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By

Trevor Burt

December 2015

A COMPARATIVE ANALYSIS OF RESIDENT AND FACULTY RESPONSES TO
THE INTERNAL GME-ADMINISTERED AND EXTERNAL ACGME-
ADMINISTERED SURVEYS AT ONE SPONSORING INSTITUTION

A Thesis Presented to the
Faculty of the College of Education
University of Houston

In Partial Fulfillment
Of the Requirements for the Degree

Doctor of Education in
Professional Leadership

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Approved by Thesis Committee:

Dr. Margaret Watson, Chairperson

Dr. Timothy B. Boone, Committee Member

Dr. Sara G. McNeil, Committee Member

Dr. Bernard R. Robin, Committee Member

Dr. Robert H. McPherson, Dean
College of Education

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Abstract

Graduate medical education residency and fellowship training programs across the United States rely upon the annual survey data that comes from the Accreditation Council for Graduate Medical Education survey to identify their impact on overall resident satisfaction, program quality, training environment, and differences in perception of these areas by core faculty in the training program. In 2006, Houston Methodist Hospital supplemented the annual ACGME resident survey with an internal GME survey. However, the ACGME did not survey faculty until 2013. The 2013-14 academic year marked the first year in which both residents and faculty in all ACGME-accredited programs at Houston Methodist participated in both surveys. The study was designed to identify variances between the resident and faculty surveys on two primary, correlational items: overall satisfaction with the program and whether the resident/faculty would refer a friend to the program, on the 2013-14 annual survey documents. The hypothesis was that variances between resident and faculty responses would be present and meaningful. In addition, the research sought to identify differences in response to survey items on the ACGME versus the GME-initiated survey. The novel data identified program-specific areas for concentration on teaching and resources to improve training in only one out of 15 programs surveyed.

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Chapter I

Introduction

Graduate medical education at the nation's 9,265 sponsoring institutions is under scrutiny due to a heightened expectation from public stakeholders (Metzler, Ganjawalla, Kaups, & Meara, 2013). These stakeholders represent powerful governmental agencies, private insurance providers, and, most notably, patient groups. The expectations stem from an increasing knowledge base, a renewed interest in self-care and treatment, and the implementation of and significant attention on the Affordable Care Act. Accordingly, focus on the accreditation process and monitoring of these programs have undergone significant change impacting the more than 117,000 residents in primary and specialty care programs across the United States (Accreditation Council for Graduate Medical Education, 2013).

The Accreditation Council for Graduate Medical Education (ACGME) is the accrediting body in the United States responsible for establishing the intricate standards and procedures by which the residency and fellowship programs train the next generation of physicians. In July 2013, the ACGME began a major restructuring of the process by which these programs are measured, assessed, and compared to other programs nationwide. In contrast to the last major revision of the accreditation standards in 1999, the Next Accreditation System or NAS signals a significant shift from the previous episodic review model to the introduction of an annual programmatic review that provides actual educational outcomes and an increase in the level of self-regulation (Nasca, Philibert, Brigham, & Flynn, 2012).

As noted above, the more fluid annual reporting mechanism replaces the previous multi-year accreditation cycle used to gauge program compliance with ACGME requirements. By incorporating nine reporting components, institutions will gain access to information previously unavailable in their quest to identify gaps and variances in training (Adams, Willett, Wahi-Guruaj, Halvorsen, & Angus, 2014). The changes are significant to provide more global and real-time assessment of programs. Compounding the changes to the accreditation process is the publication of the Association for American Medical Colleges (AAMC) predicted a shortage of 90,000 physicians by the year 2020 and the copious governmental proposals to significantly reduce the reimbursement that teaching hospitals receive. How these issues will affect the overall training environment is unknown. However, certainly the ACGME will monitor sponsoring institution's abilities to continue providing adequate teaching and learning opportunities despite the ever increasing pressure on productivity (AAMC, 2014).

Statement of the Problem

In an effort to create and maintain an effective learning environment conducive to teaching and learning, while remaining cognizant of and addressing the clinical and financial demands of sponsoring institutions, reporting and monitoring of resident and faculty satisfaction within respective programs must see a significant transformation. The tangible outcomes will be critical to consistently gauge the direct results on the most critical group of stakeholders: faculty and residents in these programs. Residents, as defined by the ACGME and referred to throughout this document, denote any physician in an accredited graduate medical education program, which also includes interns and fellows. (ACGME, 2014). Directly affected by these changes, faculty teachers and

residents remain mindful of the impending impact that new monitoring techniques bring and the potential changes that may result. Through the increased appraisal of teaching effectiveness and resource availability, the annual feedback provided by these stakeholders will become more essential than in the previous accreditation process. Quality educational programs, effective feedback, and sufficient resources will continue to be necessary to train tomorrow's physicians with the ACGME placing increasing emphasis on the success of programs.

Methodist Hospital (Houston) in Texas sponsors 36 ACGME-accredited residency and fellowship training programs and received an estimated \$26 million in Centers for Medicare and Medicaid Services (CMS) funding in 2011 to support the GME training mission. In addition, Houston Methodist spent an additional \$8 million in uncompensated costs (Boom, 2012). Due to the immensity of financial support provided by accredited programs funded by sponsoring institutions, an increased level of analysis is applied to ensure that the educational content, physical and operational resources, and policies and procedures governing training programs are adequate and accessible. Evaluations of these processes are solicited annually and provide useful data necessary for institutions to assess and suggest modifications to the program and overall learning environment.

The ACGME has consistently relied upon the invaluable feedback obtained from the annual resident and fellow survey. This anonymous evaluation seeks to gain insight into the experiences in their respective programs and to substantiate areas of compliance within the training environment, while also recognizing those in need of attention. Sponsoring institutions are provided with annual feedback on the various resources that

impact their residents' educational experiences and training environment thus providing the institution with comparative program-specific and institutional results. Holt and Miller (2009) assert that "residents' evaluation of their program is an important source of information about program quality and resident satisfaction" (p. 327) therefore, enabling programs and institutions to utilize the data to identify the level of resident satisfaction, and well-being of the program.

Noticeably absent has been an annual evaluation or assessment from the perspective of the residency and fellowship core faculty. The "core faculty," as defined by the ACGME (2013), are teaching physicians who "have a significant role in the education of residents . . . and devote an average of 15-hours of instruction and teaching engagement per week" (p.4). These skilled instructors are trained to evaluate and assess program competencies, spend significant time in the evaluation of residents, and advise residents with respect to career and educational goals. Core faculty can have a profound impact on the data provided in the resident survey (Gilhooly & Fischer, 2014). Paice (2002) explained the importance of this population in medical education and the significance of the relationship that exists between residents by stating, ". . . the quality of that relationship can make the difference between a post that is rewarding and one that is demoralizing" (p.152). By failing to include the faculty in the annual review of the clinical learning environment, sponsoring institutions have been unable to utilize any valuable feedback that could serve as a vital piece to ensure resident growth and satisfaction. Consequently, the survey data from the congruent resident and core faculty surveys can be similarly compared.

As the ACGME makes an effort to incorporate a comprehensive review of training programs, the absence of this feedback is evident and considered necessary. Incorporation of this survey and subsequent review of congruent assessment feedback from faculty and residents in a single program, have the potential to provide invaluable feedback on the clinical-learning environment.

Well in advance of the ACGME's implementation of the faculty survey, the designated institutional official (DIO) at Methodist Hospital (Houston) developed a resident and faculty survey emulating the questions on the ACGME survey. The intent was either to corroborate or dispute results from the national ACGME survey and establish a valuable assessment and measurement tool to address items on the survey below a threshold for successful achievement. Since implementation, the GME-administered survey has provided the sponsoring institution and program leadership with indicators of resident and faculty perceptions of the program's quality and adherence to the ACGME program requirements as they relate to the processes that safeguard interactions within the program. The return rate for the in-house faculty survey responses has remained satisfactory, yet it has failed to reach the 100% return rate of the annual in-house resident survey that has been sustained for seven consecutive years (Paukert, 2013).

In a pivotal article assessing the differences between responses to internal and external surveys, Fahy, et al. (2010) identified significant differences in several areas of the surveys when comparing 15 items from the ACGME survey to similarly composed items on the Methodist GME-administered survey. The article emphasized the goal of identifying variances between the results of these two survey instruments, leading to

significant analysis and ongoing interest in researching significance between responses. However, the question remained as to whether the results from the resident versus core faculty and ACGME versus in-house survey would correlate. If not, could sponsoring institution and program leadership uncover the rationale for the variances?

Significance of Study

The implementation of the NAS Phase 1 in 2013 included a graduated rollout of the revised accreditation standards and, for the first time, included a faculty survey. The programs surveyed during the initial year included very few of the programs that Methodist sponsored, and included Internal Medicine, Neurological Surgery, Orthopaedic Surgery, and medicine subspecialties (Accreditation Council for Graduate Medical Education, 2013). Therefore, the data analyzed in this study was from the second year of implementation, 2013-14, which included the following Methodist Hospital (Houston) ACGME-accredited programs: Anatomic and Clinical Pathology, Family Medicine (two programs), General Surgery, Internal Medicine and the Medicine subspecialties (Cardiovascular Disease, Endocrinology, Nephrology, Transitional Year), Neurological Surgery, Neurology, Obstetrics and Gynecology, Orthopaedic Surgery, and Plastic Surgery.

