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MEASURING FACULTY MOTIVATION AND ENGAGEMENT THROUGH AN
INSTITUTIONALLY SUPPORTED FACULTY DEVELOPMENT PROGRAM AT AN
ACADEMIC HEALTHCARE CENTER

By

Elizabeth S. Rose

B.S. University of Massachusetts Lowell, 2012

M.P.H. University of New England, 2014

A DISSERTATION

Presented to the Affiliated Faculty of

The College of Graduate and Professional Studies at the University of New England

Submitted in Partial Fulfillment of Requirements

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Elizabeth S. Rose
May, 2021
Educational Leadership

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ABSTRACT

Trends in the literature suggest that institutional support, defined as provisions for balancing work demands, schedule, and protected time, is a critical factor consistent with institutional academic success and an increase in faculty satisfaction. Competing factors including societal scrutiny, cost containment the safety and effectiveness of academic healthcare institutions, faculty recruitment and retention, increasing expectations for faculty, and pressures for high-functioning productivity can lead to feelings of ineffectiveness for faculty.

This summative program evaluation focused on the success of the Scholars Program, an institutionally supported faculty development program. The researcher sought to identify and describe faculty perceptions of the program's effectiveness as defined by two metrics: the faculty member's self-perceived motivation to remain in an academic career path and their engagement in academics after they graduated the Scholars Program.

The study was guided by two research questions.

- 1) How do faculty members who participated in the Scholars Program describe its influence on their engagement in academic activities supported by the program?
- 2) Do the curriculum vitae (CV) of faculty members who have participated in the Scholars Program demonstrate sustained academic productivity through evidence of scholarly

work as defined by the Tufts School of Medicine (TUSM) criteria for academic appointment and promotion?

Participants consisted of scholars who graduated in the years 2018, 2019 and 2020. This program evaluation used an embedded mixed methodology to identify the qualitative and quantifiable outcomes of the Scholars Program specific to faculty motivation and engagement in academics. The qualitative themes describe the programmatic experiences of the participants and how those programmatic elements effect their self-perceived motivation to participate in scholarly activity. The quantitative data showed participants demonstrated engagement in scholarly work after graduating the scholars program. The findings suggest that participants enjoyed and found value in the program.

Recommendations include: Institutions who may be struggling with faculty engagement might explore programs that utilize a similar approach. The conceptual framework could be useful for developing programs for institutionally supported faculty development and should be evaluated for effectiveness.

Keywords: faculty development, academic healthcare, self-determination theory, embedded mixed methods, program evaluation

University of New England

Doctor of Education
Educational Leadership

This dissertation was presented
by

Elizabeth S. Rose

It was presented on
April 16, 2021
and approved by:

Michelle Collay, Ph.D., Lead Advisor
University of New England

William Boozang, Ed.D., Secondary Advisor
University of New England

Tania Strout, Ph.D., R.N., M.S. Affiliate Committee Member
Maine Medical Center

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DEDICATION

I want to dedicate this work to my husband, Ryan, and my children, Vivian, Wyatt, and Sayre.

Thank you for believing in me, and being such a loving family of which am so proud.

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION..... 1

 Statement of the Problem..... 2

 Purpose of the Study..... 3

 Research Questions..... 4

 Conceptual Framework..... 5

 Assumption, Limitations, and Scope..... 7

 Rationale and Significance..... 9

 Definition of Terms..... 10

 Conclusion..... 12

CHAPTER 2: LITERATURE REVIEW..... 14

 Defining Institutional Support..... 14

 Defining Faculty Development..... 16

 Value of Academic Appointments and Promotions..... 17

 Conceptual Framework 19

 Institutionally Supported Faculty Development..... 22

 Supporting Faculty Affairs..... 22

 Faculty Development Programs..... 23

 Program Evaluation..... 26

 Self-determination Theory 26

 Conclusion..... 27

CHAPTER 3: METHODOLOGY..... 29

 Purpose of the Study 30

 Research Questions and Design 31

 Site Information and Population..... 32

 Sampling Method 34

Instrumentation and Data Collection Procedures	35
Data Analysis	36
Quantitative	36
Qualitative	37
Limitations of the Research Design	38
Ethical Issues in the Study.....	39
Conclusion and Summary	40
CHAPTER 4: RESULTS	42
Analysis	43
Qualitative Data Analysis	45
Participants	45
Quantitative Data Analysis	45
Presentation of Results	46
Qualitative Findings	47
SDT: Autonomy	49
SDT: Competence	50
SDT: Relatedness	51
Positive Experiences	52
Programmatic Themes	53
Summary of Interview Data	54
Quantitative Results	54
Summary of the CV Data	56
Summary	57
CHAPTER 5: CONCLUSION	60
Interpretation of Findings.....	62
Implications	64

Recommendations for Further Study	65
Conclusion.....	66
REFERENCES	68
APPENDIX A: AOME Professional Standards	76
APPENDIX B: TUSM Clinical Faculty CV Instructions	81
APPENDIX C: Interview Questions for Semi Structured Interviews.....	84

LIST OF TABLES

Table 1 Exemplar Quotes by Theme 48

Table 2 Changes in Participants' CV since Graduation from the Scholars Program 55

FIGURE

Figure 1. *Mind map of the themes' interconnected relationships* 49

CHAPTER ONE

INTRODUCTION

Academic healthcare comprises a “tripartite mission of educating the next generation of [healthcare professionals] and biomedical scientists, discovering causes of and cures for disease, and advancing knowledge of patient care while caring for patients” (Kanter, 2008, p. 205). However, today academic healthcare has become greater than the sum of these parts (Kanter, 2008). Accreditation requirements, political drivers, and institutional priorities all add new responsibilities for which faculty are accountable (DaRosa et al., 2011).

Underwood (2005) suggested that academic healthcare is the aptitude of the healthcare system; essentially creating the environment to contemplate, study, research, discover, evaluate, innovate, teach, learn, and ultimately improve health care. Additionally, an engaged faculty is crucial to academic healthcare institutions achieving their academic missions (Shah et al., 2018; Van den Berg et al., 2013). However, faculty in academic healthcare institutions are consistently challenged by competing demands for excellence in scholarly activity and providing productive, quality-driven, cost-conscious clinical care (Emans et al., 2008). All of these demands create significant pressure and have resulted in new stresses among faculty of all ranks (Emans et al., 2008). As a result, low job satisfaction and burnout are associated with poorer faculty academic performance in areas such as publishing less or not pursuing a senior academic rank (Glasheen et al., 2011). Provisions to support faculty can help them stay engaged in academics. Trends in the literature suggest that institutional support, defined as provisions for balancing work demands, schedule, and protected time is a critical factor consistent with academic career success, providing a counter to this driver of burnout (Glasheen et al., 2011; Shanafelt et al., 2009).

Statement of the Problem

Most faculty in academic healthcare settings want to be effective educators and support the training of well-prepared learners, but there are multiple complex factors impeding their efforts (DaRosa et al., 2011). Faculty face competing priorities for teaching, clinical care, and finding the resources needed to maintain a healthy work-life balance. Increasing rates of burnout, stress, and lack of engagement among faculty have caused significant alarm in academic healthcare.

Research suggests that competing factors including societal scrutiny; cost containment; the safety and effectiveness of academic healthcare institutions; faculty recruitment and retention; increasing expectations for faculty; and pressures for high-functioning productivity lead to feelings of ineffectiveness for faculty (Shah et al., 2018). Institutional support in the form of targeted and relevant continuing professional development, protected time, and balance of work demands has been demonstrated to reduce burnout in faculty (Glasheen et al., 2011). Additionally, there is significant evidence suggesting that engagement in academic healthcare also reduces the risk of clinician burnout (Shanafelt et al., 2009). Therefore, academic institutions must retain an enthusiastic, engaged, and motivated faculty for institutional success by creating opportunities for them to teach and participate in additional forms of scholarly work.

Maine Medical Center (MMC) is an evolving academic healthcare institution that depends on a motivated and engaged faculty to fulfill the institutional mission's dedication to train the next generation of physicians, nurses, and healthcare professionals to help ensure that Maine's communities are the healthiest in the nation (About, n.d.). It has focused its development over the past two decades to become an academic healthcare institution. In partnership with Tufts University, this has meant a more rigorous focus on the academic portion

of the mission of the institution. MMC must rely on an enthusiastic, engaged, and motivated faculty for its own institutional success.

In order to support the academic development of MMC's faculty, the Department of Medical Education at MMC developed the MMC Institute for Teaching Excellence (MITE) Scholars Program (the Scholars Program). The Scholars Program is an institutionally supported faculty program that offers two years of protected time, eight hours monthly on average, and instruction in clinical teaching skills, scholarly activity, leadership, and faculty affairs support (Rose, 2016). The program also offers support and mentoring around a discrete scholarly project. The Scholars Program goals are 1) to improve teaching, education research, and administrative skills, 2) to develop leaders and mentors, 3) to advance careers in academic healthcare. The program is now in its fifth year. Although the program has received enthusiastic yearly evaluations and continued interest in participation, an in-depth program evaluation assessing outcomes has not been conducted. Therefore, it is unclear if this program, based on its programmatic goals, helps to cultivate faculty who feel motivated and engaged in academics.

Purpose of the Study

This summative program evaluation evaluated the effectiveness of the Scholars Program at MMC to robustly develop faculty. This study sought to identify and describe faculty-perception of the program's effectiveness as defined by two metrics: the faculty member's self-perceived motivation to remain in an academic career path and their engagement in academics after they graduated the Scholars Program. To do this, this summative program evaluation analyzed the inventoried scholarly activity of the graduated scholars and transcripts of semi-structured interviews with graduated scholars. The data analyzed were both qualitative and quantitative. The data were identified using Kirkpatrick's (2006) model for evaluating training

programs, specific to learner reaction and behavior change (D. Kirkpatrick, & J. Kirkpatrick, 2006). Based on this model, this summative program evaluation examined engagement and motivation as the metrics of study. Further, the literature suggests that traits of engagement and motivation in faculty may improve job satisfaction and support a reduction in feelings of burnout (Glasheen et al., 2011). While objective measurement of these traits is beyond the scope of this program evaluation, the literature provided a reasonable association of factors identified in Self-determination Theory (SDT) to these aforementioned traits. Using this as the conceptual framework for this evaluation, SDT provides a befitting theoretical framework for understanding such faculty engagement and motivation (Glasheen et al., 2011; Shanafelt et al., 2009; Van den Broeck et al., 2008). The intent of the Scholars Program is to support the academic portion of the institutional mission by cultivating engaged and motivated faculty through the fulfillment of its programmatic goals. The researcher used the generated data to describe the impact of the Scholars Program on the faculty's engagement in academics and motivation to stay on an academic career path. Data that were used to inform those findings were selected based on the schema identified by SDT and were analyzed based on recommendations identified in the review of the literature. Further, the findings of this study will be used to informally to make refinements to the curriculum in future programmatic planning.

