaction was associated with their perceived role as surgeon ($p<0.04$), performing $>50\%$ of the case ($p<0.01$), autonomy ($p<0.03$), and PGY year 4–5 ($p<0.02$). Faculty taking over the case was associated with both resident and faculty dissatisfaction. Faculty satisfaction was associated with resident preparation ($p<0.01$), faculty perception of resident autonomy ($p<0.01$), and faculty familiarity with resident's skills ($p<0.01$).

Conclusions: Resident and faculty satisfaction are associated with the resident's competent performance of the case, suggesting interventions to optimize resident preparation for a case or faculty's ability to facilitate resident autonomy will improve satisfaction with OR experience.

INTRODUCTION

There is little dispute that the context of surgical education has changed significantly over the past 20 years. This and other factors beyond the training environment have contributed to concerns over a shortage of general surgeons for the future.^{1, 2} It is estimated that between 2009 and 2028 the overall supply of general surgeons will decrease by 18%.² This anticipated shortage and the currently relatively high attrition rate in general surgery residency programs is concerning. General surgery has a higher resident attrition rate than

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Authors have no conflicts of interest to disclose.

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sections.

both other surgical and non-surgical specialties^{3–6} with an estimated that annual attrition rate of 2%,⁷ and a cumulative attrition rate of 17–20% over the course of training;^{7–10} with more recent data estimating that 1 in 5 categorical general surgery residents will not complete their training.¹⁰ In light of this, surgical programs are working towards not only attracting surgical residents, but retaining them as well. One approach to help resolve the attrition problem was revealed in the 2008–2009 ACGME NEARS survey, which reported that one that one factor predictive of resident attrition was dissatisfaction with operative experience.¹¹

Not only does increased resident satisfaction potentially improve retention rates for general surgery programs, but it may also improve performance and productivity. Despite extensive study in areas outside of medicine,^{12, 13} there remains some controversy as to whether productivity produces satisfaction or vice versa; however, there is adequate support for the idea that in order for learning to be sustained, it must happen within the appropriate supportive learning environment.¹⁴ In correlating the optimal learning environment to accreditation length, residents in programs with longer cycle lengths for accreditation comment more frequently about procedures they performed ($p<0.04$) and more frequently made comments such as “lots of hands-on experience in the OR” compared to residents in programs with shorter cycle lengths.¹⁵ Moreover, the importance of resident satisfaction is emphasized as a key performance metric with programs facing scrutiny and even citation when faced with poor results on the annual ACGME resident survey.

Despite the evidence that resident operative satisfaction is important to retaining and training surgery residents, there is little research evaluating the factors that contribute to their satisfaction. Our study aimed to evaluate resident satisfaction with operative involvement and to quantitatively identify what factors are associated with increased satisfaction for both faculty and residents. We hypothesized that residents who were given more autonomy would have greater levels of satisfaction, and that satisfaction would increase with post-graduate year (PGY) level. Our goal is that by identifying specific factors associated with satisfaction, we can improve resident operative experience and provide an environment that is productive and sustainable.

METHODS

The Biomedical Institutional Review Board at the University of Texas Medical Branch-Galveston approved this study. Participants were recruited from the faculty and residents in the Department of Surgery at the University of Texas Medical Branch and asked to complete surveys after each operative case. Participation in the surveys were voluntary and without compensation. All faculty members within the Department of Surgery were eligible for participation in the project including subspecialties such as pediatric surgery, cardiothoracic surgery, and vascular surgery. All residents on the general surgery services were eligible, including non-categorical interns.

Survey Design

The survey instrument was developed by a team of residents and faculty physicians in conjunction with a PhD educator, and based on literature reviews,^{16–35} and informal focus

groups. The survey was designed to evaluate resident and faculty satisfaction with operative experience, as well as evaluate the potential relationships between resident satisfaction, participation, and factors such as faculty surgeon experience and resident skill level.^{28, 31, 33} An initial 18-question survey was piloted with a small group of residents and faculty to identify problems with question wording or interpretation of questions and answer choices. Subsequent revisions also underwent pilot testing. The final survey consisted of 15 questions for faculty and 16 questions for residents with a combination of “yes/no” questions, as well as rating scales and short answer.