Prior to academic year 2012-13, the ACGME depended solely on the annual resident survey for assessment of the respective training programs as a way to gauge satisfaction and compliance with Residency Review Committee (RRC) program requirements. The responses were consistently found to correlate with the findings of the ACGME RRC and subsequent accreditation actions including program accreditation

cycle length, fellowship entry rates for graduating residents, and scholarly activities of residents and fellows (Holt & Miller, 2009; Paukert, 2012).

The ACGME Common Program Requirements necessitate that all programs should provide timely and bilateral evaluation methods, effective faculty teaching, obtainable access to institutional and programmatic resources that benefit training, management and adherence to duty hour policies, and assurance of sound educational content (Accreditation Council for Graduate Medical Education, 2013). The incorporation of the ACGME annual faculty survey provided a new opportunity for sponsoring institutions and training programs alike to effectively compare results of similar questionnaire items across internal versus external surveys for both faculty and residents similar to the mechanism that Methodist Hospital (Houston) has been employing for some time. The internal mixed-method surveys and the external quantitative survey for both population groups provide residents and faculty with the opportunity to assess the cumulative aspects of the training environment in multiple areas of interest by using a five-point Likert scale. The GME-administered survey also offers participants an opportunity to enter free-text comments, not offered on the ACGME survey.

With the adoption of the annual faculty survey and the continuation of the annual resident survey, the ACGME has provided sponsoring institutions, training programs, and the accrediting council, themselves, with an improved opportunity to utilize these data to assess programs more constructively than ever before. This is vital to the GME community, in general and more importantly, to the respective residency and fellowship training programs as they seek to determine specific areas of concern in their programs.

Consequently, these surveys also seek to identify their impact on overall resident satisfaction, program quality, training environment, and differences in perception of these areas by core faculty in the training program.

Research Question

The study focused on three questions relating to the comparative survey data: did variances exist in the two overall quality and satisfaction items on the GME-administered survey and were there differences in responses to the GME-administered survey versus the ACGME-administered survey on overall satisfaction within the programs? These comparative data shed new light on the similarities and differences between the survey results of these two critical populations. When differences do occur, GME programs have the ability to monitor and address what has yet to be extensively assessed nationally. This study compared data obtained from the Methodist Hospital (Houston) GME-administered survey data and the ACGME survey for the two most critical populations associated with the training programs. Further, it identified specific areas rated the same, better, or worse than the institutional average. The institution then assessed the differences between respondent populations and survey type to determine the most appropriate ways to respond to individual aspects of the training environment in a manner resulting in responses with greater correlation. It is the intent that the data provides program and institutional leaders with the tools necessary to tailor faculty development programs, resident training enhancements, and institutional modifications to directly impact the training program environment in a way not previously available. Through the implementation of a similar annual survey for both faculty and residents, programs and institutions have gained unprecedented access to data previously unavailable. Assessment

has permitted and supported programs in a conscious effort to turn their attention and focus to addressing the individual aspects of the survey to improve the overall satisfaction of the residents and the perception of the program through the eyes of the faculty.

With the completion of the research, the results of the ACGME and GME-administered surveys have shown whether there is a significant correlation between core faculty and resident's assessment of their respective programs.

Chapter II

Literature Review

Evaluation and assessment of ACGME-accredited residency and fellowship training programs is essential to identify factors that affect the teaching and learning environment at clinical training sites across the United States. In 2004, the ACGME began surveying one-third of all accredited programs with four or more residents and increased the survey group to half of all programs with more than four residents in 2007, and finally to all programs with four or more residents in 2009 (Levenberg, 2011). The annual resident evaluation system is utilized by the respective programs and sponsoring institutions, yielding valuable data for the ACGME, as well. Programs and sponsoring institutions utilize the results to identify strengths and weaknesses that if addressed accurately, can lead to improvements in the clinical learning environment. Prior to the initial implementation of NAS, the absence of a congruent, ACGME annual faculty survey has been apparent, leading some institutions to conduct surveys developed and assessed internally (Paukert, 2013).

The literature review yielded an abundance of literature examining resident satisfaction of training programs addressing the individual aspects of training. Literature on the perspective of faculty participation in the various aspects of the clinical environment and evaluation, among other important aspects of the training environment, are also available. However, the literature is not as extensive as that identified for residents, most likely as a result of the absence of a universal faculty survey. Many publications include residents' perspectives on the effect of duty hours on resident training, resident and faculty perception of the evaluation or feedback process,

suggestions on the improvement and further monitoring of clinical training opportunities and development, and various other areas directly affecting program satisfaction. The lack of abundant resources outlining faculty perceptions of programs presents an obvious omission in the ability to conduct a valid and reliable literature review comparing the responses of the two populations.

The literature review focuses primarily on important data about the perceptions of faculty attending physicians and residents. Girard, et al. (2006), focusing solely on resident perceptions of satisfaction, highlighted the differences between the primary and specialty program types and found that primary care program residents tend to be less satisfied than their specialty program counterparts. It will also be interesting to assess how the program type correlates with faculty in these programs. The resources offer consequential data that affect the learning environment. This information will be beneficial in shaping the research proposal. It also explores the significance and pragmatism of “faking good” on ACGME surveys versus institutionally-developed surveys.

Faculty Assessments and Clinical Teaching

The absence of an ACGME-mandated annual faculty survey prior to the implementation of the ACGME NAS in 2013, predetermined that little to no specific literature exists with terms similar to “faculty assessment of program,” “importance of faculty survey in medical education,” or “residency program assessment by faculty.” The ACGME emphasizes the importance of faculty development, the documented effects on the clinical learning environment, and subsequent outcomes relating to faculty participation and teaching, which was identified in many articles. The literature on

faculty development encourages exploration of the core principles of residency and fellowship training and the successful implementation of processes critical to the learning environment and subsequently evaluated by residents and faculty.

Holmboe et al. (2011), in noting the 100th anniversary of the Flexner report, related the challenges in medical education that occurred when the report was issued to the considerable modifications currently found in medical education. Similar to the 1910 report, Holmboe et al., expressed concern over the insufficiencies that faculty possess in regards to traditional competencies knowledge, clinical skills, and professionalism, as well as the recent addition of the ACGME competencies, including evidence-based practice, quality improvement, interdisciplinary teamwork, and systems' approach to better patient care. The article recommended that institutions educate faculty on accurately evaluating the environment through an internal review of system factors that influence resident performance and assessment of the experience. Teaching development that engages faculty, thus enabling them to better understand the value and impact of the assessment tools used by the institution to monitor the overall perception of the program, will be mutually beneficial to residents and academic faculty (Holmboe et al., 2011).

In a related article, the transformation of graduate medical education at one institution in Singapore under the newly-developed ACGME International (ACGME-I) has been at the forefront of monumental changes to the educational model and a redirection of traditional cognitive and technical focus of training programs. The institutional leaders responsible for the learning environment promoted a unified front through the implementation of faculty development initiatives to better align the faculty with the transition to the modified delivery method (Huggan et al., 2012). The GME

leaders charged with its development engaged inventive modes of communicating the importance of competencies and assessment by focusing on the importance of communication skills and systems-based practice with faculty who were engaged and understood the importance. The education provided for the faculty was designed to promote the concept that “knowledge and technical skills led to inadequate emphasis on other professional attributes” (Huggan et al., p. 1271) and is critical in assessing the overall program. While it would be extremely useful to have identified literature assessing or relating to perceptions of faculty development or the importance of continuing education of programmatic faculty, none were found. There were several articles that discussed faculty perception of their own role as teachers, although this is not the emphasis of this research topic.

The topics of clinical teaching, evaluation, and feedback have been abundantly published and provide valuable focus on the importance of physician teacher engagement as it relates to outcomes and training success. As the ACGME begins to review more closely the clinical learning environment, similar to hospital accreditation site visits, the clinical context and the mechanism by which it is conducted becomes highly analyzed and must undergo its own learning curve. For example, Famiglio et al. (2013) examined the intricacies of the learning environment and the importance of not only placing learners in a high performing environment, but also identifying factors that affect training. The importance of engaging residents in a clinical environment identified as high-performing and well-functioning was identified and noted. However, in order to fully integrate these learners into these environments and expect them to be successful, Famiglio et al. highlighted the ACGME’s emphasis on planning and organizing the

learning environment to a learning environment that encourages satisfaction and success. As the traditional healthcare delivery model is modified, the authors cautioned that residents placed in areas of intense focus on quality and patient safety should continue to focus on factors affecting resident satisfaction. These factors consisted of modifications to the curriculum to ensure systemization, continuum of educational and longitudinal experiences, interprofessional training, team-based approaches to comprehensive care, the minimization of patient interface disruptions, and protection from disincentives. The authors emphasized the importance of incorporating and integrating four consistent themes around an integrated clinical curriculum as it relates to impacting resident satisfaction: modern healthcare delivery, medical genomics, clinical learning, and professionalism. When present in tandem, these factors have the potential to significantly impact training and teaching satisfaction locally and across the nation.

Self-perception and Assessment of the Clinical Teacher

Core faculty are an integral part of ensuring an effective clinical learning environment. Claridge et al. (2003) analyzed and attempted to link the survey responses between attending physicians and residents and found that they varied “significantly”, in regards to the self-perceptions of core faculty to residents. They identified that “the medical literature is nearly void of studies on the topic of evaluating surgical attending physicians as educators” (p. 323). In addition, the study reflected that 61% of attending physicians, in a survey relating to their performance as teachers, scored themselves significantly different than residents who completed the survey. This significant variation in responses had a direct correlation on overall satisfaction of the program and highlighted the consistently overinflated perception of the program by faculty.