Research Questions

This summative program evaluation used SDT as a theoretical framework to understand the impact of the program on faculty engagement and motivation, and the methodology was guided by the following research questions:

- 3) How do faculty members who participated in the Scholars Program describe its influence on their engagement in academic activities supported by the program?

- 4) Do the curriculum vitae (CV) of faculty members who have participated in the Scholars Program demonstrate sustained academic productivity through evidence of scholarly work as defined by the Tufts School of Medicine (TUSM) criteria for academic appointment and promotion?

Analyses were conducted to assess whether participation in the Scholars Program resulted in engagement in scholarly activity as documented in the individual faculty member's CV and their self-reported motivation to remain engaged in an academic career path as evidenced by themes identified in the transcripts of semi-structured interviews with participants who have graduated the program. The researcher used these questions to interpret this evidence as outlined by the conceptual framework and the literature. This evidence provides a possible association between faculty engagement and motivation in academics and participation in institutionally supported faculty development programs such as the Scholars Program.

Conceptual Framework

The conceptual framework supporting this summative program evaluation provides a foundation for understanding how the themes identified in the literature relates to the findings of this study and offers guidance for the interpretation of the results. Literature suggests that participation in programs similar to the Scholars Program is associated with an increase in faculty engagement (Glasheen et al., 2011, Van den Berg et al., 2013). To place this evaluation in the context of existing literature, a theory on cultivating motivation and engagement was identified as a conceptual framework. SDT suggests that pursuing activities that align with an individual's core interests and values allows the individual to fulfill their psychological needs (Diefendorff et al., 2018). SDT defines these needs as autonomy, competence, and relatedness (Diefendorff et al., 2018). According to the literature, SDT is one of the leading theories on

human motivation positing that when the three basic psychological needs are met, an individual is more likely to feel that the activity they are engaged in is in line with their self-identity, personal goals, and sense of self (Diefendorff et al., 2018). Thus, the individual wants to engage in that activity and as the theory suggests, this desire is self-determined or the individual is motivated (Deci & Ryan, 2002; Gagné & Deci, 2005). SDT defines this state as the satisfaction of needs (Van den Berg et al., 2013) and it may explain the relationship between motivation and engagement at work (Van den Broeck et al., 2008). Van den Broeck et al. (2008) suggested that faculty experiencing the fulfillment of their needs at work feel more motivated and engaged in their work.

Van den Berg, et al. (2013) proposes SDT can help elucidate the motivation for teaching in the academic healthcare environment. Their research suggests that faculty experiencing job characteristics that address these psychological needs feel more motivated and engaged in their work (Van den Berg, et al., 2013). Further, the findings suggest that the psychological needs defined by SDT may contribute to how an individual perceives their work environment contributing to an individual's positive intentions towards their work (Van den Berg, et al., 2013). According to Shah et al. (2018) and Thibault-Landry et al. (2018), these work intentions are indicative of an individual's engagement and motivation. It may be deduced that faculty that consistently participate in activities that are representative of the three characteristics of SDT within the work environment will feel a sense of engagement and motivation and may continue to be motivated to do so. Van den Berg et al. (2013) suggested that these types of positive work activities have "a buffering effect on the energy-depleting effects of work, but also stimulate work motivation" (p. 266). Academic healthcare institutions may be able to reduce burnout and increase faculty engagement and motivation by investing in an infrastructure that supports these

activities and characteristics (Van den Berg, et al., 2013). By investing in the SDT-defined needs of faculty through institutionally supported programming such as the Scholars Program at MMC, SDT predicts that faculty may feel more motivated and engaged in their academic work.

Assumptions, Limitations, and Scope

For the purposes of this study, academics and scholarship are used interchangeably. The scope of academics was defined by the Academy of Medical Educators (AOME) Professional Standards framework (see Appendix A) and the metrics for academic advancement as defined by Tufts University School of Medicine (see Appendix B). The Scholars program curriculum is based on the AOME Professional Standards framework (see Appendix A) that includes five domains 1) designing and planning learning, 2) teaching and facilitating learning, 3) assessment of learning, 4) educational management and leadership, and 5) educational research and scholarship. The AOME used a comprehensive, peer-review process to develop these standards over four iterations. The five domains of professional standards set forth by the AOME were developed after wide consultation and input from key organizations involved in medical, dental, and veterinary education (Academy of Medical Educators [AOME], 2014). The AOME (2014) sought the opinion of key stakeholders principally involved in delivering medical education within the workplace through the peer-review process on the relevance, content, and clarity of these standards. Additionally, academic career advancement is defined for this study according to the TUSM framework for academic promotion, this framework is based on Boyer's model for scholarship (Appointments & Promotions, 2019; Boyer, 1990; Hatem et al., 2006; Newman et al., 2016). These metrics define the areas of focus for faculty to continue to develop their academic careers autonomously. Based on the scope presented above, faculty who have

graduated from the Scholars Program may be motivated to engage in academics if they are participating in activities that reflect these metrics.

For the purposes of this study, it is assumed that the faculty who participate in the Scholars Program are self-directed towards scholarship and those internal inclinations may contribute to their feelings of motivation and engagement. Because the participants have applied to the Scholars Program, it is assumed that they find a personal sense of value in the work that is supported by the Scholars Program curriculum. The assumption that the participants find value in academics may influence the conclusions drawn from the resulting data. Further, it is assumed for the purposes of this evaluation, that faculty who have graduated from the program may retain that same sense of value in academics. In the analysis of the CV data, it is assumed that faculty have developed a professional plan that includes analyzing time commitments and aligning required work tasks to achieve personal career goals, so that they set themselves on a path toward career success, as defined by that faculty member and this study (Sadowski & Schragar, 2016). For this study, academic career success specifically refers to academic appointment and promotions detailed by the TUSM framework for academic appointment and promotion (see Appendix B for TUSM CV format requirements used for academic appointments). MMC faculty are encouraged but not required to follow these criteria for academic career advancement. This study assumes that faculty definitions of career success will be in alignment with the framework identified by TUSM. The metrics of academic engagement and motivation this study identified are defined by these five domains and promotions criteria. This evaluation sought to identify these metrics of engagement and motivation in the analysis of the qualitative and quantitative data.

Some limitations of this summative program evaluation include generally accepted barriers to academic engagement. These barriers might be curricular obstacles such as unclear objectives or curriculum structure (DaRosa, et al., 2011), cultural barriers such as faculty learning preferences, the belief that teaching is a distraction from patient care, or environmental and financial barriers such as limited time and resources. Despite being an institutionally supported program, some faculty still find balancing clinical and academic activities difficult (DaRosa, et al., 2011).

The scope of this work was limited primarily to faculty in Maine who are affiliated with MaineHealth, MMC's health system. This system has institutions throughout the state of Maine and one in New Hampshire. All faculty have access to the Scholars Program and other MMC faculty development programming and resources. However, it should not be assumed that every institution in the MaineHealth system offers the same opportunities for academic engagement. The varying levels across the system may contribute to the faculty's ability to remain engaged in academics after leaving the Scholars Program, as institutional support has been identified in this summative program evaluation as a key factor in faculty academic engagement.

Rationale and Significance

SDT suggests that engagement and motivation are highly dependent on satisfaction of needs. Glasheen et al. (2011) suggested that, for academic faculty, there is limited knowledge about "job satisfaction, stress, and rates of burnout in academic hospital medicine or how these factors affect scholarly success and productivity" (p. 782). Lower academic engagement and motivation are associated with non-statistically significant trends towards less academic career advancement (Glasheen et al., 2011). These trends, as outlined by Glasheen et al., include fewer peer-reviewed first-author publications, lower confidence in teaching skills, reduction or lack of

institutional grand rounds presentations, and not feeling ready to mentor others (Glasheen, et al., 2011). Burnout has also been associated with similar non-statistically significant trends including a lack of institutional grand rounds presentations, a lower understanding of criteria for promotion, and a lack of confidence in the evaluation of medical students and residents (Glasheen, et al., 2011). Although the causal link between these factors has yet to be identified, institutional support has been identified as a critical factor consistent with improving academic success that may also counter this source of burnout.

Institutional support may also be critical to strategic success in increasing job satisfaction (Glasheen, et al., 2011; West et al., 2016). Because the Scholars Program is an institutionally supported program that fully meets the definition of institutional support, this study has the potential to contribute to the literature exploring institutionally supported programs on faculty engagement and motivation. While this is a summative program evaluation and is not designed to evaluate causality, the conclusions can contribute to the literature as a prospective outcome of institutionally supported faculty development programs.

Definition of Terms

For the purposes of this study the following terms have been defined:

Academics is defined by two frameworks. First, the five domains of professional standards written by the Academy of Medical Educators (AOME). They are designing and planning learning, teaching and facilitating learning, assessment of learning, educational research and scholarship, and educational management and leadership (AOME, 2014). Second, by the TUSM metrics for academic appointment and promotion, which is based on Boyer's model of scholarship. Boyer's model encompasses four components of scholarship: discovery, integration, application, and teaching (Boyer, 1990). Other works have suggested that these elements of

scholarship are significant, especially teaching (Bosold, & Darnell, 2012; Grady et al., 2012; Hyman et al., 2002). *Academics* and *Scholarly Activity* may be used interchangeably throughout the body of this work.

Academic healthcare is replacing the term *Academic Medicine* as it is more inclusive of the various healthcare professions. *Academic Healthcare* is defined as “the discovery and development of basic principles, effective policies, and best practices that advance research and education in the health sciences, ultimately to improve the health and well-being of individuals and populations” (Kanter, 2008, p. 205).

Faculty are defined as members of the healthcare team who give value, context, and meaning to the academic interactions of learners (Common Program Requirements, n.d.). Faculty appointments are at the discretion of the medical school and/or its parent university and the academic role of the faculty should align with the academic mission of the academic institution. This study relies on the framework under which conditions faculty appointments are conferred and will use the clearly defined metrics that offer a pathway to academic promotions (Block et al., 2015). Further, it is important that this term remain inclusive of all healthcare team members, as the Scholars Program is interprofessional in nature.

Faculty development refers to “multiple efforts and initiatives in academic institutions to include mentoring programs, teaching skills, leadership development, career planning, research and administrative skills, and fellowships” (Emans et al., 2008, p. 390).

Institutional support is defined as provisions balancing work demands, schedules, and protected time (Glasheen et al., 2011).

Passion is defined “as an individual’s persistent, emotionally-positive, meaning-based, state of wellbeing, stemming from reoccurring cognitive and affective appraisals of various job and

organizational situations that result in consistent and constructive work intentions” (Zigarmi, et al., 2009, p. 310).