Demographic data obtained from faculty surgeons included number of years post-training, the case performed, and the approximate number of times they had performed the case previously since completing their training. Residents were asked similar demographic information including PGY level, the case performed, and number of times they had performed this case previously. In addition, faculty and residents were asked questions about their perception of the residents level of preparation, and faculty were asked to rate their comfort with the resident’s operative skill level. Residents and faculty were also asked in a “yes/no” format whether or not they perceived that the resident acted autonomously, if they felt the faculty took over the case, and if there was a perceived time constraint on the case. Finally, residents and faculty were asked what percentage of the case they think the resident performed (defined as <25%, 25–50%, 50–75%, and >75%), and what the residents’ role was in the case (defined as “first assistant”, “surgeon junior”, “surgeon chief”, or “teaching assistant” in keeping with the ACGME case log format). Upon completion of data collection, a list of all cases performed was created and distributed to two senior faculty members in both vascular and general surgery for categorization as basic versus complex with 100% agreement among reviewers.

Outcomes

The primary outcome was resident satisfaction based on operative experience as evaluated by their response on a five point Likert-type scale from very unsatisfied to very satisfied. The secondary outcome was faculty satisfaction with resident performance. Satisfaction with operative participation was evaluated in relationship to the type of case performed (laparoscopic vs. open vs. endovascular), case complexity (basic vs. complex), perceptions of autonomy, preparation, experience, level of supervision, and role and percent of the case performed.

Survey Administration

Study personnel administered parallel versions of the survey to residents and faculty individually, immediately following every eligible case during a three-week period from July 21 to August 5, 2015. Cases were considered eligible if the faculty performing the case had volunteered to participate in the survey, and if there was at least one resident participating in the surgery. Surveys were de-identified, and coded with matching numeric identifiers to facilitate evaluation of data by operative case.

Analysis

Data were compiled and compared for intra-case agreement between residents and faculty concerning their satisfaction in the case as well as perceptions of autonomy. The rating of “very satisfied” on the Likert scale was used as the marker for satisfaction, and the information from the cases where residents or faculty rated themselves as “very satisfied” were compared to the remaining cases. Descriptive statistics were performed. Chi-square was used to evaluate both resident and faculty satisfaction with categorical variables: operative type (open vs. laparoscopic vs. endovascular), case complexity (basic vs. complex), PGY year (PGY 1–3 and PGY 4–5), resident perception of time constraint (yes/no), resident and faculty perceptions of resident preparation (3-well prepared vs. 1-unprepared and 2-prepared), autonomy (yes/no), and whether or not faculty took over the case (yes/no), as well as percent of the case performed (<50% vs. >50%), resident role (surgeon chief/ junior vs. first assistant), and finally faculty knowledge of resident skill (1-not comfortable through 3-moderately comfortable vs. 4 and 5- extremely comfortable). Bivariate analysis was also used to evaluate faculty satisfaction with the following variables: operative type, case complexity, PGY year, faculty perception of time constraint, percent of the case performed, resident perception of role, faculty comfort with resident skill, faculty experience (<10 years experience vs. 10 years experience), and finally both resident and faculty perceptions of resident preparation, autonomy, and whether or not the faculty took over the case. Significance was set at p-value 0.05. All statistical analysis was performed with SAS 9.4. (Cary, NC).

RESULTS

Of the 187 cases performed during the study period by faculty members in the Department of Surgery during the study period, 113 cases met eligibility criteria. We collected matched resident and faculty data for 87 cases (77% response rate), for a total of 174 surveys. Thirteen of our twenty faculty members participated in the study.

Demographics and Case Characteristics

Resident and faculty demographics are represented in Table 1. There was an approximately even response rate for junior residents (PGY 1–3) and senior residents (PGY 4–5). There were slightly more faculty with less than 10 years experience post training (63%). The characteristics of the cases are shown in Table 2. The majority of cases were basic open cases, such as inguinal hernia repairs. There was one laparoscopic case converted to open, which was counted as a complex open case in the final analysis. Of the 22 endovascular cases, 9 were basic (e.g., angiograms and vein RFA) and 13 were complex endovascular cases (e.g., endovascular aneurysm repairs and stenting).