Incidentally, failure to complete the survey was a factor in the resident's perception of the teacher; 22% (Claridge et al., p. 327) of attending physicians who did not complete a self-perception survey were scored lower by residents than attending physicians who did. Similarly, Boor et al. (2008) found that the level of resident can also impact survey results. Residents at the senior level rated their respective training program experiences higher than their junior counterparts did.

Although the Claridge study was published more than ten years ago, a similar study conducted more recently and published in the same journal, highlighted analogous findings. Jensen et al. (2011) also surveyed both residents and faculty regarding timely feedback in the operating room setting. They also demonstrated that resident perception of feedback was "significantly lower" than faculty perception in all components of the feedback process, and faculty perceived the frequency of feedback higher than residents. Faculty and residents did show repetition on several aspects of feedback. However, residents were less satisfied with all aspects of the feedback they received, while faculty were satisfied with the level and frequency of feedback they provided. The study concluded that these opposing perceptions have the tendency to engender frustration within the educational experience and that additional research should be conducted to identify and address the gaps (Jensen et al., 2011).

In a study specific to surgical attending physicians, Sender Liberman et al. (2005) highlighted the differences between perceptions of the quantity and quality of feedback provided by surgical attending physicians to their residents. The perceptions varied significantly with 90% of the surgery faculty in the program feeling confident in their ability to provide effective feedback. Although, only 16.7% of residents perceived it this

way. The other variances included a 73.7% difference between perceptions of immediacy of feedback and an 83.4% difference in whether tangible suggestions for improvement were given during feedback (Sender Liberman et al., 2005, p. 471). These significant differences highlight the assessment perceptions among resident and faculty.

The data from another study by Boor et al. (2008) highlighted resident perceptions of clinical teachers in an obstetrics and gynecology program in the Netherlands, comparing any shift in the resident's view of the clinical teacher's role between a study initially conducted in 1994 and subsequently in 2003. The study aptly identified factors that could directly impact the clinical learning environment and teaching effectiveness, including additional challenges regarding quality and patient care placed on the clinical teachers and the direct impact on the amount of time spent preparing and teaching residents. It also sought to identify the evolution of the roles of clinical teachers in relation to the terms 'physician', 'supervisor', 'teacher', and 'person'. The comparative study identified the shift in the perceived role of the clinical teacher from the original study conducted in 1994. The results from the 2003 study found that the most mentioned role was 'teacher', but the most important was 'person'. Interestingly enough, this signaled a sizable shift from the 1994 results where the role of 'physician' was more important. Consequently, the results of the 2003 study showed a shift more toward the 'supervisor' role, which Boor et al. identified as a more 'learner-centered' approach to training (p. 155).

The basis of the categories of roles determined in the Boor study was initially identified by Ullian, Bland, and Simpson (1994). Ullian et al. primarily studied what residents consider as the most important components that make up the clinical teacher. In

a similar study, focused on medical student learners and their perceptions of clinical teachers, Paukert and Boyd (2000) focused on the perceptions of medical students. Ullian's study (1994) found that residents ranked the clinical teacher characteristic of supervisor as highest, while medical students in the Paukert study ranked the teacher role as the highest. The learner's perceptions varied, based on their own position, and as they moved from student to resident, the clinical teacher's role was perceived differently although it was possibly the same individual. As the learner progressed from student to resident, their professional development was impacted by their clinical teacher, yet the role changed significantly based on their role-specific needs.

Lombarts et al. (2014) were similarly interested in determining whether or not the learning climate or environment affected teaching performance as evaluated by residents. Using the "Dutch Residency Educational Climate Test (D-RECT)," the researchers sought to evaluate the learning environment and teaching performance. While the study was not comparative in nature, this valid, reliable, mixed-method study focused on eleven learning climates that compose the clinical learning environment. The study, using both qualitative and quantitative data, determined that the resident's perception of the learning climate was positively associated with the teaching of faculty and that both have the ability to affect one another. The study found that the climate of a residency program was positively affected by the performance of the teaching faculty.

In another study of obstetrics and gynecology resident satisfaction, and the first to compare the satisfaction of residents and faculty in the program, identified several factors that residents and faculty agreed upon and those in which significant variances occurred. Blazek, Zollinger, and Look (2005) found a similar response between overall satisfaction

in the program with approximately 69% of residents stating they were satisfied compared with 61% of faculty. However, the researchers identified three areas where residents and faculty disagreed on the level of satisfaction: adequate resources, continuity of care, and role ambiguity. These three processes have the ability to adversely affect the overall satisfaction if not addressed.

Finally, in the only article identified that studied a cohort of residents and faculty in a multi-year study, researchers at Wayne State University researchers surveyed faculty, staff, and residents in the Family Medicine program (Roth, Severson, Probst, Monsur, Markova, Kushner, and Schenk, 2006). This comparative study conducted at two clinical sites was designed to gauge teaching environment perception and to identify faculty development programs intended to ensure that teaching quality was a focus of the program. Roth et al. (2006) determined many similarities and differences in the responses of faculty and residents. The areas of congruence were found to be in learning opportunities, faculty teaching, staff roles, and site characteristics, and the differences were primarily between training sites as opposed to barriers to learning opportunities.

GME-administered versus ACGME Survey

The focus of this review was to seek out historical inconsistencies in data that exist between internally-developed survey instruments and those administered by the ACGME. The literature search yielded no resources that focus on the comparison between these two survey instruments. Speculatively, this results from the sole dependence upon the annual ACGME resident survey and the lack of a comparative faculty instrument until 2013 with the implementation of NAS. It is possible, however, that sponsoring institutions may have an internally developed and administered faculty

assessment to gauge the perceptions of the attending physicians in residency and fellowship training programs. However, the researcher could not locate any analysis of these results in the literature search. One could surmise that with implementation of an annual faculty survey by the ACGME congruent to the resident survey in the respective program and with a required participation rate of 60% of identified core faculty, more will begin to be published.

The literature search for internally administered versus ACGME survey results comparing resident and faculty results was also limited and yielded only one survey, incidentally at Methodist Hospital (Houston). Fahy et al. (2010) detailed the accuracy of the ACGME annual resident survey compared to that of the Methodist Hospital (Houston) in-house survey. Comparable to several of the previous studies cited, this research also focused on responses of residents in a general surgery training program. The comparative analysis sought to investigate resident perceptions on 15 items relating to satisfaction and processes in the learning environment that were present on both survey instruments. The results found that significant differences involved faculty teaching time, the presence of and possible interference by other learners, and an emphasis on education over service. Incidentally, the results on the ACGME survey were all less favorably rated than those on the GME-administered survey.

Fahy, et al. explained that the Methodist GME-administered survey offered responses on a 5-point Likert scale, while the ACGME-administered survey only offered a yes/no response on most questions. Fahy concluded that the dichotomy of responses on the ACGME-administered survey may “inaccurately reflect the magnitude of noncompliance” at sponsoring institutions. However, in an article published by the staff

at the ACGME (Holt et al. 2010), it was determined that the ACGME survey was validly constructed despite having no non-ACGME data against which to test its reliability. Holt et al. (2010, p.517) confirmed that, despite this correlational assessment, compelling evidence exists linking survey results to program citations given by respective training program review committees.

In addition to ensuring validity and reliability of surveys, the reality of residents “faking good” or bad should be taken into consideration. According to the literature, most frequently it is a personality inventory that is “faked” in order for the surveyor to get the answer that the participant thinks they want to hear. Dr. Lynn McFarland of Clemson University’s industrial psychology program explains a phenomenon of “social desirability,” in which participants provide answers to the survey questions that they believe are acceptable (Connolly, n.d.). The same could be said for residents taking a survey, based on the intensity of the stakes involved, although no literature was found to corroborate this assumption. This reactivity to answering internal and external surveys are indicative of the Hawthorne Effect, where residents could alter their responses if they know they are being monitored or a potential negative effect could result. The focus on this phenomenon was important as it relates to the hypothesis that residents and faculty may respond differently on an internal versus external survey to prevent this occurrence.

Summary

The current literature supports the hypothesis that variances in resident and faculty teacher perceptions of a program exist within various programs, institutions, and countries in a number of areas related to the clinical learning environment. The importance of this research topic and the need for additional examination of the clinical

learning environment exists across the spectrum, and resident and faculty perceptions of their program will foster interest as the Next Accreditation System gains momentum in the next phases of rollout. The corresponding surveys will also give renewed insight into perceptions between primary and specialty care residents and faculty.

These resources provide varying degrees of insight into the differences between faculty and resident perceptions of the training programs in the United States. The literature review identified that these two populations of program participants often have differing opinions on the training that is given and received. There is much to be learned about the comparative results and the implementation of a standardized, program-specific annual ACGME faculty survey that is congruent to the annual ACGME-administered resident survey. The data may provide researchers with the most valuable information essential to complete a valid and reliable comparative analysis of these high-stakes survey instruments.

Chapter III

Methodology

This study was designed to compare the feedback of residents and faculty in ACGME-accredited programs sponsored by Methodist Hospital (Houston) regarding the overall satisfaction and recommendation of the program using archival data from the 2013-2014 academic year. The comparable surveys are based on items that focus on varying aspects of training that both participant groups utilize to provide feedback that will assist the sponsoring institution on evaluating the perception of the programs as well as their overall performance. The questions used in the survey relate to the overall quality of the training program through the insight of those who are significantly involved and affected by the program's performance. This chapter will describe the technique used to survey the residents and faculty, as it relates to the methodology of the survey instruments, the process the accrediting agency and the institution used to develop the survey instrument to collect valid and reliable data, and a description of the statistical methods used in analyzing the data.