Scholarly Activity or Scholarship is defined by two frameworks. First, the five domains of professional standards written by the Academy of Medical Educators (AOME). They are first, designing and planning learning, teaching and facilitating learning, assessment of learning, educational research and scholarship, and educational management and leadership (AOME, 2014). Second by the TUSM metrics for academic appointment and promotion, which is based on Boyer's model of scholarship. Boyer’s model encompasses four components of scholarship: discovery, integration, application, and teaching (Boyer, 1990). Other works have suggested that these elements of scholarship are significant, especially teaching (Bosold, & Darnell, 2012; Grady et al., 2012; Hyman et al., 2002). *Academics* and *Scholarly Activity* may be used interchangeably throughout this body of work.

Self-determination Theory (SDT) is the process by which an individual satisfies their psychological needs: autonomy, competence, and relatedness (Diefendorff et al., 2018).

Conclusion

Teaching tasks may be squeezed between competing obligations, which might contribute to a decrease in professional satisfaction (Van den Berg et al., 2013). As health care becomes progressively more regulated and scholarly demands continue to grow, institutional support is a key factor in faculty motivation and engagement (Sadowski, & Schrager, 2016). It is possible that conditions supporting faculty motivation are those conditions outlined by SDT and likely describe conditions for faculty engagement (Van den Berg et al., 2013). Satisfying basic psychological needs can be accomplished throughout a faculty member's career. Institutions employing faculty have an opportunity to act as a steward of strategies that promote this type of

psychological satisfaction and through that satisfaction possibly foster academic engagement and motivation (M. Poulsen, & A. Poulsen, 2018). The themes outlined in the subsequent literature review identify themes that may improve the academic career of healthcare providers at an academic healthcare institution through motivation and engagement. Subsequent chapters review the current literature pertaining to the conceptual framework and the themes in the literature concerning institutionally supported faculty development, and offer support for the selected methodology for this program evaluation.

CHAPTER TWO

LITERATURE REVIEW

There is significant evidence to suggest that academic healthcare institutions need to strengthen their commitment to supporting their academic mission (Mallon & Jones, 2002). Faculty are challenged by competing demands for sustaining teaching excellence and productive clinical care (Emans, et al., 2008). Across all academic ranks faculty are feeling new levels of stress due to significant demands in the form of quality and cost measures, novel curriculum, new competencies, and increased scholarly activity requirements. This can leave newer faculty under intense pressure that jeopardizes their engagement and leads to burnout (Emans et al., 2008). Depersonalization of patients and colleagues as well as irritability and skepticism regarding the value of one's own work have been attributed to this source of burnout (Schaufeli et al., 2011). "When an individual has feelings of low professional efficacy and doubts about [their] capacity to perform work-related tasks and meet job demands" low rates of job satisfaction and professional burnout arise (M. Poulsen, & A. Poulsen, 2018, p. 684).

Defining Institutional Support

Low job satisfaction and burnout are associated with decreased academic performance in faculty, though the causal link between these factors has yet to be identified in the literature. The literature does define metrics for at-risk faculty. For example, Glasheen et al. (2011) define at-risk faculty as those with "fewer peer-reviewed publications, lower confidence in their teaching skills, and a lower likelihood of having presented institutional grand rounds" (p. 783). These are metrics that can be observed qualitatively to describe faculty engagement in academics in the literature. A faculty member's curriculum vitae (CV) may include gaps in some of these areas, providing evidence of a lack of engagement in academic advancement. These gaps may suggest

potential issues on an institutional level that hinder the engagement and motivation of faculty. For example, Glasheen et al. (2011) suggested that achieving senior levels of academic rank can be impacted by institutional provision of protected time for scholarship. The literature also suggests that institutionally supported programs are a consistent factor associated with improved academic success and reduced professional burnout (Glasheen et al., 2011; Varkey et al., 2012). Institutional support can include elements such as provisions balancing work demands, protected time, and formal mentoring programs (Varkey et al., 2012). Institutional support is also critical to success in increasing job satisfaction, increased motivation, and reducing burnout (Glasheen et al., 2011; Lyness et al., 2013). Additional examples in the literature include institutionally supported sabbaticals from administrative and clinical duties to pursue scholarly work such as writing grants and papers, mentoring, and administrative support for manuscript preparation (Emans et al., 2008). In a busy medical center, to recruit and retain the best faculty, specific programs centered on institutionally supported academics are critical to nurturing the career development and engagement of faculty (Emans et al., 2008).

Fellowships targeted at research, teaching, mentored projects, and leadership have also been established to address targeted faculty development (Emans et al., 2008). Some institutions have undertaken specific institutionally supported changes in policies and programmatic efforts designed particularly to improve the career development and retention of faculty. Some schools have structured incentives to motivate and develop future educators, such as monetary compensation (John et al., 2011). Other institutions are supporting more autonomous motivational improvements to increase faculty engagement. Autonomous motivational approaches such as offering faculty the choice of academic promotion along several possible career paths may help academic health centers recruit, retain, motivate, and develop faculty

members (Lyness et al., 2013). Along this same theme of institutional programming to support faculty's academic needs, Wai et al. (2014) suggest institutions should do the work to identify institutionally specific critical factors related to workplace satisfaction and engagement as important to enhancing institutional retention and motivation of faculty. However, despite these pockets of institutionally supported faculty development, Emans et al. (2008) indicated that the majority of academic healthcare institutions do not have infrastructure centered on faculty development (e.g. an office devoted to faculty affairs or comprehensive faculty development programs such as those mentioned above).

Defining Faculty Development

Faculty development refers to the inclusion of multiple efforts and initiatives in academic institutions including but not limited to mentoring programs, teaching skills, leadership development, career planning, research and administrative skills, and fellowships (Emans et al, 2008). These types of activities cultivate competencies that fall within the five domains of professional standards as defined by the Academy of Medical Educators (Academy of Medical Educators [AOME], 2014). These domains are: 1) designing and planning learning, 2) teaching and facilitating learning, 3) assessment of learning, 4) educational research and scholarship, and 5) educational management and leadership (AOME, 2014). In academic healthcare institutions, healthcare professionals are “increasingly involved in teaching, learning, assessment and supervisory activities with medical students, trainees, and other health professionals” (Swanwick, & McKimm, 2010, p.164). The professional standards framework is designed to develop the knowledge, skills, and practice required of faculty who perform the wide variety of educational roles undertaken in the education of healthcare professions (Swanwick & McKimm, 2013). This framework also suggests that for any faculty development program, these five

domains offer a robust roadmap to develop these competencies in faculty. Participation in comprehensive faculty development programming enables faculty to provide high-quality education and training (Swanwick & McKimm, 2010).

As healthcare becomes increasingly more regulated and complex, scholarly demands for faculty compete for resources such as time and attention. Scholarly activity is squeezed between these contending responsibilities, which might contribute to a decrease in job satisfaction for faculty (Van den Berg et al., 2013). Glasheen et al. (2011) suggested that “little is known about career promotion, job satisfaction, stress, and rates of burnout in academic hospital medicine or how these factors affect scholarly success and productivity” (p. 782). There is some evidence to suggest that institutionally supported programs can promote work engagement and motivation (M. Poulsen, & A. Poulsen, 2018). One academic institution, in an effort to respond to faculty feedback, revised their academic promotions guidelines to “provide faculty with better tools to help them achieve successful promotions outcomes” (Lyness et al., 2013, p. 5).

Academic healthcare institutions often face opposition from faculty when asked to meet performance targets, regulatory standards, or otherwise engage with organizational missions (Lyness et al., 2013). According to Self-Determination Theory (SDT), this goal can be achieved by maintaining the basic psychological needs of the faculty. SDT stresses the importance of supporting intrinsic and autonomous motivation (Lyness et al., 2013). By recognizing risk factors for burnout and increasing healthy work practices that are focused on supporting academic engagement, faculty can remain engaged and motivated. By offering institutional support for such standardized processes such as the academic appointments and promotions, academic healthcare institutions may see improved quality of its faculty.

Value of Academic Appointments and Promotions

Essentially, the basic foundation of being a faculty member relates fundamentally to the individual's educational and scholarly activities and variable aspects of being a faculty member may be defined by the local environment (Feder & Madara, 2008). A faculty member may reach senior appointments based on a career-long record of scholarly accomplishments. The variable features of a faculty member are those expressions of academic rigor that vary by the individual and are influenced by each academic institution (Feder & Madara, 2008). Those documented attributes can then be used to evaluate a faculty member for appointment or promotion. Faculty are reviewed based on personal statements to provide context for reviewing the candidate, a brief review of major accomplishments and activities, and summarized evidence regarding the quality and effectiveness of those activities (Simpson et al., 2004). The practice revolves around clear and standardized criteria, and an evaluation process that holds subjectivity to a minimum (Feder & Madara, 2008). The appointment and promotion of excellent faculty are an important marker of an academic institution's overall excellence (Feder & Madara, 2008).

The Liaison Committee on Medical Education (LCME), an accrediting body for educational programs at schools of allopathic medicine in the United States and Canada, requires faculty to supervise educational activities in which medical students may engage in order to retain the highest quality education (Block et al., 2015). To this point, faculty appointment criteria must be informed by LCME accreditation standards (Block et al., 2015).

Papaconstantinou and Lairmore (2006) suggest "a critical component of a successful academic career is the understanding of institutional criteria and guidelines for academic appointment, promotion, and tenure." They go on to point out that these criteria may vary by institution, but

they are standardized for all clinical faculty and provide a framework for professional excellence within a single institution (Papaconstantinou & Lairmore, 2006).

Conceptual Framework

Because an individual's profession is a central tenant for most people's lives, feelings of satisfaction and achievement in their work are positively associated with an individual's well-being (Diefendorff et al., 2018). By pursuing work that aligns with the subjective nature of one's sense of success e.g. providing choices, offering compelling validation, and pursuing employee feedback (Lyness et al., 2013), that work can satisfy the individual and ultimately lead them to feel happier (Diefendorff, et al., 2018). Since, in general, people tend to work for a greater percentage of their lives, wellbeing should be profoundly fulfilled through work (Van den Berg, et al., 2013). SDT underscores the importance of pursuing the activities that align with an individual's core interests and values in relation to one's motivation and sense of wellbeing.

Lyness et al. (2013) suggest:

A key, empirically validated cornerstone of [SDT] is that supporting three basic psychological needs engages one's motivation from within, producing desirable benefits for learning, behavior, and well-being. (p. 2)

SDT is a practice by which the individual fulfills their psychological needs: autonomy, competence, and relatedness (Diefendorff, et al., 2018). According to the literature, SDT is one of the leading theories on human motivation, one of the key personal factors for engagement (Costa, 2009; Lyness, 2013; Thibault-Landry et al., 2018; Van den Berg et al., 2013; West et al., 2016; Zigarmi et al., 2009). High levels of satisfaction, productivity, and engagement enable faculty to leverage professional success and achieve personal goals in concert with institutional priorities (Dankoski et al., 2012). This phenomenon of faculty motivation and engagement is

influenced by both individual and institutional determinants. Motivation and engagement are illustrative of how meeting the three basic psychological needs defined by SDT (Diefendorff, et al., 2018) can benefit the wellbeing of the faculty and the institution.