Satisfaction and Autonomy

Residents reported being “very satisfied” with their operative participation in 64% (N=56) of cases; whereas faculty were “very satisfied” with the resident’s participation in only 41% (N= 36) of cases. Overall, cases with greater faculty satisfaction had higher rates of agreement between residents and faculty with regard to percent of the case performed, resident role, resident preparation, operative autonomy, and faculty take over, compared to

cases of resident satisfaction as shown in Table 3. Table 4a shows the relationship between resident and faculty satisfaction and our covariates relating to the case, while Table 4b shows the relationships between resident and faculty satisfaction and our measures of resident autonomy.

The type of case and complexity were not significantly associated with residents' or faculty satisfaction with their operative participation, nor was the perception that there was a time constraint on the operation (Table 4a). Both faculty and residents were more likely to be satisfied with the residents participation in the case when they individually perceived that the resident functioned as the operating surgeon. In addition, both resident and faculty were more likely to be satisfied when the resident perceived they performed more than 50% of the case, and when the faculty was more comfortable with the resident's skill level. For residents, being a senior level resident (PGY 4–5) was associated with greater satisfaction with operative participation as compared to lower level residents (PGY 1–3). For faculty, being more than 10 years out of training was associated with greater satisfaction, as was perceiving that the resident performed >50% of the case.

Faculty and residents were both more satisfied when they independently perceived that the resident operated autonomously (Table 4b). In 69% (N=60) of all cases (regardless of satisfaction) there was agreement between the resident and faculty as to whether or not the resident operated autonomously, with more than half (58%) agreeing that the resident operated autonomously during parts of the procedure. In cases of disagreement on resident operative autonomy, more often the resident perceived that they were allowed to operate with autonomy, while the faculty did not (23/27 cases). Seventy-two percent of residents who felt like they were allowed to operate with autonomy reported being "very satisfied" with their operative participation, compared to 48% of residents who were not allowed to operate autonomously ($p=0.027$). Residents who reported being very satisfied commented, "I felt that I was leading the dissection" and "allowed me to operate on my own". While residents who were less than satisfied commented, "could have given more autonomy" and "attending micromanaging case down to application of local anesthetics- does not seem to trust resident for basic skills"; strengthening the association between autonomy and resident satisfaction. In addition, 56% of faculty who responded that they allowed the resident to operate with autonomy reported being "very satisfied", compared to the 29% among faculty who reported the resident did not operate autonomously ($p=0.01$).

Dissatisfaction

Only one factor was found to be negatively associated with both resident and faculty satisfaction, which was the perception that the faculty took over the case. For residents, there was decreased satisfaction when they felt that the part of the case taken over and was something they were able to perform ($p=0.0147$), as opposed to cases where faculty took over because that portion of the case was too advanced for their training ($p=0.7639$). Faculty satisfaction was related to both the resident perception that they took over the case ($p=0.025$) as well as the faculty's perception that they took over ($p<0.001$); however faculty perception that they took over the case was not associated with decreased resident satisfaction ($p=0.946$).

DISCUSSION

Resident satisfaction is a key performance metric for surgery programs; not only can poor scores on ACGME resident surveys lead to program scrutiny and citation, but low satisfaction can contribute to resident attrition. In the ever-changing landscape of surgical education, we sought to understand what factors influence resident and faculty satisfaction at the case level, to better target interventions to improve resident satisfaction with operative cases. In this study evaluating real-time perceptions of faculty and residents completing operative cases together, we found that there are opportunities to improve both resident and faculty satisfaction. Resident satisfaction appears to be highly correlated to their perception of autonomy during the case, supporting previous research linking resident satisfaction with autonomy,^{10, 11, 15, 36} while not doing a portion of the case they felt capable of performing was correlated with dissatisfaction. Similarly, faculty satisfaction was also tied to their perceptions of resident autonomy, as well as their perception of the resident's abilities and preparation.

Factors Affecting Resident Satisfaction

Four resident related factors and one faculty related factor were predictive of increased resident satisfaction: higher PGY level (PGY 4–5 > PGY 1–3), perception they performed >50% of the operation, perception they acted as the operating surgeon, the perception of autonomy, and finally the faculty's comfort level with the residents' operative skills. While it seems intuitive that residents would have greater satisfaction when they have greater operative participation, our study is the first to show a direct link with resident operative participation and satisfaction. Although our study does not directly measure the previously described relationship between autonomy and resident experience, preparation, and faculty knowledge of the resident,³⁷ it does suggest the importance of these factors on resident satisfaction; reinforcing the need for tailored operative experience, geared towards maximizing level appropriate autonomy. Moreover, the lower levels of satisfaction seen with PGY 1–3 residents is consistent with the reports of overall lower satisfaction in lower level residents and higher attrition rates in PGY years 1 and 2.^{10, 11}