Research Method

This is a quantitative study that examined the results of two independently run surveys - the annual resident and faculty surveys administered by the ACGME and the other by the Methodist Hospital (Houston) Office of Graduate Medical Education. The results produced data based on a 1-5 Likert scale using statistical analyses. Prior to the 2012-13 academic year the faculty survey was only administered at Methodist, absent of a national survey administered centrally by the ACGME. However, duplicate surveys conducted on both residents and faculty in training programs sponsored by Methodist,

have been administered since 2006 by the GME Office to compare the results of these participant groups.

Both survey instruments were distributed in similar manners, but relied solely on the administrator of the survey – ACGME or GME. The ACGME-administered survey was sent to all residents in ACGME-accredited residency and fellowship programs, as well as core faculty in their respective programs, via an email message in the spring of each year. The corresponding Methodist GME-administered survey was distributed through the New Innovations residency software system following completion of the ACGME survey, as to not “survey saturate” the subjects all within the same survey timeframe.

The ACGME and Methodist GME deployed comparable annual surveys. The ACGME did not provide specific survey items to non-residents or faculty, therefore the GME-administered survey was designed loosely off of the ACGME-designed survey instrument which was made available at one time and modified to reflect specific questions. The survey instruments used to evaluate the feedback of residents and faculty regarding their satisfaction with the program was determined by three distinct survey questions. The survey was directly impacted and affected by the processes established by the ACGME to safeguard resident experiences within their respective programs. These processes were duty hours, faculty interaction, evaluation, educational content, and resources.

Survey Sample

Administered each year since the beginning of program sponsorship in 2006, the ACGME and Methodist surveyed all residents and core faculty in Methodist-sponsored

programs. Only at the introduction of the Next Accreditation System (NAS) did the ACGME incrementally begin to survey the core faculty, with an instrument similar to the resident survey. The initial rollout of the NAS program, which began in 2012-13, included the annual survey of numerous programs, four of which trained residents at Methodist Hospital (Houston) at the time. All residents and faculty in these programs received both surveys. However, aggregated data for residents in programs with less than four responses were not provided. In order to increase the sample size and possible variability, this study used the 2013-14 data for both surveys, which included 15 surveyed program. Upon further review of the ACGME-administered survey, Holt et al. (2010) concluded that the ACGME survey is reliable and valid and provides a useful tool for the evaluation of residency programs.

The study sample was aggregated to protect resident and faculty anonymity. Table 1 lists the programs, sums the number of participants for each survey instrument, and indicates the number of responses. The number of residents invited to participate in both surveys was the same. The faculty participating in the ACGME-administered survey were pre-determined by core faculty designation. The GME Office-administered survey was inclusive of all faculty regardless of core faculty status.

Table 1

Residents and Faculty Survey Responses (Aggregate)

Residency Program*	Faculty Responses		Resident Responses	
	ACGME	Methodist	ACGME	Methodist
Program 1	100% (5/5)	100% (8/8)	100% (13/13)	100% (13/13)
Program 2	100% (5/5)	83% (5/6)	100% (12/12)	100% (12/12)
Program 3	92% (12/13)	18% (7/39)	100% (24/24)	100% (24/24)
Program 4	88% (7/8)	67% (6/9)	100% (9/9)	100% (9/9)
Program 5	75% (18/24)	10% (3/32)	100% (26/26)	100% (26/26)
Program 6	100% (5/5)	100% (13/13)	100% (12/12)	100% (12/12)
Program 7	80% (8/10)	70% (7/10)	100% (10/10)	100% (10/10)
Program 8	80% (4/5)	50% (2/4)	100% (4/4)	100% (4/4)
Program 9	100% (10/10)	11% (1/9)	100% (20/20)	100% (20/20)
Program 10	75% (15/20)	43% (3/7)	100% (12/12)	100% (12/12)
Program 11	80% (4/5)	100% (18/18)	100% (4/4)	100% (4/4)
Program 12	100% (7/7)	100% (18/18)	100% (30/30)	100% (30/30)
Program 13	100% (6/6)	70% (7/10)	100% (6/6)	100% (6/6)
Program 14	100% (12/12)	90% (9/10)	100% (19/19)	100% (19/19)
Program 15	100% (3/3)	33% (1/3)	100% (4/4)	100% (4/4)
Average Response Rate	91%	63%	100%	100%

Note. * Program name removed to provide anonymity of results

Survey Instrument

The ACGME-administered resident and faculty survey were only provided to those individuals identified by the program as participating in these categories. Therefore, the researcher did not have access to the individual items on the survey instrument and was unable to obtain the number of items asked on the annual survey. The survey results were grouped into categories important to the overall review of the program and are different based on the individual's role in the program. For example, the ACGME-administered resident survey included results categorized into duty hours, faculty, evaluation, educational content, resources, patient safety, and teamwork. The aggregated results also provided "Program Means at-a-glance" and the "Resident's

Overall Evaluation of the Program.” The ACGME-administered faculty survey included faculty supervision and teaching, educational content, resources, patient safety, and teamwork. These results also identified program means, similar to the resident results, as well as the “Faculty’s Overall Evaluation of the Program.”

The Methodist GME Office-administered resident survey contained 66 questions and was developed by the Designated Institutional Official (DIO), a PhD educator, with extensive experience in developing survey instruments. The faculty survey consisted of 45 questions. All survey items were based on a 5-point Likert scale, and the ratings were used to calculate an overall resident and faculty satisfaction score for each program.

Data Collection

Both the ACGME and GME-administered survey instruments were provided to all residents and core faculty in the spring of the 2013-2014 academic year. A link to access the survey was emailed to participants, complete with instructions on completing the survey. Participants were granted a specific date range, consistent with other programs, to complete the electronic survey. Throughout the process, the survey responses were anonymously collected and recorded. However, the GME office was able to identify the residents who had not completed the survey and reminder emails were sent on a regular basis until all respondents had an opportunity to respond. Since the beginning of the resident surveys in 2006, 100% of Methodist-sponsored residents responded to both surveys. In 2014, all residents in the programs shown in Table I above completed both surveys (100% response rate), while the majority of core faculty completed the surveys. The responses to each item were recorded electronically.

Data Analysis

The ACGME response data were analyzed and aggregated centrally at the ACGME headquarters in Chicago, IL who provided summary data analyzed for review and potential action to the sponsoring institution. The data were provided in a summary format to the sponsoring institution and respective program to ensure respondent anonymity. If a residency program recorded fewer than four responses, the data were not provided to the sponsoring institution. This was similar to the Methodist GME-sponsored survey results, to encourage truthful feedback and to protect anonymity for the individual programs and their participants. The GME-administered survey results were analyzed by the DIO and results presented comparatively across programs. This analysis identified programs with responses at, better, or worse than the institutional average, and provided information that related to two specific questions for both survey groups (residents and faculty): ACGME survey - would you choose the program again (residents)/overall quality of training (faculty) and would you recommend the program to a friend or colleague (both surveys/groups). The report was then presented to the GME Committee, programs, and institutional leadership for appropriate action.

Summary

The purpose of this chapter was to describe the important aspects of the research methodology associated with this study, explanation of the mechanism by which the sample was selected, a basic description of the procedure used to design the survey instrument and the collection of the response data, as well as to describe the procedures used to analyze the data.

Chapter IV

Results

The results of the surveys were run through SPSS software and results were provided detailing the mean, median, standard deviation, range, and n for each of the 15 programs included in the ACGME and GME-administered surveys. The ACGME survey results only provide aggregated data, therefore no additional analyses were completed. However, the GME-administered survey for both participant groups provided an opportunity to review the data more significantly and provide plot lines for each, signifying variances in the responses. The research proposal hypothesized variances between responses to two questions on the annual GME-administered faculty and resident survey. In addition, the variances between the GME-administered survey results and the ACGME survey results in response to overall quality were expected to show differences in responses.

Findings

ACGME Resident and Faculty Survey

To ensure confidentiality of the survey participants and establish national program benchmarks, the ACGME aggregates data and only provides a rating based on a 1-5 Likert scale of: very negative, negative, neutral, positive, very positive. Table 2 provided results from the resident and faculty survey, where participants rated the overall quality of the training provided in their respective programs. The results could not be properly analyzed based on only two data points for each program. However, the variance between the two participant groups could be assessed at face value to determine very basic variances between responses.

Out of 36 Methodist-sponsored, ACGME-accredited programs eligible to participate in the annual survey, only 15 programs received responses due to small sample sizes. The ACGME does not provide results for programs with fewer than three responses on the faculty or resident survey. Due to multiple, small fellowship programs falling into this category, several programs were not included.

The ACGME provides no detailed demographic information on the survey participants other than the sample size and the aggregated rating of all participants. While the demographics of the resident participants could be determined (since the response rate was 100%), it would be difficult to identify and assess demographics for faculty respondents. This is not considered a shortcoming, however, because this research study was not constructed to analyze specific data points about each sample. Therefore, it is possible that variables that may have impacted the outcome are not included in the analysis. Table 2 describes the aggregated results from the faculty and resident survey of each program, as well as the difference between the two values.

In almost three-quarters of the programs included in this study (11 of 15), faculty respondents rated the training program either the same or more favorably when referring to the quality of the training program in comparison with the resident respondents.