The literature describing SDT suggests that when the three basic psychological needs are met, an individual is more likely to feel that the activity they are engaged in is in line with their self-identity and personal goals. Thus, the individual's desire to engage in that activity is self-determined (Deci & Ryan, 2002; Gagné & Deci, 2005) and drives their personal motivation. SDT is guided by three separate needs: autonomy, competence, and relatedness, and by satisfying these needs we can begin to explain the dynamics between job demands, job resources, and work engagement. It is through this theory that Van den Berg, et al. (2013) suggest SDT can help define the motivation for scholarship. The research suggests that faculty experiencing practical job characteristics that address these needs feel more motivated and engaged in their work (Van den Berg, et al., 2013). Thus, a work environment that strives to balance job demands, job resources, and engagement dynamics could increase wellbeing. Lyness et al. (2013) suggest that setting optimal levels of challenge, supporting skills development necessary to meet the posed challenge, creating structures to foster individual connections, and creating structures to foster group and community connections will help faculty feel more motivated and engaged. The needs defined by SDT influence how an individual perceives their work environment (Lyness et al., 2013). This perception contributes to an individual's motivation, which is symptomatic of an individual's engagement (Thibault-Landry et al., 2018).

Zigarmi et al. (2009) suggested a motivated and engaged faculty is a result of "an individual's persistent, emotionally positive, meaning-based, state of well-being, stemming from reoccurring cognitive and affective appraisals of various job and organizational situations that

result in consistent and constructive work intentions” (p. 310). Faculty consistently engaging in activities that are representative of the three psychological needs of SDT, within the work environment, may feel motivated to engage in their work. These activities could be in any of the following three categories: *organizational characteristics* such as professional competence, occupational growth, and performance expectations; *occupational characteristics* such as job autonomy, task variety, workload balance, and meaningful work; and *relationship characteristics* such as feedback, collaboration, connectedness with patients or colleagues, and connectedness with leadership (Thibault-Landry et al., 2018). Van den Berg et al. (2013) suggested that these types of activities have “a buffering effect on the energy-depleting effects of work, [and] also stimulate work motivation” (p. 266). A qualitative study conducted by Costa (2009) that centered on career satisfaction in healthcare faculty suggested that faculty accountability and autonomy in decision-making, the learning of new skills in faculty development, and the expectation of professional growth are some of these key stress-reducing activities. These findings are supported and reinforced by Lyness’s (2013) *Implications of SDT for Teachers and Leaders in Academic [Healthcare]*. The literature suggests that academic healthcare institutions can reduce burnout and increase faculty motivation and engagement by investing in infrastructure that supports activities and psychological characteristics as defined by SDT (Costa, 2009; Lyness, 2013; Thibault-Landry et al., 2018; Van den Berg et al., 2013; Zigarmi et al., 2009). By supporting motivation through institutionally supported faculty development, academic healthcare institutions can maximize engagement and well-being. Further, by creating environments that enrich the engagement of faculty, academic healthcare institutions may be able to recruit and retain faculty and support the success of the academic mission.

Institutionally Supported Faculty Development

The literature cites a number of examples of how institutionally supported programs can improve job satisfaction and reduce burnout in faculty. Institutional support is critical to financial and strategic success in developing a motivated and engaged faculty (Glasheen, et al., 2011; West et al., 2016). These include financial and strategic drivers that define the scope of the programs.

Supporting Faculty Affairs

Faculty affairs usually refer to support and management of academic processes, including academic appointments and promotion. Additional primary functions may include developing and coordinating management activities specific to faculty such as annual evaluations, counseling, conflict resolution, and grievance processes and committees (Gibson, n.d.). Faculty affairs may also refer to facilitation of development opportunities for faculty by identifying recognition, scholarships and fellowship opportunities, competency enhancement activities and curricula, and leadership and professional development programs (Gibson, n.d.). Faculty affairs may also be involved in faculty handbook development, faculty governance, mentorship programs, and programs for women and minority faculty (Gibson, n.d.). One example of a robust institutionally supported faculty affairs program is from Emans et al. (2008). They suggested that the retention of skilled faculty is more cost-effective than recruitment and that supporting faculty affairs leads to faculty engagement. In this example, the case for leadership and the return on investment was compelling. The researchers created an office of faculty affairs as an evolving model. The goals of the office were to recruit and retain skilled faculty, facilitate career advancement and satisfaction, and increase leadership opportunities for faculty (Emans et al., 2008). The program focused on institutional and individual support for faculty by including the

following elements: centralized resources; access to clinical research training and consultation; a mentoring framework; teaching workshops; and support for the academic promotion process (Emans et al., 2008).

Traditionally, faculty recruitment, development, and retention stem directly from the departmental level for that department's specific faculty (Sonnino et al., 2013). In the recent decade, academic healthcare institutions have increasingly acknowledged the necessity for providing services and support through a central administrative office for faculty affairs (Sonnino et al., 2013). These types of faculty affairs support differ from faculty development programs. Faculty development focuses on academic frameworks such as fellowships or longitudinal programs that are targeted toward developing faculty through curricula focused on academic skills, mentored projects, and compensation to the departments for protected time for faculty participating in these programs (Emans et al., 2008).

Faculty Development Programs

Hatem et al. (2006) described three faculty development fellowship programs available through the Carl J. Shapiro Institute for Education and Research at Harvard Medical School and Beth Israel Deaconess Medical Center (the Institute). The three fellowship programs described “share the common goals of enhancing the skills of the faculty as educators, providing an opportunity to conduct scholarly educational research, supporting the fellows as change agents, and fostering the creation of a supportive community dedicated to enhancing the field of [healthcare] education” (Hatem et al., 2006, p. 941). The Institute does this through advocacy for academic promotion, the study of contemporary healthcare education, and the advancement of clinical teaching skills (Hatem et al., 2006). The Institute is driven by the theory that the skills

needed by faculty can be learned through a systematic curriculum rooted in faculty development rather than “solely relying upon the on-the-job approach of the past” (Hatem et al., 2006, p. 941).

Institutional support for these fellowship programs includes an annual stipend that is structured to compensate 20% of a fellow’s clinical time (Hatem et al., 2006). This arrangement allows the fellow to continue with usual responsibilities, only modifying their schedules for the supported time. The synthesis of the fellowship curricular requirements included scholarly activity focusing on an important issue in healthcare education (Hatem et al., 2006). Fellows each select a mentor, in addition to the fellowship faculty, to help guide their project’s development (Hatem et al., 2006). This program offered protected time and institutionally supported structured mentoring to support the fellows through the program.

Since June 2006, the three fellowships have graduated 63 physicians (Hatem et al., 2006). Fellows represent a variety of clinical disciplines including anesthesiology, medicine, neurology, obstetrics-gynecology, pediatrics, radiology, emergency medicine, and surgery. The fellowships are open to all faculty who teach in both the preclinical and clinical years, as well as in graduate and continuing medical education, and are chosen through a competitive application process (Hatem et al., 2006). The goal of their study was to examine the outcomes of the fellowship programs using both qualitative and quantitative methods (Hatem et al., 2006). The program evaluation includes quantitative analysis of pre- and post-fellowship CVs, the results of which help to characterize the professional impact of the fellowship year, and qualitative analysis of personal statements and semi-structured interviews that reflected on educational activities and professional development (Hatem et al., 2006). The researchers used the data gathered to continuously improve the quality of the program. Additionally, two subsequent program evaluations were published from this work, qualitative and quantitative, respectively (Hatem et

al., 2006; Lown et al., 2009; Newman et al., 2016). Newman et al. (2016) used a modified version of Kirkpatrick's evaluation framework to support their evaluation (D. Kirkpatrick & J. Kirkpatrick, 2006; Leslie et al., 2013). The Kirkpatrick model for evaluating a training program is a four-level progressive sequence of assessment: learner reaction, learning measurement, behavior change, and program results (D. Kirkpatrick & J. Kirkpatrick, 2006). The modified framework developed by Leslie et al. (2013) encompasses a seven-level sequence: 1) learner reaction; 2) modification of attitudes/perceptions; 3) acquisition of knowledge/skills; 4) behavioral change; 5) changes in organizational practice; 6) benefits to students/residents; and 7) benefits to patients/communities. The subsequent program evaluations from the initial report first explored faculty perceptions using qualitative methods (Lown et al., 2009). The team then examined quantitative data in the form of CV analysis (Newman et al., 2016). These three studies used both formative and summative program evaluation methodologies. Findings indicated that the Fellowship program met programmatic goals and produced positive, measurable academic outcomes for participants (Newman et al., 2016).

The University of California, San Francisco (UCSF) Medical Center created a faculty development program and published its formative program evaluation (Sehgal et al., 2011). The objectives of the faculty development program were to increase knowledge, skills, and attitudes about key academic domains; support successful production of scholarly output; and evaluate satisfaction with the faculty development program (Sehgal et al., 2011). The program was implemented to support the professional development of faculty, promote work demand balance, and strengthen the academic mission, "advancing health worldwide through preeminent biomedical research, graduate-level education in the life sciences and health professions, and excellence in patient care" (Mission & Vision, n.d.; Sehgal et al., 2011). The evaluation of the

program revealed increased work satisfaction and faculty academic output; an increase in self-assessed skills and knowledge of academic resources; and a general sense of purpose behind the academic mission (Sehgal et al., 2011).

Program Evaluation

Educational programs are fundamentally about change. Evaluations of these programs should be designed to explore if and what outcomes or impacts occurred as a result of this change (Frye & Hemmer, 2012). These types of change can be intended or unintended; Frye and Hemmer (2012) suggest that program evaluation should examine both. Historically, program evaluation studies have been strongly influenced by reductionist theory attempting to isolate individual program components to determine associations with outcomes (Frye & Hemmer, 2012). A program evaluation methodology should support the complexity of the educational process and utilize data that is specific to the research questions that define the desired understanding of the program (Frye & Hemmer, 2012). This summative program evaluation aimed to identify and assess the programmatic outcomes, as informed by the literature and conceptual framework (Wojtczak, 2002). This study measured the success of the Scholars Program curriculum in achieving programmatic objectives and fostering motivation and engagement in the participants.

Self-determination Theory

Formative and summative program evaluations of faculty development programs similar to those described above have generally shown changes in faculty satisfaction, academic output, and motivation (Hatem et al., 2006; Lown et al., 2009; Newman et al., 2016; Sehgal et al., 2011). The above examples primarily used formative program evaluations that examining CVs, rates of publications, and retention of academic faculty (Emans, et al., 2008) as well as measures of

motivation, overall wellbeing, and work task-balance. Program evaluations such as these are generally relevant to identify the success of a program. However, little empirical evidence elucidating the relationship between institutionally supported faculty development and faculty engagement and motivation in the context of activities as defined by SDT currently exists.