Factors Affecting Faculty Satisfaction

Faculty satisfaction was related to six faculty dependent factors: faculty experience, faculty level of comfort with the residents' skill level, perception of resident preparation, perception that the resident performed >50% of the procedure, perception that the resident acted as the operating surgeon, and perception of resident autonomy. Our data show that faculty with more than 10 years experience were more likely to be satisfied with resident performance; this is likely related to their increased willingness to allow residents to operate autonomously stemming from greater confidence in their ability to prevent or repair any major errors made by the resident. With experience may also come more highly developed skills to facilitate resident operative autonomy. Faculty were also more likely to be satisfied if they had confidence in the resident's skill level and when they perceived the resident as well prepared, again, likely related to their willingness to allow the resident autonomy. Similarly, the implication of the resident performing >50% of the case, or acting as the operating surgeon, is that they were able to operate with more autonomy and competently

perform more of the operation. Three of these six factors are related to faculty members decision to give a resident autonomy: quality of the resident's preparation or plan, faculty knowledge of the resident, and experience of the attending,³⁷ while the other three are direct and indirect measurements of autonomy and participation.

Improving Satisfaction by Improving Autonomy

Ultimately, our data suggest that the individual's perception contributes to their satisfaction. Both resident and faculty satisfaction are related to their individual perceptions of the how much of the case the resident performed, what the residents' role was in the case, whether or not they acted with autonomy, and whether or not the faculty took over the case. This suggests that there is a common expectation between residents and faculty for autonomy and operative performance, with both reporting greater levels of satisfaction with increased performance. However, the discrepancy between faculty and resident satisfaction highlights the disconnect between their perceptions of the residents' performance and autonomy. We believe that residents showed higher rates of satisfaction due to their (incorrect) perception that they were acting with more autonomy than they in fact were. Therefore, the faculty assessment of autonomy (and their corresponding satisfaction) is likely a more accurate picture.

If resident and faculty satisfaction are closely linked to autonomy, it serves to reason that improving resident autonomy will also improve satisfaction. Ultimately, the most important factor is patient safety, and resident satisfaction should not be placed above this. However, we believe that with appropriate preoperative preparation and faculty development, residents can be safely guided through level-appropriate autonomy for at least some portions of an operative procedure. The findings from our study support the need for the utilization of a more concrete and purposeful pre-operative discussion between residents and faculty, focused not only on the operative plan but also on setting expectations based on the residents' skill level. Potential interventions suggested in previous research include the briefing, intraoperative teaching, and debriefing (BID) method described by Roberts et al.³⁰ as well as a train-the-trainer program to better develop faculty skills around intraoperative teaching.³⁸

Considering faculty perception of resident preparation was a significant factor associated with faculty satisfaction, and that resident and faculty perceptions of autonomy were linked to satisfaction, we propose a model incorporating these two concepts. In this "Modified BID Model", residents and faculty brief at least a day prior to the operation, and engage in a resident-driven discussion around the resident's learning objectives for the case. This provides the faculty with an opportunity to evaluate the resident's understanding of the case and the disease, as well as their insight into their performance. Faculty are able to provide feedback at that time to help establish mutually-agreeable, realistic learning objectives and expectations for the case. Faculty can also provide feedback on the resident's plan for preparation, which might include recommending a specific atlas or highlighting an aspect of peri-operative management that the resident should cover as part of preparation.

In the "Modified BID Model", intra-operative teaching is enhanced with specific faculty skills designed to promote appropriate resident autonomy and minimize the need to take

over performance of portions of the operation that the resident was expected to perform as established in the preoperative brief.³⁸ The debriefing is likewise enhanced to include a discussion of how the operation was conducted based on the agreed-upon plan, and if there were portions that the resident was expected to perform but was unable to, the faculty can provide specific feedback to help residents continue to improve. This ideally occurs in person, but asynchronous applications such as the SIMPL app may also facilitate the same exchange of information.^{39–41}

Better pre-operative preparation and a shared understanding of the residents' role in the case sets the stage for success, while improved techniques for intraoperative education allows for more sustainable learning. Our data show that neither residents nor faculty had decreased satisfaction when the resident was unable to perform part of the case that was outside their level of training, as opposed to when the faculty took over part of the case they were capable of doing. Therefore, we believe that by utilizing these tools to facilitate clear and realistic expectations, not only will faculty have a better understanding of the residents preparation, but they will also be less likely to take over the portions of the case that they agreed the resident would perform, thereby increasing both resident and faculty satisfaction.