Table 2

ACGME Resident and Faculty Survey Aggregated Data on Overall Evaluation of Respective Training Program

Program	Resident Response	Faculty Response	Variance
Program 1	4.36	5.00	-0.64
Program 2	4.83	5.00	-0.17
Program 3	4.29	4.67	-0.38
Program 4	4.67	4.33	0.34
Program 5	4.16	4.44	-0.28
Program 6	4.08	4.80	-0.72
Program 7	5.00	5.00	0.00
Program 8	3.50	4.50	-1.00
Program 9	4.65	5.00	-0.35
Program 10	4.50	4.93	-0.43
Program 11	4.50	4.50	0.00
Program 12	4.40	5.00	-0.60
Program 13	4.83	5.00	-0.17
Program 14	4.53	4.83	-0.30
Program 15	5.00	5.00	0.00

Programs with No Variance. The data from Programs 7, 11, and 15 demonstrated no variance between the resident and faculty responses. While it is important to note that the residents and faculty were in alignment on their responses to the survey, it should be noted that Programs 11 (4 faculty responses and 4 resident responses) and 15 (3 faculty responses and 4 resident responses) had relatively small sample sizes, while Program 7 had a greater number of faculty and resident responses to the survey (8 faculty responses and 10 resident responses).

Programs with Variances Between -0.01 and -0.50. In 7 of 15 programs (47%), the resident to faculty response variance was less than significant (< -1.00) and ranged from -0.01 to -0.50. The programs that fell within this range were:

Program 2, with a very small sample size, had a very insignificant variance of -0.17 and tied with Program 13 for the lowest of negative variances. These results only signified a slight difference in response.

Program 3, also a program with a small sample size, had a -0.38 difference in results. However, it should be noted that aggregated resident data showed a 4.29 while the fellow data was 4.67. The program remained in good response range, but aggregated responses were lower than 11 of the resident responses in other programs and 10 of the faculty responses.

Program 5, one of the larger programs surveyed, exhibited a low, -0.28 variance. This program had the third lowest resident rating (4.16) and the lowest faculty rating (4.33) of all programs. Despite this, the variance still did not show significance in the variance of the resident to faculty response.

Program 9, another program among the larger sample sizes, exhibited a minor variance of -0.35. The residents and faculty rated the program somewhat consistently with a perfect 5.00 rating reflected by the faculty.

Program 10 exhibited a variance close to the midpoint range. The residents rated the program 4.50, while the faculty counterparts rated the program 4.93, a variance of -0.43.

Program 13 tied with Program 2 for the lowest variance between resident and faculty responses (-0.17). In similar outcomes, the residents responded with a 4.83 while the faculty posted a 5.00 response.

Program 14, with a respectable sample size, exhibited a variance of -0.30. While the 12 resident and 19 faculty survey participants failed to rate the program at the highest overall rating, the variance did not show significance in the overall results.

Programs with Variances Between -0.51 and -0.99. In 3 of 15 programs (20%), the resident to faculty response variance was less than significant and ranged from -0.51 to < -1.00 (significant difference). The programs that exhibited results within this range were:

Program 1, with a variance of -0.64, did not constitute a significant difference, had a relatively small sample size, and was one of only three programs that exhibited a variance greater than -0.50, but less than -1.00.

Program 6 marked the closest variance to what determined a significant difference with -0.72. This program, consisting of a small sample size, exhibited the second lowest resident aggregated response of 4.08.

Program 12 had the largest resident response sample size (30) out of all 15 programs and a reasonably sized faculty sample size of seven respondents. The variance of -0.60 was less than significant.

Programs with a Variance Showing Significant Difference of -1.00 or Greater. Data from Program 8 revealed a -1.00 variance between the resident and faculty survey responses. This exhibited a significant difference between the response of the resident and faculty respondents.

Programs Noting a Positive Variance. In contrast, faculty in only 1 out of 15 programs (.07%) rated the overall quality of the program lower than that of residents in

the program on the ACGME survey (Program 4). This denotes a slight variance (.34), but without additional details, the variance of responses is unremarkable.

GME-administered Resident and Faculty Survey Q42 and Q52

The GME-administered resident and faculty survey results were analyzed based on two similar questions that each sample group answered. First, item 42 on the faculty survey was “Would you recommend this program to your professional colleagues and potential residents and fellows?” Item 52 on the resident survey similarly stated, “I would recommend my training program to a friend.” On a 1-5 Likert scale, the participants could choose from the following options: Recommend highly, Recommend with a few reservations, Recommend with some reservations, Recommend with significant reservations, or Would not recommend. Table 3 provides the raw, comparative data for items 42 and 52. Figure 1 outlines a diagram of the rankings of the faculty in each program on item 42. Figure 2 outlines a diagram of the ratings of the resident responses in each program on item 52. Figure 3 provides a comparative analysis of the variances between the responses of resident and faculty for these two items.

The first analysis was conducted on item 42 (Q42) of the faculty survey and item 52 (Q52) of the resident survey. The items focused on whether or not the resident or faculty member would recommend their program to professional colleagues or a friend. The comparative data from Q42 and Q52 identified residents in 67% of the programs (10 of 15 programs) included in the survey rated their programs lower than their faculty, as displayed in Figure 3.

Table 3

Comparative Analysis of Raw Data from Questions 42 (Faculty) and 52 (Resident)

Comparison #1	Resident Survey Q52			Faculty Survey Q42			Difference Res-Fac
	Mean	SD	n	Mean	SD	n	
Department							
Program 1	4.1429	1.35062	14	4.7500	0.46291	8	-0.6071
Program 2	4.7500	0.45227	12	5.0000	0.00000	5	-0.2500
Program 3	4.5000	0.65938	24	4.2857	0.75593	7	0.2143
Program 4	4.4444	0.72648	9	4.3333	1.03280	6	0.1111
Program 5	4.1538	0.96715	26	4.6667	0.57735	3	-0.5129
Program 6	4.0833	0.79296	12	4.6154	0.50637	13	-0.5321
Program 7	5.0000	0.00000	10	4.8571	0.37796	7	0.1429
Program 8	4.0000	0.81650	4	5.0000	0.00000	2	-1.0000
Program 9	4.5500	0.82558	20	5.0000	0.00000	1	-0.4500
Program 10	4.5000	0.67420	12	5.0000	0.00000	3	-0.5000
Program 11	4.0000	0.81650	4	4.0000	1.41421	2	0.0000
Program 12	4.7000	0.59596	30	4.7778	0.42779	18	-0.0778
Program 13	5.0000	0.00000	6	5.0000	0.00000	7	0.0000
Program 14	4.7368	0.45241	19	4.8000	0.42164	10	-0.0632
Program 15	4.7500	0.50000	4	5.0000	0.00000	1	-0.2500

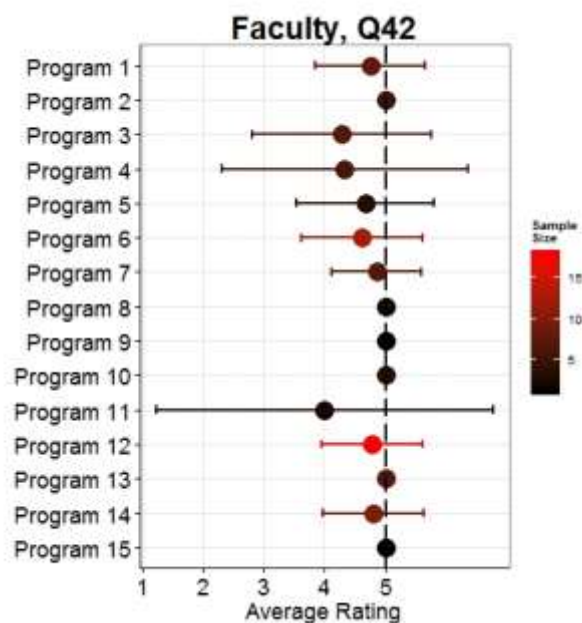


Figure 1 GME-administered Faculty Survey Question 42 - “Would you recommend this program to your professional colleagues and potential residents and fellows?”

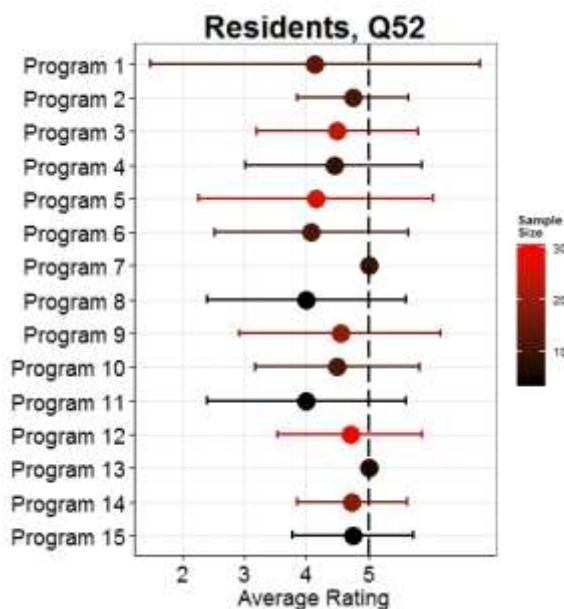


Figure 2 GME-administered Resident Survey Question 52 - “I would recommend my training program to a friend.”