Lyness (2013) suggests that common approaches to influencing behavior such as the use of direct tangible incentives e.g., rewards or remediation are ineffective and yet remain widely used. Essentially, externally supported, tangible incentives produce extrinsic motivation that may feel forced, as opposed to feeling driven from within. An institutionally supported faculty development program using SDT as the contextual framework may offer new implications for academic healthcare leaders attempting to plan such programs (Lyness et al., 2013). Academic healthcare institutions may benefit by applying principles from SDT to their faculty development programming to improve faculty motivation and engagement, and, in turn, the success of the greater academic mission (Costa, 2009; Lyness, 2013; Thibault-Landry et al., 2018; Van den Berg et al., 2013; West et al., 2016; Zigarmi et al., 2009). Additionally, SDT may offer a conceptual framework for understanding the outcomes of both formative and summative program evaluations (Lyness et al., 2013). By identifying elements that meet the metrics outlined by SDT, a formative or summative program evaluation may be able to identify changes in faculty motivation and engagement. This study employed a summative program evaluation to attempt to determine if this institutionally supported program changes faculty motivation and engagement in academics.

Conclusion

Programmatic elements with the potential to reduce burnout and increase motivation are essential when considering institutional goals centered on well-being, retention, and a sense of

engagement for faculty (M. Poulsen, & A. Poulsen, 2018). Institutions may help faculty experience greater satisfaction by designing programs that meet their psychological needs, as outlined by SDT. By creating infrastructural components aligned with SDT, institutions could help faculty feel that their tasks are enjoyable, autonomous, and specific to their self-identity, consequently, supporting a deeper sense of motivation for faculty (Thibault-Landry, et al., 2018). Institutions may experience positive individual and organizational benefits associated with faculty engagement and motivation with improved institutional support for faculty affairs and development (Glasheen et al., 2011; Thibault-Landry, et al., 2018; West et al., 2016). Of note, the current literature indicates that similar institutionally supported faculty development programs have had a meaningful impact on faculty motivation, a shared commitment to the academic mission, and a mechanism for recruitment and retention (Costa; 2009; Hatem et al., 2006; Lown et al., 2009; Newman et al., 2016; Sehgal et al., 2011). The conceptual framework defined by SDT suggests that academic leaders should develop faculty programs to ensure academic career support for the individual (Diefendorff et al., 2018; Lyness et al., 2013). This should include mentorship, faculty development, and a balance between academic activities and increasing clinical responsibilities (Glasheen et al., 2011; Hatem et al., 2006; Lown et al., 2009; Newman et al., 2016). Targeted programming and interventions are vital to creating fulfilling, sustainable, and robust academic careers for academic healthcare faculty (Glasheen et al., 2011; Sehgal et al., 2011; West et al., 2016). Little is known about how institutionally supported faculty development impacts faculty motivation and engagement in academics (Glasheen et al., 2011). Therefore, the goal of this program evaluation was to identify the value of the Scholars Program specific to these two metrics.

CHAPTER THREE

METHODOLOGY

As an institution, Maine Medical Center (MMC) offers undergraduate, graduate and continuing healthcare education programs; faculty may teach in any or several of these areas at any given time as part of their academic responsibilities. Support for scholarly work and career development are crucial elements to the workplace for these faculty. In 2008, MMC and Tufts University School of Medicine (TUSM) created the Maine Track, an inventive program that offers clinical training experiences in Maine and exposes medical students to the unique aspects of rural practice as well as training at a major tertiary medical center. The medical school, the numerous interprofessional residency and fellowship programs, and the continuing education programs at Maine Medical Center rely heavily on faculty located throughout the state of Maine. For these education programs to retain a high standard and meet accreditation requirements, comprehensive faculty development must be offered and supported by the institution.

Academic healthcare institutions committed to healthcare education, similar to MMC, have traditionally been unsuccessful in preparing their faculty members for responsibilities as teachers (Hatem et al., 2006). Often perceiving teaching as an add-on role, many administrators assume that clinical or research expertise is a sufficient qualification for the responsibility of teaching (Hatem et al., 2006). In response to inadequate faculty development, the growing continuum of healthcare professions education, and the need to develop motivated and engaged faculty throughout the state, the Department of Medical Education at MMC designed strategically planned infrastructure to support faculty development. This program provides

support for faculty to excel as teachers, scholars, mentors, leaders, and role models and this work bolsters the long-standing culture of academic healthcare at MMC.

There are multiple complex factors impeding the efforts of faculty to facilitate high-quality education for learners at all levels in healthcare education (DaRosa et al., 2011) and literature suggests that these competing factors lead to feelings of ineffectiveness (Shah et al., 2018), increased rates of burnout, stress, and lack of engagement (Glasheen et al., 2011). Institutional support in the form of resources for targeted and relevant continuing professional development, protected time, training to support scholarship and balance of work demands is linked to a reduction in burnout in faculty (Glasheen et al., 2011).

Purpose of the Study

This summative program evaluation sought to evaluate the effectiveness of the MMC Institute for Teaching Excellence (MITE) Scholars Program (the Scholars Program) to foster faculty motivation and engagement in academics. Using the themes identified in the literature and conceptual framework, this summative program evaluation explored faculty motivation and engagement in qualitative and quantitative data sets. For the purposes of this study, the program's effectiveness was defined by two metrics: faculty engagement in scholarship and academia after they graduate from the Scholars Program, and self-reported motivation to follow an academic career path. These metrics informed the degree to which the Scholars Program is successfully cultivating motivated and engaged faculty and elucidate on opportunities to improve the program.

Research Questions & Design

This study was guided by the following research questions:

- 1) How do faculty members who participated in the Scholars Program describe its influence on their engagement in academic activities supported by the program?
- 2) Do the curriculum vitae (CV) of faculty members who have participated in the Scholars Program demonstrate sustained academic activity through evidence of scholarly work as defined by the Tufts School of Medicine TUSM criteria for academic appointment and promotion?

A summative program evaluation methodology was employed to assess the Scholars Programmatic outcomes as relevant to these research questions. The literature suggested a summative program evaluation is an accepted methodology used to identify the success of a program in achieving its desired outcomes (Emans, et al., 2008; Hatem et al., 2006; Janus & Brinkman, 2010; Lown et al., 2009; Newman et al., 2016; Sehgal et al., 2011). This summative evaluation documented self-reported impacts of the program on the graduated scholars and their academic careers. The researcher evaluated the scholarly products of the graduated scholars since graduating program as defined by the TUSM criteria for academic advancement. By assessing these outcomes, this evaluation provides context on the effectiveness of the program at affecting faculty motivation and engagement in academics.

This summative program evaluation studied descriptive metrics to address the above research questions. Little has been done to try to understand the implications of institutional supported faculty development relative to faculty engagement at MMC; therefore, this summative program evaluation aimed to identify factors supporting success in the participants of the Scholars Program at MMC in the context of motivation and engagement. An institutionally

supported faculty development program using Self-Determination Theory (SDT) as the contextual framework offers new implications for academic healthcare leaders planning faculty programming and offers a conceptual framework for understanding the outcomes of this summative program evaluation (Lyness et al., 2013; West et al., 2016).

Site Information & Population

MMC relies on numerous faculty throughout MaineHealth and the state of Maine to support the continuum of health professions education that takes place throughout the year. To offer an option for institutionally supported faculty development needed for these faculty, the Department of Medical Education at MMC began the Scholars Program. This institutionally supported program serves many functions within faculty affairs support and faculty development. The program provides support for faculty academic appointments and promotions and functions as a vehicle for engagement in the domains of teaching, mentoring, role modeling, and scholarly activity (Rose, 2016). The Scholars Program has been a competitive and popular program since it began in 2016 (Rose, 2016). Interprofessional faculty must apply for the two-year program and are selected based on their involvement with scholarship, prospective growth in the academic community, and the comprehensiveness and relatedness of their proposed scholarly project (Rose, 2021). Scholars also apply with a formal mentor they select; the role of this mentor is to help guide them professionally and to help them navigate their proposed scholarly project during the two years they are in the program (Rose, 2021). The scholars are supported through protected time and dedicated program resources for faculty affairs and faculty development (Rose, 2016). Faculty in the program are released from 0.05 FTE of their clinical obligations through a stipend program; this equals roughly two hours per week (Rose, 2016). The Scholars Program curriculum is based on five domains of academic healthcare as defined by the

Academy of Medical Educators Professional Standards: 1) designing and planning learning, 2) teaching and facilitating learning, 3) assessment of learning, 4) educational research and scholarship, and 5) educational management and leadership (Academy of Medical Educators [AOME], 2014; Rose; 2016). In academic healthcare institutions such as MMC, healthcare professionals are “increasingly involved in teaching, learning, assessment and supervisory activities with medical students, trainees, and other health professionals” (Swanwick & McKimm, 2010, p. 164). It is for this reason that the professional standards framework is designed to develop the knowledge, skills, and practice required of faculty who perform these wide varieties of educational roles undertaken in the education of healthcare professions (Swanwick & McKimm, 2013).

Additionally, the program serves to support faculty enrolled in the program through the academic appointment and promotions process, and it serves as a vehicle to support engagement in the areas of teaching, mentoring, role modeling, and scholarly activity (Rose, 2016). Faculty at MMC are appointed to an academic rank through the TUSM; this is because the medical school program, The Maine Track at MMC, is a partnership with TUSM. Their academic appointment process is therefore the academic appointment process for MMC. The TUSM academic promotions process also serves as a framework for scholarship at MMC. It is the intention of the Scholars Program to support faculty affairs and professional development throughout the MaineHealth health system (Rose, 2016).

MMC is a 637 licensed-bed teaching hospital located in Portland, Maine with a staff of over 6,000 people, and is part of the larger MaineHealth system. MaineHealth is a nonprofit system of providers and healthcare organizations (About, n.d.). A well-supported faculty is critical as the Department of Medical Education at MMC supports numerous interprofessional

learners in undergraduate, graduate, and continuing healthcare education throughout the system. Graduates of the Scholars Program practice and teach in a variety of locations throughout Maine. Many of the scholars are employed by MMC and some are independently employed. The Scholars Program participants include a wide range of medical specialties comprising hospitalists, surgeons, family medicine, and psychiatrists. Other healthcare professional from nursing, pharmacy, and physician assistants are also included in the Scholars Program participants. The Scholars Program participant cohort who contributed to this study included eight graduates from the program. CVs were submitted from six participants, one from the 2018 and five from the 2019 graduation year cohorts. Six scholar graduates participated in the semi-structured interviews, four from the 2019 and two from the 2020 graduation year cohorts.

Sampling Method

Participants who have graduated from the Scholars Program from the start of the program in 2016 up to 2020 were recruited by direct email. Recruitment emails satisfactorily explained the study to the participants in order to gain informed consent; there were eight unique participants total. Four participants submitted a CV and participated in the semi-structured interviews and four participants only submitted CVs or participated in the semi-structured interviews; the breakdown for that group was two submitted CVs and two participated in the semi-structured interviews.