Limitations

Our study should be interpreted in the context of its limitations, which relate to the validity evidence around our survey and the small sample size of this planned pilot study. Although we piloted several versions of the survey and multiple revisions were made, there was still the potential for misinterpretation of questions and responses, which could result in bias. Another significant limitation of this study was the sample size and selection. These surveys were administered to only thirteen faculty members and an unknown number of residents at a single institution. Although we intentionally did not attempt to identify specific residents or faculty out of a desire to maintain respondents anonymity due to the sensitive nature of some questions about teaching abilities, the lack of information about how many residents participated does lend the study to sample bias if only a few residents from each PGY level were surveyed. Therefore, these responses may not be representative of the surgery residents at our institution or surgery residents in general. In addition, because the study was voluntary, there is again potential for selection bias, as previous research has shown that faculty members who volunteer to participate in research evaluating teaching skills tend to be better educators.²² There also may be other confounders contributing to resident or faculty satisfaction that were not captured with our survey instrument including the sensitive dynamic between faculty and resident, as well as variations in teaching strategies to name a few.

Conclusion

In conclusion, both resident and faculty satisfaction with resident performance are associated with the residents' ability to act autonomously and perform more of the case without the faculty needing to take over. Therefore, continued efforts to improve resident autonomy through better pre-operative preparation and the use of faculty development programs may potentially improve not only surgical education, but also satisfaction and result in better retention and training of general surgery residents.

ACKNOWLEDGEMENTS

Drs. Perone and Brown had full access to all the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.

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Table 1.

Resident and faculty training and experience

	N (%)
PGY Year	
PGY 1–3	47 (54%)
PGY 4–5	40 (46%)
Faculty # Years Post Training	
<10 Years	55 (63%)
10 Years	32 (37%)

Table 2.

Case Characteristics

Type of Case	Number Performed (% total cases)	Number of Basic Cases Performed (% total cases)	Number of Complex Cases Performed (% total cases)
Laparoscopic	17 (20%)	8 (9%)	9 (10%)
Open	48 (55%)	38 (44%)	10 (11%)
Endovascular	22 (25%)	9 (10%)	13 (15%)

Table 3.

Resident and faculty rates of satisfaction and dissatisfaction in relationship with agreement on percent of the case performed, resident role, residents level of preparation, autonomy given, and whether or not the faculty took over the case.

	Faculty Satisfaction (n=36) N (%)	Resident Satisfaction (n= 56) N (%)	Faculty Dissatisfaction (n=51) N (%)	Resident Dissatisfaction (n= 31) N (%)
<i>Agreement on % Performed</i>	34 (94%)	45 (80%)	38 (75%)	18 (58%)
<i>Agreement on Resident Role</i>	29 (81%)	36 (64%)	26 (51%)	19 (61%)
<i>Agreement on Resident Level of Preparedness</i>	17 (47%)	33 (59%)	31 (61%)	15 (48%)
<i>Agreement on Autonomy</i>	32 (89%)	37 (66%)	29 (57%)	23 (74%)
<i>Agreement on Faculty Takeover</i>	31/36 (86%)	41 (73%)	29 (57%)	19 (61%)

Table 4a.

The relationship between resident and faculty satisfaction and covariates relating to the case.