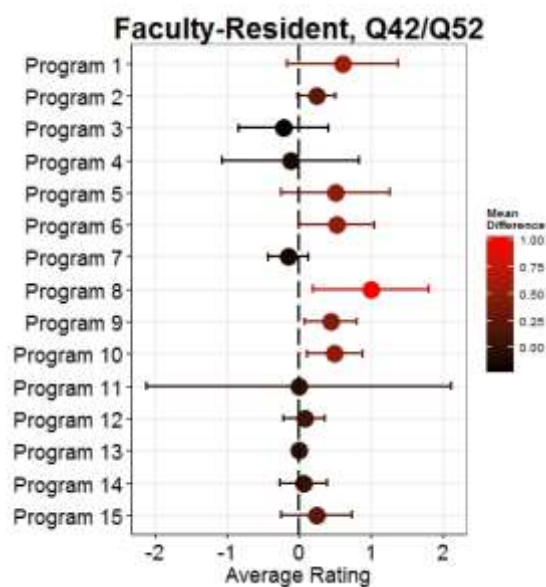


Figure 3 GME-administered Resident and Faculty Survey Comparison of Questions 42 (Faculty) and Question 52 (Resident)

Programs with No Variance. There were two programs that demonstrated a 0.00 variance between resident and faculty results. Program 11, with a small sample size of

four residents and faculty in each survey, rated the program a consistent 4.00; while Program 13, with six residents and two faculty participants agreed on a perfect 5.00 score of their programs. The absence of a variance for these programs reflects agreement between the participants on the level of whether they would recommend the program to others.

Programs with Variances Between -0.01 and -0.50. There were six programs (40%) that showed a slim variance of -.01 and -0.50 between the responses of the resident and faculty survey participants. These programs, included:

Program 2 consisted of 12 residents and five faculty participants and demonstrated a -0.2500 variance. With an aggregated result of 4.75 for residents and a 5.00 for faculty, this insignificant variance reflects similarity in responses.

Program 9 consisted of a single faculty respondent that rated the program at a 5.00, while the 20 resident respondents rated the program a respectable 4.550.

Program 10 reflected a small faculty sample size of only three respondents and a medium-sized resident participant size of 12 respondents. The variance of -0.50 reflected a 4.50 rating by the residents and a 5.00 rating by the faculty.

Program 12, the program with the largest sample size of both residents (30) and faculty (18), demonstrated a very minimal variance of -0.0778. This is quite remarkable considering the sample size. Residents rated the program 4.700 while the faculty bested it with an aggregated 4.778 rating.

Program 14 respondents had an even smaller variance of -0.0632 in a similarly large program with 19 resident and 10 faculty respondents. The difference between

4.7368 and 4.800 signifies almost an exact relationship between the possibility of recommending the program to others, which is relatively high.

Program 15, a very small program with only four resident respondents and one faculty, demonstrated a -0.2500 variance which is still insignificant considering the resident rating of 4.75 and the faculty rating of 5.00.

Programs with Variances Between -0.51 and -0.99. The data presented three programs with variances between -0.51 and up to -0.99. These programs, all at the lower end of the scale, provided the research with additional information on slight variances between the resident and faculty responses on the surveys. These programs consisted of:

Program 1, with a reasonable sample size of 14 residents and eight faculty, showed a variance of -0.6071. The variance isn't significant. However, the 4.1429 rating by the residents sheds light on potential attention that needs to be placed on why the average is so close to "recommend with a few reservations."

Program 5 represents one of the larger programs, consisting of 26 resident participants but only three faculty. The faculty rated the program a mean of 4.6667, while the residents rated it third lowest among the resident responses in the 15 programs at 4.1538, which still only signaled a -0.5129 variance.

Program 6, representing only a -0.5321 variance, is an equally matched resident (12) to faculty ratio (13). Although the variance does not reach significance, the concern is the lowest resident ranking on this Q52 at 4.0833 compared to a faculty mean of 4.6154.

Despite the less than significant variance of these program outcomes, there remains concern about the low mean averages represented. However, the research was

developed to determine whether variances among the residents and faculty are present and in these instances there are no significant differences.

Programs with a Variance Showing Significant Difference of -1.00 or Greater.

Consistent with the ACGME survey results, the variance on the Q42/Q52 comparison between the residents and faculty in Program 8 was a -1.00. This signifies a significant difference on the internal and external survey regarding factors that contribute to satisfaction within the program. It also corroborates the responses of both faculty and residents regardless of the survey instrument being conducted internally (GME-administered) versus externally (ACGME-administered). An hypothesis was that participants may respond more favorably on an external survey than they would on an internal survey. However, this is not supported based on these findings.

Programs Noting a Positive Variance. Three of 15 programs (20%), denoted a positive variance, which signified a resident rating that was greater than that of the faculty rating when comparing Q42 and Q52. Although insignificant, it still indicated that faculty in programs 3 (0.2143), 4 (0.1111), and 7 (0.1429) were less likely to recommend the program than their resident counterparts in the program.

GME-administered Resident and Faculty Survey Q43 and Q53

The second comparative analysis was based on item 43 of the faculty survey, “Overall, how would you rate the training that residents or fellows received in this program?” Rated on a 1-5 Likert scale, faculty had the following options: Poor, Fair, Good, Excellent, or Superior. On a similar scale, but with different selection options, residents rated item 53, “Which of the following best summarizes your opinion of your residency program?” using the following choices: A very negative experience, a negative

experience, a neutral experience, a good experience, or the best possible experience.

Table 4 provides the raw, comparative data for items 42 and 52. Figure 4 outlines a diagram of the rankings of the faculty in each program on item 43. Figure 5 outlines a diagram of the ratings of the resident responses in each program on item 53. Figure 6 provides a comparative analysis of the variances between the responses of resident and faculty for these two items.

Table 4

Comparative Analysis of Raw Data from Questions 43 (Faculty) and 53 (Resident)

Comparison #2	Resident Survey Q53			Faculty Survey Q43			Difference
	Department	Mean	SD	n	Mean	SD	
Program 1	4.1429	1.02711	14	4.5000	0.75593	8	-0.3571
Program 2	4.7500	0.45227	12	4.6000	0.54772	5	0.1500
Program 3	4.1250	0.74089	24	4.4286	0.78680	7	-0.3036
Program 4	4.3333	0.50000	9	3.6667	0.51640	6	0.6666
Program 5	3.8462	0.78446	26	4.6667	0.57735	3	-0.8205
Program 6	4.0833	0.51493	12	4.3077	0.75107	13	-0.2244
Program 7	5.0000	0.00000	10	4.4286	0.78680	7	0.5714
Program 8	3.5000	0.57735	4	4.5000	0.70711	2	-1.0000
Program 9	4.6500	0.67082	20	5.0000	0.00000	1	-0.3500
Program 10	4.5000	0.67420	12	5.0000	0.00000	3	-0.5000
Program 11	3.7500	0.50000	4	4.5000	0.70711	2	-0.7500
Program 12	4.4333	0.62606	30	4.2222	0.73208	18	0.2111
Program 13	4.8333	0.40825	6	4.8571	0.37796	7	-0.0238
Program 14	4.6316	0.59726	19	4.5000	0.70711	10	0.1316
Program 15	4.5000	0.57735	4	4.0000	0.00000	1	0.5000

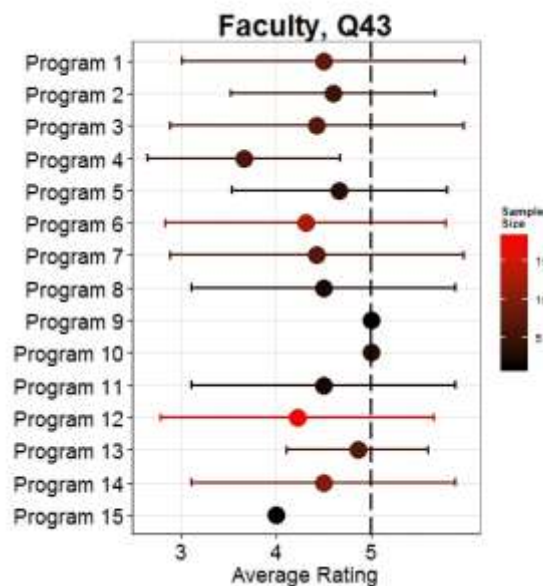


Figure 4 GME-administered Faculty Survey Question 43 – “Overall, how would you rate the training that residents or fellows received in this program?”

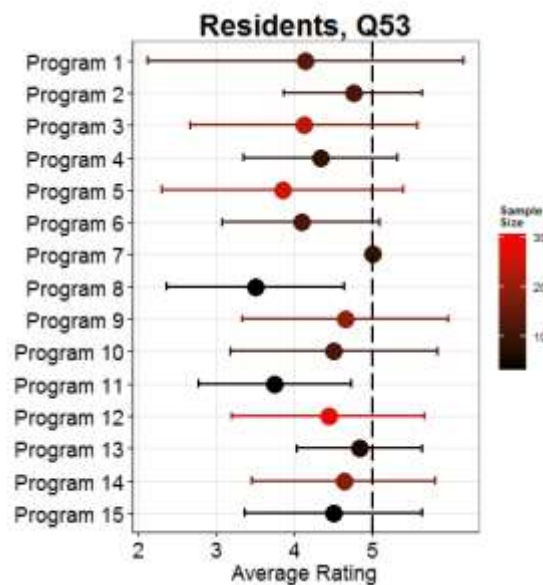


Figure 5 GME-administered Resident Survey Question 53 – “Which of the following best summarizes your opinion of your residency program?”