Qualitative data were generated through semi-structured interviews. The participants were interviewed using a series of open-ended questions about their level of engagement in academics and scholarly activity as defined by the AOME professional standards domains and the TUSM metrics for academic advancement since their involvement in the Scholars Program. The researcher qualitatively coded the scholars' responses. Lastly, the CVs submitted by the

participants were collected and quantitatively analyzed to appraise the presence of and quantify scholarly activity. The analysis was guided by the TUSM metrics for academic advancement since their respective cohort graduation dates until the time of collection early 2021 (see Appendix B). This evaluation sought identify the qualitative and quantifiable outcomes of the Scholars Program in specific to faculty motivation and engagement in academics. Similar summative program evaluation methodologies have been used in the literature with the same goal (Hatem et al., 2006; Lown et al., 2009; Newman et al., 2016). These methodologies were based on a modified Kirkpatrick model of evaluation. The above sampling method collected data that is guided by Kirkpatrick's four level model in the areas of learner reaction and behavior change (D. Kirkpatrick & J. Kirkpatrick, 2006). By identifying the scholars' qualitative self-perceived reactions and the quantitative changes in the scholar's CVs, this summative program evaluation identified program outcomes in motivation and engagement in the context of SDT.

Instrumentation & Data Collection Procedures

Data collection methods followed the methodologies required for promoting ethically responsible and compliant research. This study was exempted from obtaining a full approval from the University of New England (UNE) Institutional Review Board (IRB). The researcher obtained a research determination that this program evaluation did not fall into the category of human subjects research from the MMC IRB.

After obtaining informed consent, quantitative data were gathered from the participants CVs. The CVs were collected via email request by program administrative support and were de-identified before analysis. The CVs were stored on an internal MaineHealth secured network. This network is password protected per each individual user and cannot be accessed without administrative rights granted by the MaineHealth Department of Information Support (MMC IS).

The MaineHealth secured network is Health Insurance Portability and Accountability Act (HIPAA) compliant and meets the privacy requirements set forth by the MaineHealth Office for Research Compliance and IRB.

Qualitative data were generated through semi-structured interviews that were centered on gathering information about the scholars' level of motivation and engagement in the academic setting after they graduated from the Scholars Program (see Appendix C for the interview guide). The researcher via secured Zoom calls version 5.6.1 (Zoom Video Communications, San Jose, CA) conducted semi-structured interviews during the late winter of 2021 following the interview guide (see Appendix A). The security for the researcher's Zoom account is managed by Tufts University. Transcripts were transcribed using the transcription feature in Zoom and checked for accuracy by the researcher. Open-ended questions encouraged robust responses pertaining to the AOME five domains of professional standards, the TUSM framework for academic promotion, and the metrics of motivation and engagement as outlined by the conceptual framework.

Data Analysis

In order to respect the participants' availability to participate, CVs and interview responses were not paired. Because of this, the mixed methodology is considered embedded and the researcher looked at the data sets independently.

Quantitative

The collected CVs from the scholars were quantitatively analyzed. The content from the CV analysis represent verifiable data that are detailed and inclusive of the above definition of engagement in scholarly activity since graduation from the Scholars Program (Newman et al., 2016). The TUSM CV format is standardized (see Appendix B for TUSM CV criteria) and requires organization and reporting of criteria required for academic advancement

(Appointments & Promotions, 2019). These criteria identified in the TUSM CV format were the number of teaching activities, committee work, teaching presentations, educational leadership roles, medical education funding sources, total publications, academic healthcare publications, teaching awards, newly developed curricula, and academic promotion (Appointments & Promotions, 2019). The CVs were reviewed and inventoried based on the TUSM CV academic criteria. The data were entered into Excel 2016, a version of Excel developed by Microsoft that runs on the Windows 10 platform managed by MMC IS (Microsoft Corporation, Redmond, WA). The baseline for all participants' CV analysis was the time of graduation from the Scholars Program. TUSM CV criteria for all participants was inventoried from the time of graduation to present and the mean for each criterion was calculated (see Table 2). Due to the available sample size of six, this analysis was underpowered to detect a definitive statistical significance. However, the researcher examined the content for trends in the expected direction of the improved academic performance following program completion.

Qualitative data analysis

For the purposes of this program evaluation, codes were assigned using deductive and inductive approaches. Deductive analysis was based on representative meaning to the descriptive information as outlined by the AOME professional standards, TUSM academic advancement, and SDT frameworks mentioned above. Qualitative description and data organization were completed using MaxQDA Analytics Pro v20.1 software, (VERBI Software, Berlin, Germany). MaxQDA is a tool used for organizing data during the process of analysis. Data were analyzed using a first cycle coding method, identifying codes initially assigned to the data including both a priori themes and emergent themes (Saldaña, 2015). The second cycle coded the data within the resulting first cycle codes (Saldaña, 2015). Using deductive and inductive code assignments for

the data, the analysis provided an inventory of themes to guide and categorize, which is especially useful for program evaluation studies with mixed forms of data (Saldaña, 2015). The data were coded for analysis independently of the quantitative data. This embedded mixed method is designed to allow for some of the vagueness and adaptability that supports the generation of qualitative data (Glaser, 1965). The qualitative data analysis is iterative, with repeated reviewing of transcripts from the semi-structured interviews. The themes identified in the qualitative analysis were used to develop a framework for understanding the ways in which participation in the Scholars Program influences faculty motivation and engagement, and refinements to improve the program.

Limitations of the Research Design

There are some limitations to this program evaluation design. Summative program evaluations have a tendency for overreliance on summative measures such as the CV quantitative data (Chatterji, 2003) and this quantitative sample size is underpowered. Because of this limitation, this program evaluation used an embedded mixed methodology to allow each data set to stand independently. This evaluation is summative, meaning after the conclusion of the program there is not an opportunity to correct any discrepancies or opportunities for program improvement. However, coding was conducted to elicit programmatic feedback to be used for curriculum refinement during future planning. Lastly, this method may not illustrate inconsistencies in the data such as differences in experience or goals of the faculty.

The primary data may contain systematic reporting biases based on the scholars' perceptions (Bamberger et al., 2004). Some of these limitations are addressed by using mixed methods, such as reviewing qualitative and quantitative data concurrently, which can increase validity by identifying similar trends in both data sets (Bamberger et al., 2004). Compatibility

between data sets obtained through different methods may establish corroborating evidence and multiple contexts to enhance the understanding of the research questions (Salkind, 2010).

Limitations may have negative impacts on the validity, reliability, and transferability of the program evaluation methodology specifically through biases. Mixed methods studies can improve the validity and reliability of a study and may obtain a less biased understanding of the phenomenon under study (Creswell & Clark, 2017).

For the qualitative portion of the study, a number of measures were taken to ensure methodologic rigor and trustworthiness (Braun & Clarke, 2006; Corbin & Strauss, 2015; Saldaña, 2015). The factual accuracy of the data defined by descriptive validity (Johnson, 1997) was addressed by reviewing the Zoom transcripts to ensure correctness. The degree to which the participants' viewpoints, thoughts, intentions, and experiences are accurately understood as defined by the interpretive validity (Johnson, 1997) is addressed by asking clarifying questions to verify the participants' statements and ensure assumptions were not made by the researcher. Lastly, theoretical validity is addressed in the discussion section of the study and has been addressed in the conceptual and programmatic frameworks. This is the degree to which the theoretical framework explanations developed from the conceptual and programmatic framework fit the data and are credible and defensible (Johnson, 1997). The analysis also aided in mitigating threats to theoretical validity as similar data trends in each data set may establish corroborating evidence to enhance the understanding of the research questions (Salkind, 2010).

Ethical Issues in the Study

Ethical issues in educational research are often governed by compliance with rules, codes, and principles. Ethical issues are complex, dynamic, and often dependent on context and relationships (Head, 2020). It is important that the relationships between the researcher and the

participants are negotiated in order to protect the dignity, rights, and welfare of research participants. Prior to data collection informed consent was obtained for all participants. Data were collected from participants through email requests for CVs and stored in a password-protected folder on the MaineHealth secured network. During analysis, all data were kept in MaxQDA, and Excel programs under password protection and limited to the researcher involved in the study. Zoom security is managed by the TUSM Information Services (IS) department; this security uses a two factor authentication for logging into the secured account. Additionally, the study design was sent to the UNE IRBs for research determination and found not to be human subjects research.

The researcher has managed the Scholars Program for five years and is part of the team that develops the curriculum, teaches in the program, and is on the selection committee that admits the incoming cohorts. Because of this close relationship with the Scholars Program, there is the potential for bias (Internal vs. External Evaluation, 2016, September 16). There may have been a perceived lack of objectivity and a lack of attention to unanticipated emerging outcomes. To mitigate the potential bias the researcher employed a mixed-methods methodology to verify with more than one data source. The potential benefits of this relationship are that the researcher has a robust knowledge of the program and might have more nimbly assessed the program due to that knowledge base (Internal vs. External Evaluation, 2016, September 16). To reconcile any perceived conflict of interest, the researcher disclosed the existence of the potential conflict of interest.

Conclusion and Summary

There are many barriers to faculty engagement in academics, including pressures for clinical productivity, available opportunities for rural faculty, and the absence of career guidance

in academics (Glasheen et al., 2011; Whitcomb, 2003). The development of a strategically planned infrastructure to support faculty affairs and development at MMC including the Scholars Program may impact the motivation and engagement of faculty (West et al., 2016). This summative program evaluation assessed whether participating in the Scholars Program resulted in changes in motivation and engagement as outlined by the literature and the conceptual framework. The Scholars Program supports faculty and serves as a vehicle for engagement in the domains of scholarly activity as outlined by the AOME Professional Standards and TUSM academic advancement framework. Qualitative and quantitative data were examined for trends in this mixed-methods study. The scope of this evaluation was to identify curricula that may encourage faculty motivation and engagement in academics through institutionally supported programs, and elucidate on refining the program.

CHAPTER 4

RESULTS

The themes identified in the literature review guiding this program evaluation suggest that institutionally supported faculty development may be associated with faculty motivation and engagement. This study sought to identify factors that support the success of participants of the Maine Medical Center (MMC) Institute for Teaching Excellence (MITE) Scholars Program (the Scholars Program), an institutionally supported faculty development program, in the context of cultivating motivation and engagement. Self-Determination Theory (SDT) offers a conceptual framework for understanding the findings of this summative program evaluation. According to the literature, SDT is one of the leading theories on human motivation, positing that when the basic psychological needs of faculty are met an individual feels engaged (Deci & Ryan, 2002; Diefendorff et al., 2018; Gagné & Deci, 2005). SDT defines this as the satisfaction of needs and this may explain the relationship between motivation and engagement at work (Lyness et al., 2013; Van den Berg et al., 2013; Van den Broeck et al., 2008). SDT serves as the conceptual framework for the interpretation of the findings of this study as they pertain to faculty's self-perceptions.