	Resident Satisfaction			Faculty Satisfaction		
	Very Satisfied (%)	Less Satisfied (%)	p-value	Very Satisfied (%)	Less Satisfied (%)	p-value
Surgery Type						
Laparoscopic	14 (78%)	4 (22%)	0.31	7 (39%)	11 (61%)	0.081
Open	30 (64%)	17 (36%)		24 (51%)	23 (49%)	
Endovascular	12 (55%)	10 (45%)		5 (23%)	17 (77%)	
Surgery Complexity						
Basic	36 (65%)	19 (35%)	0.781	26 (47%)	29 (53%)	0.143
Complex	20 (62%)	12 (38%)		10 (31%)	22 (69%)	
PGY Year						
1-3	25 (53%)	22 (47%)	0.018	16 (34%)	31 (66%)	0.132
4-5	31 (77%)	9 (23%)		20 (50%)	20 (50%)	
Faculty Experience						
<10 years	36 (64%)	19 (35%)	0.781	17 (31%)	38 (69%)	0.009
10 years	20 (62%)	12 (38%)		19 (59%)	13 (41%)	
Faculty Comfort with Resident Skill Level						
Comfortable	38 (79%)	10 (21%)	0.001	26 (54%)	22 (46%)	0.007
Not Comfortable- Moderate Comfort	18 (46%)	21 (54%)		10 (26%)	29 (74%)	
Resident Level of Preparation (Resident Perspective)						
Other	28 (56%)	22 (44%)	0.058	18 (36%)	32 (64%)	0.236
Well Prepared	28 (76%)	9 (24%)		18 (49%)	19 (51%)	
Resident Level of Preparation (Faculty Perspective)						
Other	29 (57%)	22 (43%)	0.078	14 (27%)	37 (73%)	0.006
Well Prepared	25 (76%)	8 (24%)		19 (58%)	14 (42%)	
Time Constraint (Resident Perspective)						
Yes	9 (64%)	5 (36%)	0.238			
No	47 (64%)	26 (36%)				
Time Constraint (Faculty Perspective)						

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	Resident Satisfaction		p-value	Faculty Satisfaction		p-value
	Very Satisfied (%)	Less Satisfied (%)		Very Satisfied (%)	Less Satisfied (%)	
Yes				5 (42%)	7 (58%)	0.246
No				31 (41%)	44 (59%)	

Table 4b.

The relationships between resident and faculty satisfaction and measures of resident autonomy.

	Resident Satisfaction			Faculty Satisfaction		
	Very Satisfied (%)	Less Satisfied (%)	p-value	Very Satisfied (%)	Less Satisfied (%)	p-value
Percent of the Case Performed (Resident Perception)						
<50%	12 (41%)	17 (50%)	0.002	7 (24%)	22 (76%)	0.021
>50%	44 (75%)	14 (24%)		29 (50%)	29 (50%)	
Percent of the Case Performed (Faculty Perception)						
<50%	21 (60%)	14 (40%)	0.485	7 (20%)	28 (80%)	<0.001
>50%	35 (67%)	17 (33%)		29 (56%)	23 (44%)	
Resident Role (Resident Perception)						
First Assistant	6 (35%)	11 (65%)	0.006	7 (41%)	10 (59%)	0.926
Surgeon Junior/ Surgeon Chief	47 (71%)	19 (29%)		28 (42%)	38 (58%)	
Resident Role (Faculty Perception)						
First Assistant	15 (62%)	9 (38%)	0.869	5 (21%)	19 (79%)	0.012
Surgeon Junior/ Surgeon Chief	38 (64%)	21 (36%)		30 (51%)	29 (49%)	
Autonomy (Resident Perspective)						
Yes	42 (72%)	16 (28%)	0.027	26 (45%)	32 (55%)	0.356
No	14 (48%)	15 (52%)		10 (34%)	19 (66%)	
Autonomy (Faculty Perception)						
Yes	25 (64%)	14 (36%)	0.963	22 (56%)	17 (44%)	0.01
No	31 (65%)	17 (35%)		14 (29%)	34 (71%)	
Faculty take over (Resident Perception)						
Yes	10 (43%)	13 (57%)	0.015	5 (22%)	18 (78%)	0.026
No	46 (72%)	18 (28%)		31 (48%)	33 (52%)	
Faculty take over (Faculty Perception)						
Yes	13 (65%)	7 (35%)	0.946	2 (10%)	18 (90%)	<0.001
No	43 (64%)	24 (36%)		34 (51%)	33 (49%)	
Part of the Case Beyond Residents Skill Level						
Yes	18 (67%)	9 (33%)	0.764	9 (33%)	18 (67%)	0.307

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Faculty Satisfaction		Resident Satisfaction		
Very Satisfied (%)	Less Satisfied (%)	Very Satisfied (%)	Less Satisfied (%)	
27 (45%)	33 (55%)	38 (63%)	22 (37%)	No
p-value		p-value		