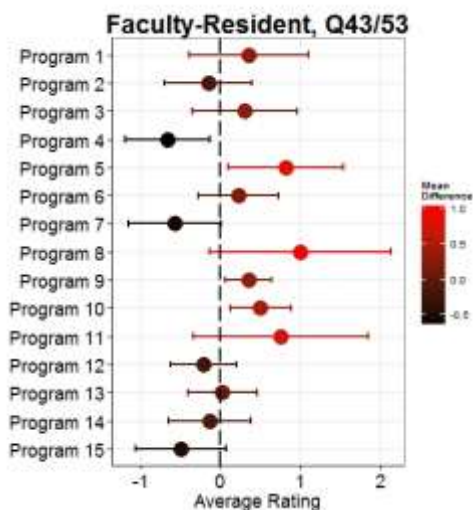


Figure 6 GME-administered Resident and Faculty Survey Comparison of Questions 43 (Faculty) and Question 53 (Resident)

The results, while similar to the comparative analysis between Q42 and Q52, contained some unique outcomes. Of the 15 programs analyzed, nine rated their program lower than the faculty who also completed the survey, with six of the nine programs being the same as in the Q42 and Q52 comparison. In addition, the data revealed that three programs recorded aggregated responses under a 4.00 mean average. In comparison no residents or fellows had a mean less than 4.00 on the ACGME survey and only one was recorded on the Q42/Q52 item assessment.

Programs with No Variance. Unlike the ACGME survey comparison results and the results from the Q42/Q52 comparison, there were no programs that exhibited variances of 0.00, which would have signified corresponding responses to the items. This illustrates that the residents and faculty responded differently in each program.

Programs with Variances Between -0.01 and -0.50. Forty percent (6 of 15) of programs exhibited a variance between -0.01 and -0.50 on items Q43 and Q53. These

included one program with a small sample size and the other five with significant sample sizes.

Programs 1, 3, and 9 all have medium to large sample sizes of residents and demonstrated a mean variance between -0.3036 and -0.3571. Programs 1 and 3 had similar faculty sample sizes. However, Program 9 consisted of a response from a single faculty participant which likely impacted the results.

Program 6 consisted of a medium sample size of both residents and faculty with a variance of -0.2244. Nevertheless, both rated the program in the lower range of responses when compared to other programs with a mean of 4.0833 and 4.3077, respectively.

Program 10 exhibited a variance of -0.50. However, the 12 resident respondents and three faculty respondents rated the program very well with a mean of 4.50 and 5.00, respectively.

Programs with Variances Between -0.51 and -0.99. Only two of 15 programs saw a variance between -0.051 and -0.099. Most notable was the low mean average of the resident responses, in comparison to the faculty.

Program 5 showed a mean variance of -0.8205. With 26 residents participating, in this program, these data represent the second largest sample size, yet it also exhibits a small faculty sample size of three. The variance is -0.1795 away from being considered a significant difference.

Program 11 is a small program with only four residents and two faculty responding. Despite the small sample size, the variance is -0.7500 and also noted a resident mean lower than 4.00 at 3.75.

Programs with a Variance Showing Significant Difference of -1.00 or Greater.

As in the other comparative results, Program 8 consistently exhibited a variance of -1.00, a significant difference in results. This remains important to the overall consistency of responses and could reflect the impact of a small sample size when the items are answered consistently by both participants groups.

Programs Noting a Positive Variance. In a surprising result, six programs revealed a variance above 0.00, indicating that the faculty in these programs had a lower overall opinion of the program than the residents. The programs that contributed to this category are Programs 2, 4, 7, 12, 14, and 15. The programs with the least variance of faculty ratings lower than the residents were Program 2 and Program 14, with 0.1500 and 0.1316, respectively. The mean for both the residents (Program 2 - 4.75; Program 14 - 4.60) and faculty (Program 2 - 4.60; Program 14 - 4.50) still represent a positive rating for the programs.

Program 12 had the largest sample size of residents and faculty, yet demonstrated an equally insignificant 0.2111 variance. The resident mean of 4.433 and faculty mean of 4.222 showed that despite the size of the program, the residents and faculty are in relative alignment when it comes to overall assessment of the program.

Program 4 exposed the only program where the overall assessment of the program fell below 4.00 for the faculty mean (3.667) and while not significant, the variance of 0.6666 raises a very interesting point about the low overall perception of the program by both sample groups.

Program 7 residents rated the program with a mean of 5.00, while faculty mean was 4.4286. This reflects a possible slight misperception of the program by the faculty considering their residents have the highest overall assessment of the program possible.

Program 15 represented a very small sample size of four residents and one faculty. The variance of 0.500 represents the difference between a mean resident response of 'good' and a mean faculty response of 'fair.' While not statistically significant, this also represented a variance that should be monitored as appropriate.

Research Question

The purpose of the study was to assess the overall quality items on the ACGME-administered survey, items 42 and 52, and items 43 and 53 on the GME-administered survey to determine if variances existed in the two overall quality and satisfaction items on the GME-administered survey and whether there were differences in the overall satisfaction assessment of residents and faculty respondents on the ACGME-administered survey. These items on the surveys were closely associated for the two populations and provided the opportunity to plot the responses, as well as the mean difference of the comparisons. For the purpose of the research and taking into account the small sample sizes of the respective participant groups, a mean difference of -1.00 would signify a significant difference between the response of residents and fellows on the surveys.

The comparative analysis between the survey responses will answer the question as to whether or not a significant variance between responses to the comparable survey items was present. It was expected that the results could provide the programs identified to have a significant variance with an opportunity to address the concerns of both participant groups in an effort to better align their responses in future surveys.

Chapter V

Discussion

The sample size from the programs at Methodist Hospital (Houston) included in the research was small, in most instances, and therefore may have impacted the comparative analysis between the residents and faculty results on the GME-administered and ACGME surveys. Despite the sample size and varying factors that could have also influenced the outcomes of the survey result comparisons, there were some programs that exhibited variances between the resident and faculty responses.

The GME-administered resident and faculty survey results provided an opportunity for additional assessment of the ratings of each participant group and the evaluation of their respective programs on two similar items. In each of these questions, comparisons were made within the program and a variance between the faculty and resident response was tabulated to identify significant variances in the responses. Similar to the ACGME survey, for the purpose of this research, a significant difference in responses equates to a -1.000 variance or greater.

ACGME-administered Survey

In the assessment of the results of the aggregated ACGME-administered survey and the variances between resident and faculty responses, a few important facts are represented. In the absence of individualized participant responses from the ACGME, it is difficult to assess the responses from a range and standard deviation perspective. However, from the aggregated results available, it can be concluded that the variances between the responses does not represent a significant difference between faculty and

residents when providing feedback on the overall evaluation of their respective training programs.

In only one instance (Program 8), the results highlighted a significant difference of -1.00 in the resident versus faculty response, with the residents rating the program 3.50 and the faculty rating it 4.50. Having firsthand knowledge of this program and the residents who provided the feedback, it was evident that the variance was a result of discontent in a program that had faced challenges, such as program director and faculty modifications, scheduling issues, and resentment by the residents that expressed a lack of preparation by the program to prepare them for practice. It is important to note that this is a very small program, where a couple of residents had the ability to significantly determine the overall outcome.

Assessing any specific features or notable trends in the individualized program data is difficult considering the responses on each survey were aggregated into a program average. The research did determine that 80% of programs showed a variance in responses, thus signifying a difference in opinion of the program. The residents, in most cases, had a lower assessment of the program than their faculty counterparts, except in two programs where the faculty rated the program slightly lower than the residents. With 94% of resident and faculty participants providing “positive” or “very positive” responses to the survey, all but one program showed signs of resident and faculty satisfaction despite these variances. Despite these aggregated responses and minor variances, this instrument continues to provide national benchmarking data that remains a useful tool for the ACGME and sponsoring institutions in comparative analyses between programs and

institutions accredited by the agency. Please note that this survey will continue to be used in the future, as it is a mandatory part of the accreditation process.

GME-administered Survey

Question 42 Compared to Question 43. The comparative analysis of items Q42/Q52 on the GME-administered survey revealed that 13 of 15 programs (87%) indicated a variance in their assessment of the program in response to the level at which they would recommend the program. This is an increase of 7% from the ACGME data results. This may signify that respondents were more willing to be more critical of the programs, without fear of external oversight and repercussions. Although not significant at a .500 level, it was useful to realize that residents would still recommend the program with a few reservations. Similar to the ACGME survey, a significant difference (-1.00 or greater) between the resident and faculty responses was only identified in Program 8. Once more, knowing the demographics of this program and the internal issues affecting it at the time of the survey, it is not surprising that the responses to the ACGME and GME-administered surveys were identical.

Of note in the comparison of items 42 and 52, was the slight increase from one program in the ACGME comparison to three programs that noted a positive variance, signifying a slightly lower faculty rating of the program. This is noted as an anomaly of sorts, considering that faculty teachers develop the clinical content of the program and therefore may be expected to consistently rate the program higher than residents. While this is only an assertion, there were likely other aspects of the faculty insight that played into the results that may or may not have been a direct result of their participation in the program.

Program 3 is a larger program with 24 residents and 7 faculty completing the survey. Programs 4 and 7 had smaller sample sizes, yet still reflected faculty recommendation of the program lower than the residents. Again, experience with each of these programs on a personal level allowed recollection of the various adverse events occurring in proximity to the time that the annual survey was conducted, possibly contributing to slight faculty discontent. However, in all programs, the faculty still rated the program higher than a 4.00 or “positive”, on a 5-point Likert scale. Considering the fact that these are instructors in the respective programs with insight into the development and maintenance of the program, this disconnect, regardless of significance, should be closely monitored to ensure attention to bringing these back in alignment.