Using the themes identified in the literature and conceptual framework, this summative program evaluation explores faculty motivation and engagement. The program's effectiveness is measured by two metrics: faculty engagement in scholarship and academia after they graduate from the Scholars Program and self-perceived motivation to follow an academic career path. These metrics will inform whether the Scholars Program is successfully cultivating motivated and engaged faculty.

This summative program evaluation was guided by the following research questions:

- 1) How do faculty members who participated in the Scholars Program describe its influence on their engagement in academic activities supported by the program?
- 2) Do the curriculum vitae (CV) of faculty members who have participated in the Scholars Program demonstrate sustained academic activity through evidence of scholarly work as defined by the Tufts School of Medicine (TUSM) criteria for academic appointment and promotion?

Self-reported impacts of the program on the graduated scholars and the scholarly products of the graduated scholars since participating in the program, as defined by the TUSM criteria for academic advancement, were analyzed.

Analysis

Analysis of the data was a two-part process. This evaluation sought to identify the qualitative and quantifiable outcomes of the Scholars Program specific to faculty motivation and engagement in academics. The quantitative data examined the number of scholarly products as identified in the TUSM CV format produced by participants after graduating from the Scholars Program. These criteria were the number of teaching activities, committee work, teaching presentations, educational leadership roles, medical education funding sources, total publications, academic healthcare publications, teaching awards, newly developed curricula, and academic promotion (see Table 2 for quantitative results; Appointments & Promotions, 2019). Qualitative data were obtained from semi-structured interviews using a question guide constructed on the AOME professional standards, TUSM academic advancement, and SDT frameworks (see Appendices A, B, & C). Using a deductive approach, qualitative codes were

assigned based on representative meaning to the descriptive information as outlined by these three frameworks.

For the purposes of this summative program evaluation examining engagement and motivation, learner reaction and behavior change were identified as the metrics of study based on Kirkpatrick's evaluation model (D. Kirkpatrick & J. Kirkpatrick, 2006). The qualitative data produced by the semi-structured interviews provided learner reaction and the quantifiable data from CVs provided evidence of behavior change. The researcher was able to obtain six interview transcripts and six CVs for analysis. In order to respect the participants' availability to participate, CVs and interview responses were not paired.

This study recruited Scholars Program graduates from the start of the program in 2016 up to 2020 by direct email. Recruitment emails satisfactorily explained the study to the participants in order to gain informed consent; there were eight unique participants total who submitted CV and/ or participated in the study. Four participants submitted a CV and participated in the semi-structured interviews and four participants only submitted CVs or participated in the semi-structured interviews; the breakdown for that group was two submitted CVs and two participated in the semi-structured interviews.

Quantitative data were collected from the participants CVs. The CVs were submitted via email and were de-identified before analysis. The CVs were stored on an internal MaineHealth secured network. The CVs were analyzed based on the TUSM CV academic criteria. The data was entered into Excel 2016, a version of Excel developed by Microsoft that runs on the Windows 10 platform managed by MMC IS (Microsoft Corporation, Redmond, WA). Table 2 reflects the inventory of results for the quantitative data.

Qualitative Data Analysis

Qualitative data for the study consisted of interview transcripts. Semi-structured interviews were conducted by the researcher via secured Zoom calls version 5.6.1 (Zoom Video Communications, San Jose, CA) during the late winter of 2021 following the interview guide (see appendix A). The security for the researcher's Zoom account is managed by Tufts University. Transcripts were transcribed using the transcription feature in Zoom and checked for accuracy by the researcher. The transcripts were then stored in MaxQDA Analytics Pro v20.1 software, (VERBI Software, Berlin, Germany). Qualitative data organization and analysis was completed using MaxQDA. Descriptive codes were assigned using both deductive and inductive approaches. The analysis provided an inventory of themes.

Participants

Participants consisted of scholars who graduated in the years 2018, 2019 and 2020. To maintain confidentiality, no other demographic information such as gender or discipline can be disclosed. The cohorts are too small and the array of demographics are too narrow. Any additional information about the participants would then allow them to be identifiable. After the transcripts were reviewed a member check was not conducted due to time constraints. Using a deductive approach, qualitative codes were assigned based on representative meaning to the descriptive information as outlined by the AOME professional standards, TUSM academic advancement, and SDT frameworks used for this study. Data were analyzed using a deductive and inductive first cycle coding method, identifying codes initially assigned to the data. The second cycle coded the data within the resulting first cycle codes. Using a priori and emergent descriptive code assignments for the data, the analysis provided an inventory of themes.

Quantitative Data Analysis

The quantitative data consisted of six CVs representing a third of the program participants. Six participants submitted their updated CVs when solicited to participate in the study. Reasons given by non-participants included not having updated CVs, not having time to update CVs for submission, or not responding to solicitation to participate.

The evaluation of six CVs was conducted. Faculty at MMC are appointed to an academic rank through the TUSM. The TUSM academic promotions process also serves as a framework for academic engagement as the format is standardized (see Appendix B for TUSM CV criteria) and requires organization and reporting of criteria required for academic advancement (Appointments & Promotions, 2019). These criteria identified in the TUSM CV format (see Appendix B). Table 2 shows each criterion outlined in the TUSM framework for academic promotion. Faculty are responsible for independently tailoring their academic career to meet most of these criteria to promote to the next academic rank (Appointments & Promotions, 2019).

Analysis of the contents of the six CVs provides a description of faculty engagement in scholarship and academia after graduation from the Scholars Program. CVs for six graduated scholar cohorts were collected and subjected to quantitative analysis to appraise the presence of scholarly activity, as defined by the TUSM metrics for academic advancement since their graduation dates until the time of collection early 2021, and to quantify any identified scholarly activity (see Appendix B and Table 2). Changes in the scholar's CVs since graduation demonstrate quantifiable engagement in scholarly activity.

Presentation of Results

The findings are presented in two sections, qualitative and quantitative. The qualitative findings illustrate the themes identified from the semi-structured interviews. The definition of

scholarly activity including the AOME Professional Standards and TUSM academic promotions frameworks and the conceptual framework, SDT, guided the deductive analysis identifying these themes. The TUSM framework for promotion also guided the framework for the quantitative analysis. Table 2 shows the inventory of scholarly products for each of the participants since graduating the Scholars Program. These two data sets illustrate self-assessed motivation and evidence of continued engagement in academics post-graduation. Each form of data is summarized.

Qualitative Findings

Qualitative data analysis was used describe the self-perceived motivation of the participants to follow an academic career path after graduating the Scholars Program. The researcher found that the a priori themes as outlined by SDT were identified as conceptual themes. Additionally, positive experience emerged as a conceptual theme. Three a priori programmatic themes were identified from the data. The conceptual themes and programmatic themes include the a priori categories as defined by SDT and the criteria for scholarship as defined by the framework for this study. Table 1 shows these themes with exemplar quotes from the semi-structured interview transcripts.

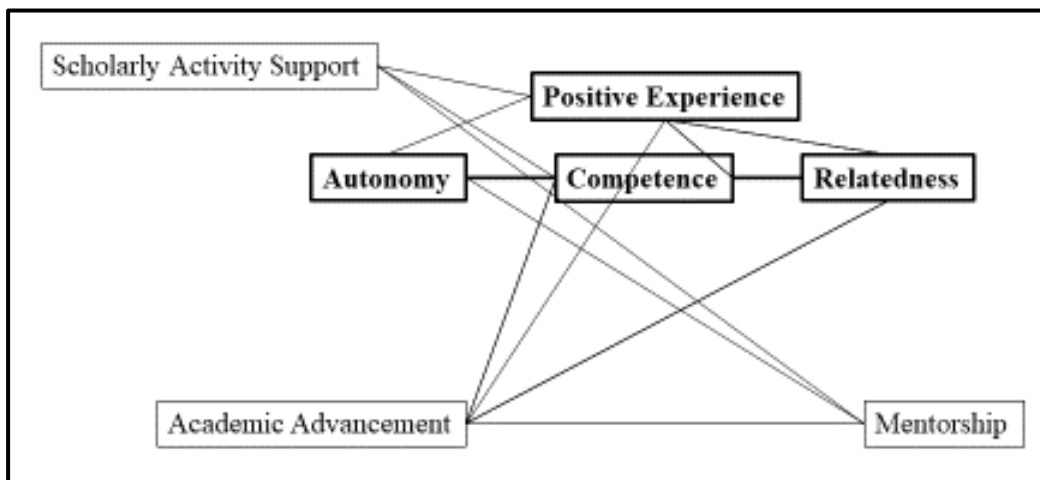
Table 1
Exemplar Quotes by Theme

	Primary Themes	Exemplar Quotes
A priori	Autonomy	I'm happy, I was primarily a clinician and would do research occasionally if I had time. But [the Scholars Program] has really expanded my world to be free from that and choose what I want. (Participant 5)
	Competence	I think [the Scholars Program] definitely gave me some of those tools and therefore a little more confidence in terms of idea generation, in writing, and pursuing a grant. ^[P1] And I think in terms of just the management of my own projects. I think it gave me more competence and able to see something to completion (Participant 3)
	Relatedness	I think that the major strength of the the Scholars Program is the academy and I think getting to know that community. I think you know MMC and being a part of a smaller division/ program you feel very siloed and don't feel super connected to other people doing similar work or thinking about things in similar ways. (Participant 1)
	Positive experience	I would say its such a great program. And I think the connection and networking part of [the Scholars Program] is really good because of that. I think one of the great strengths is the external speakers. I also think that that it is great for the institution at large. And I think the interdisciplinary focus is awesome. It was a really worthwhile program. (Participant 1)
	Subthemes	
A priori	Scholarly activity support	The only teaching I did before was teaching on the wards or the occasional lecture. And afterwards, I'm teaching all the time and then started a series and then that dovetailed into what's going to become a program. The Scholars Program gave me a project and in giving me a project, I got some attention and then that attention elevated leadership's awareness of me. (Participant 2)
	Academic achievement	I got my assistant professor and I'm not [yet] up for associate but yes I am hoping to apply. I know that just being a part of that community that places value on promotion as I do was helpful. (Participant 1)
	Mentorship	There are so few mentors here who do clinical research like there's almost none. I'm a principal investigator on a study getting started and [they] have become my mentor. I'm in a meeting with [them] twice a week, so that that's worked out and that's been great. (Participant 2)

All four conceptual themes show interconnectedness with the three programmatic themes (see Figure 1 for a visualization of the interconnectedness of these themes). In the mind map displayed in Figure 1, the conceptual themes are bolded and lines connect each theme to show the relationships identified between them in the qualitative data. The connections between the three themes of autonomy, competence, and relatedness that define SDT are bolded to show their assembly is the characterization of SDT. The programmatic themes illustrate the elements of the Scholars Program that produced the conceptual themes: self-assessed feelings in the participants.

Figure 1

Mind map of the themes' interconnected relationships



In the next section, the three SDT categories, autonomy, competence, relatedness, and positive experience are used to present participants' reflections on their experiences during the semi-structured interviews.