Question 43 Compared to Question 53. The results of the comparative analysis of Q43/Q53 yielded some unexpected results, most notably the increased number of faculty who rated the program lower than the residents (40%) and the fact that all programs demonstrated a variance of some degree. The data from this analysis provide the programs and institution with the ability to address the concerns amongst the faculty in these programs and to ensure that it does not have a significant effect on the resident survey. It is important to note that Program 4 exhibited this variance pattern on both surveys in the comparative survey items. Additional information would be needed to evaluate these results and begin to address the concerns of the faculty. Program 8, again, demonstrated the only significant difference in relation to the overall assessment of the program by these respondents. Indicative of the other two survey item comparisons, this corroborated the discontent by the residents in the program and the previously noted discord within the program.

The faculty results may have presented a bias based on their view of varying perspectives of training when it comes to answering “would recommend”, likely comparing their own training environment or experiences. They may also be more familiar with what the program has to offer in association with a lack of program maturity that residents might not appreciate in their role as trainee. In addition, generational gaps between faculty and residents may contribute to the differences in responses. Faculty, most likely baby boomers, generation X, and even some builders, have a very specific recollection of their own training and therefore have different expectations of what training should look like. Many of these had no duty hour limits, more autonomy, and felt that they were responsible and defined by their profession, which was considered a noble one (Jenkins, 2015). In stark contrast to what they may be accustomed to in their own training programs, faculty must possess flexibility and adaptability to successfully work with Generation Y residents. Faculty are often frustrated with this generation and the way that they approach the workforce with limited duty hours and more of a shiftwork mentality. However, with the largest segment of the workforce represented by this generation, faculty will need to adapt to work within a certain framework that could impact the overall assessment of the program (Eckleberry-Hunt, & Tucciarone, 2011).

Comparison Between ACGME and GME-administered Survey

Although one hypothesis of this study was that residents and faculty would provide different answers on the external ACGME-administered survey compared to the internal GME-administered survey, this was quite difficult to confirm. It is important to note that the questions did not effectively correlate between the two instruments.

Q43/Q53 comes closest to assessing the overall rating of the programs. However, there is still a bit of variance in the manner in which the question is posed on the GME-administered survey and the aggregation of data to determine the overall rating on the ACGME-administered survey. In a comparison of items Q43 and Q53 on the GME-administered survey and the aggregated ACGME-administered survey aggregated results for each program, there are a few similarities.

The most consistent similarity is a significant difference of -1.00 variance on both GME-administered survey question comparisons, as well as on the ACGME survey, by Program 8 participants. This signifies the reliability of the data as the same faculty and residents participated in the survey and the same results were gleaned from each instrument and item. However, as previously stated, there were some inclinations that this program exhibited some frustration among the residents and that half of the residents may have responded similarly on purpose. This cannot be validated, however.

Limitations

Both the ACGME and GME-administered surveys provide potential for improvement and contain limitations that could impact results. The limitations identified throughout the analysis of the data may be significant enough to provide shifts between the faculty and resident responses, albeit minimal. If the responses to the individual items from the ACGME survey were provided to sponsoring institution, the two independent, yet comparable surveys would be easier to compare. Based on the assessment of the researcher, the limitations identified in the ACGME and GME-administered surveys regarding sample size, would be difficult to modify, if not impossible due to the accredited resident complement and number of faculty in these small programs.

Aggregated Data. The ACGME survey is developed to ensure consistency among the nation's accredited residency and fellowship programs. To ensure that the survey is confidential, there are no individual survey responses provided to institutions for review. The aggregated and categorized results are then provided to the sponsoring institution and respective programs for review and attention. As a result of having only the aggregated data, it is impossible for the institution to assess individual survey items. Therefore, the researcher was unable to provide and examine detailed information on the mean, median, standard deviation, and most importantly, develop plot diagrams similar to those on the GME-administered survey. Not having the ability to drill down into these factors makes it increasingly more difficult to assess outlier responses that impact the overall rating of the program.

Sample Size. In addition to not having the ability to drill down on the ACGME data, having small sample sizes in several of the programs eliminated them from being included in the research. Due to small faculty sample sizes (less than 4 responses), 8 out of 28 programs (29%) were not represented in the survey results. Even more prevalent with the resident survey, 11 out of 28 programs (39%) failed to have adequate resident responses to receive a report from the ACGME on the results of the survey. Due to these small sample sizes, the programs are permanently eliminated from receiving detailed analysis of the survey results. This creates a great handicap to programs that may need feedback to improve their programs as a result of information gleaned from the results.

Similar to the ACGME-administered survey, sample size for both resident and faculty GME-administered surveys hinder the ability to effectively analyze the results for either. However, the benefit of the GME survey is that despite the small sizes,

comparative analyses on the results can still occur. The small size of several of the programs often does hinder a program's and the institution's ability to address issues that may be occurring in a specific program. The sample size will not change for a majority of the programs since they represent a full resident complement and have the number of core faculty required by the ACGME. Therefore, the sample size will continue to be a limitation that is not easily addressed.

“Faking Good.” Another limitation of this research study is the ability to know that the participants are answering the external survey truthfully. An article written primarily to highlight the act of “faking it” on employer personality tests, also focused on the term social desirability (Connolly, 2014). Social desirability is the tendency of a test taker, or in this case, a survey participant, to respond in a manner in which the responses they provide are socially acceptable and within the norms of the test giver or evaluation provider. This is particularly important when referring to agencies that are responsible for accrediting residency programs. Although it is infrequent, the ACGME has sent a task force on a site visit to a sponsoring institution based on troubling resident or faculty survey outcomes. While this is unlikely in most instances, it has occurred, and participants may want to protect their institution, training, and/or residents or faculty at all costs. Therefore, they may respond in a manner to prevent any red flags or cause for concern.

Faking responses to create a level of social desirability, as previously described, is evident with some programs. Programs that have found themselves at the lower spectrum of the survey outcomes when compared against other programs and the institutional average have been accused of ‘teaching to the test’ to improve their scores. While this is

possibly mere hearsay, as it has not been confirmed by any independent measures, it speaks to a limitation of the study when trying to ensure that the responses are accurate representations of the feedback of resident and faculty. Being an internally-based survey, many survey participants may fear that the results can be identified and that it may impact their program in a negative way. This creates a level of insecurity in participants, and thus the potential for surveys to consistently provide an accurate depiction of the program environment.

Conclusions and Future Research

Comparative analyses of data obtained from the ACGME-administered survey and GME-administered survey consistently provided data points that were representative of the other without remarkable differences. On both item comparisons from the GME-administered survey, the same programs seemed to have similar result outcomes. In comparison with the ACGME survey, Program 8 showed congruence with the same significant deviation. However, it is important to note that the sample sizes in many of the programs were relatively small. The program size however, is not expected to increase; therefore this will be an ongoing concern. It should be noted that these variances can be used to effectively address concerns within the programs that exhibited variances, albeit minimal, to better engage residents and faculty in the outcomes associated.

This research study provided a preliminary assessment of comparative results between faculty and resident respondents for one year of a survey that is conducted annually for the purpose of benchmarking the programs. Based on the initial assessment of the outcomes of this research, there are opportunities present to enhance the outcome

analysis and provide training programs and institutions with the ability to address concerns within their residency programs. In addition, there is a benefit to providing respondents with text fields on the ACGME survey to provide written feedback and provide a qualitative assessment. With specific attention placed upon these surveys and the uniqueness of having an internal survey that can also assess those smaller programs, programs can begin to respond to identified concerns when variances between resident and faculty responses are clarified.

Although it was not part of this research proposal, it would be interesting to begin evaluating the program level of the residents and the longevity of faculty in the programs for the participants of the surveys. Girard et al. (2006) hypothesized that there is a difference between satisfaction levels based on the level of the resident and whether or not they are in their initial training program or a specialty program/fellowship. This is quite possibly true in the ACGME and GME-administered surveys, as well. Although not currently quantified, as residents mature and begin to find their comfort zone in the program or they enter into a specialty-specific fellowship program, they tend to be more satisfied on the surface. It would be quite interesting to see if this holds true when comparing the Houston Methodist residents. In addition, it would be interesting to compare whether the same holds true for faculty the longer they teach in the program. While there are no comparative data for this phenomenon, it is possible that it would be less pronounced than the resident counterparts. However, it would offer some additional insight into the importance of faculty integration and satisfaction with the program.

With the ability to drill down into the data without compromising confidentiality of the participants, it may also be interesting to study variances as it relates to the other

critical aspects of training, such as duty hours, faculty engagement in teaching, and institutional resources. The ACGME survey, as well as the GME-administered survey, has delineated sections of the survey that highlight various aspects of training that may present more significant variances. The potential variances between the responses to survey items specifically relating to educational content may provide additional insight into opportunities for programmatic improvements that could impact program citations and/or the mandatory, annual resident milestones. However, without the ability to investigate variances, identify potential impact to the overall satisfaction of the residents and faculty, and use the findings to improve the programs, the usage of the data is limited.

Finally, these data could be utilized in a fundamental manner to target specific faculty development concepts that ultimately impact training and program-specific outcomes. It is the responsibility of all training programs to equip faculty with the necessary tools to ensure that the trainees are receiving appropriate guidance and feedback within their clinical learning environment. The ultimate goal of every program is to graduate physicians who will utilize the skills and training they received to be successful, licensed, independent practitioners.

Summary

The continuation of these surveys is guaranteed, as they are used by programs, institutions, and accrediting agencies to create benchmarks and globally assess programs across the nation and internally. It is imperative that the programs utilize the information gleaned from the comparative analyses to address variances between the residents and faculty in their programs due to the importance of alignment. The data provided in this

research are indicative of the continued assessment that can be conducted in various aspects of training. The future research opportunities offer programs and institutions with the ability to not simply address concerns, but to respond in a manner that will ultimately impact the clinical learning environment.

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