SDT: Autonomy

Autonomy is the one of three categories from the SDT framework. SDT suggests that individuals need to feel a sense of control over their behaviors and goals (Diefendorff et al., 2018). Describing how autonomy was felt in the program, one participant suggested that the program allowed them to “Discover[ing] what’s out there in terms of academia and educational careers” (Participant 4). Another participant suggested that, prior to participating in the program, they didn’t have the opportunity to autonomously seek out academic opportunities, nor the competence to do so. They stated:

I was so naive to academic [healthcare]. I wouldn't have even known how to go about anything. And at least now I feel like I have skills and I have building blocks. And if I wanted to, depending on what I want to do I feel like I at least know the next steps of

how to get there. So in that sense, that gives me some autonomy of knowing how and what I can work on my own. (Participant 5)

Autonomy was also described as the choice to pursue scholarly activity and competence was described as acquiring the skills needed to make those decisions. In this quote, the Scholars Program is referred to as the MITE program because the Scholars program is part of the Maine Medical Center (MMC) Institute for Teaching Excellence (MITE).

I was certainly never pushed to do something with my project I didn't want to do and I mean, I feel like it gave me things I needed so that and I knew how to go about certain things because of the MITE program. (Participant 3)

SDT: Competence

Competence is one of three categories from the SDT framework. Competence is an individual acquiring knowledge or skills. When an individual feels competent, they are more likely to pursue actions to help them achieve their goals. Competence was described as possessing the knowledge and skills needed to recognize institutional expectations and the overall value of academic healthcare. In this case, the participant speaks to how formal mentorship as part of the Scholars Program gave them the knowledge needed to change their behavior and attitude with respect to career planning and academic advancement.

I didn't know that CVs came in different forms. I didn't know that each school has its own special format and that there was such a thing as a teaching portfolio like I'd never even heard of such a thing. I think [mentorship] helped me understand why [academic healthcare] was important and why I should spend the time to update my CV and go through that process. (Participant 5)

Competence, positive experience, and autonomy were described in the context of the participant being better equipped to navigate an academic career due to the Scholars Program.

One participant said:

I think, like I said, that it gave me skills that I wouldn't have acquired as quickly. And I think it think helped me a lot in terms of the academic part of my career and figuring out where to bring that. (Participant 3)

Competence was also described in relation to community and how it fostered a drive towards professional development. This participant speaks to elements of the program cultivating motivation.

I think having the time to learn about all these different elements that honed different skills. I saw what everyone else is doing and that kept a fire alive in me. I was actively trying to improve my skills, knowledge, and abilities in academics. I think that has been a huge benefit professionally. (Participant 6)

SDT: Relatedness

Relatedness is the last element of SDT. Simply put an individual needs to experience a sense of belonging and feel part of a community. Scholarly activity support was also often described with competence, academic advancement and relatedness as expressed by two participants. “The Scholars Program encouraged me to write that medical education grant and every grant you write gets you a little bit better at writing grants” (Participant 1) and “I think that that kind of community aspect helps a lot in terms of keeping the scholarly trajectory at the institution” (Participant 3).

Scholarly activity was used to describe feelings of relatedness among the community and within professional networks and, again in this quote, the Scholars Program is referred to as MITE.

I think it gave me some really great connections with people in other areas of the hospital that I wouldn't have met otherwise. And make it easier to network, like, when I have projects or ideas. I know, kind of, what other people are working on. That's really helpful and everyone in MITE has been great, and friendly and easy to network with. So that's been really nice professionally. (Participant 5)

Positive Experiences

For the purposes of this study, self-perceived motivation is illustrated by the theme of positive experience. Often throughout the transcripts, at least one of the basic psychological needs as defined by SDT accompanied the theme of positive experience. Positive experiences were often described in tandem with competence as described in the following quote: “One faculty member talked with me about negotiation, never in my life had someone talked to me about how you negotiate for things. And I like that, it was amazing” (Participant 5).

Often the basic psychological needs as outlined by SDT accompanied positive experience in the transcripts. This experience is also echoed when participants discussed academic advancement as a theme tied to competence, positive experience and relatedness. This participant speaks to the opportunities the program afforded them in relation to the conceptual themes.

Right now I am going for my next level of professorship. I would not be doing that if it wasn't for the Scholars Program. I never would have gotten involved in the feedback research. That introduced me more to the Tufts Medical School, we went down there to meet the students and attend a lecture and for an educational day. (Participant 4)

Motivation was tied to positive experiences in the program and feeling supported. One participant revealed how the Scholars Program was a positive experience and that it kept them autonomously motivated to stay involved in academics.

I'm incredibly happy to have been involved in [the Scholars Program] and to continue to be involved in it and it was a really important thing for me. I think, as I mentioned, [its kept] a passion for [academics] from fizzling out. So I'm really, really appreciative of the program. (Participant 6)

Positive experience emerged as interconnected to the three basic psychologic needs of SDT. This is suggested in the theory itself; SDT is one of the leading theories on human motivation and one of the key personal factors for engagement (Costa, 2009; Lyness, 2013; Thibault-Landry et al., 2018; Van den Berg et al., 2013; Zigarmi et al., 2009). High levels of happiness, productivity, and engagement enable faculty to leverage professional success and achieve personal goals (Dankoski et al., 2012).

Programmatic Themes

The programmatic themes identified in the qualitative data were based a priori on the framework used for this study to define academics. The AOME Professional Standards and the TUSM criteria for academic advancement informed the identified programmatic themes. The Scholars Program uses these frameworks to guide curriculum development. These programmatic themes were interconnected to all four conceptual themes and were not identified specific to any one conceptual theme. See Figure 1 for an illustration of the interconnected nature of the themes. Connections were drawn between the conceptual themes and programmatic themes when mentioned in the exemplar quotes to offer a visual model of these relationships. The

programmatic themes are illustrative of the programmatic framework on which the Scholars Program is based.

Summary of Interview Data

The themes were used to organize and present the qualitative data. The conceptual themes were highly interrelated to the programmatic themes. These themes of mentorship, academic advancement, and support with scholarly activity offered program-based opportunities for the participants feelings that aligned with the conceptual themes. The programmatic themes identified areas in the Scholar Program curriculum that may cultivate the feelings as described by the conceptual themes. Since these programmatic themes were identified using a deductive approach based on the definition of scholarly activity, which is informed by the TUSM frameworks for TUSM academic appointment and promotion and the AOME professional Standards, the programmatic themes reinforce the rational for using this framework.

Quantitative Results

There were 11 categories defining the contents of the CVs. The TUSM framework for academic appointment and promotion uses these categories. These criteria outline scholarly activity based on the Boyer model for scholarship (Boyer, 1990). CVs of faculty members who have participated in the Scholars Program demonstrated sustained academic engagement through evidence of scholarly activity (see Table 2).

Table 2*Changes in Participants' Curriculum Vitae since Graduation from the Scholars Program*

CRITERION	SCHOLAR ID						MEAN
	1	2	3	4	5	6	
Years from Graduating the Scholar's Program	2	2	2	2	2	3	2.17
Graduation Year from Medical School	2013	2011	2006	2007	2008	2004	2008
Academic Appointment	Assistant Professor	Assistant Professor	Assistant Professor	Assistant Professor	Assistant Professor	Assistant Professor	Assistant Professor
Years in Rank	5	2	5	8	5	5	5
Year of Appointment	2016	2019	2016	2013	2016	2016	2016
Number of Teaching Presentations	14	11	6	11	11	8	10.17
Total Number of Publications	4	6	23	0	12	7	8.67
Total Number of Publications Related to Teaching/Medical Education Research	1	0	2	0	2	1	1.00
Funding related to medical education innovation or medical education research	2	0	3	0	0	2	1.17
Number of Academic and/or Teaching Leadership Roles*	1	0	5	9	8	6	4.83
Number of Major New Educational Curriculum Offerings/Materials Developed	0	2	2	0	2	0	1.00
Total Number of Major local/regional/national committee assignments related to medical education or medical education research	0	3	2	5	3	3	2.67
Total Committee Assignments	8	11	2	8	4	3	6.00
Number of Teaching Awards	1	1	1	1	0	2	1.00
Number of longitudinal medical student, resident, fellow, or faculty development teaching activities per year relative to the fellowship	8	2	0	9	3	2	4.00
Number of zero entries for any criterion	2	3	1	4	2	1	2.17

Six of the participants submitted CVs for analysis. There was overlap between the interview participants and the CV's reviewed. Four participants submitted a CV and participated in the semi-structured interviews and four participants only submitted CVs or participated in the semi-structured interviews. The researcher attributes the mix in participation to a variety of

explanations. For example, participants may have wanted to participate but did not have an updated CV to submit or they may have had an updated CV but not time to devote to the semi-structured interview.

The CV cohort were, on average, 2.17 years post-graduation from the Scholars Program (range 2 to 3 years). All six participants hold an academic appointment at the assistant professor level, with average time-in-rank being 5 years (range 2 to 8 years). The average number of teaching presentations was 10.17 (range 6 to 14). On average, participant CVs reported 8.67 publications (range 0 to 23). Publications related to teaching or medical education research averaged 1 (range 0 to 2). Grant awards focused on medication education innovations or research averaged 0.50 (range 0 to 3). Academic or teaching leadership roles averaged 4.83 (range 0 to 9).

Participant CVs reflected an average of 1 (range 0 to 2) new educational curriculum offerings or materials developed. The average number of major local/regional/national committee assignments related to medical education or medical education research was 2.67 (range 0 to 5) while participants reported an average of 6 (range 2 to 11) total committee assignments. The average number of teaching awards was 1 (range of 0 to 2). The average number of longitudinal medical student, resident, fellow, or faculty development teaching activities per year, relative to the program, was 4 (ranged 0 to 9). To best understand the spread of the range per participant on average, each participant had 2.17 no entries for any given criterion; meaning they did not have a work product for an individual criterion.

Summary of the CV Data

The CV data shows that for each participant they participated in most scholarly activity criteria. This suggests that each participant was motivated to remain engaged in most areas of scholarship. Each participant was at the same academic rank of assistant professor and the spread

of scholarly products varied from participant to participant. This varying range of scholarly products suggests that trends in areas of engagement cannot be identified from these data. There were two criteria where participants all showed scholarly engagement: total number of committee assignments and number of teaching presentations. Committee meetings and teaching presentations often occur throughout the administrative workday of Monday through Friday 8:00AM to 5:00PM regardless of clinical schedules. It may be that these two criteria are easier to engage in because they are scheduled into clinicians' calendars regardless of other commitments. The other criteria are all subject to scheduling protected time or external approval from governing bodies. For example, funding for educational projects and publications require time to prepare and write, and are then subject to approval from a governing body or peer-review. Further, leadership roles and teaching awards require approval from a governing body. It could be suggested that some of the criteria are subject to inequity. Participants may not have scheduling support, may have work-life balance challenges, or their departments or programs who do not have a culture of scholarship support (Gawad et al., 2020; Thomson et al., 2018). The Scholars Program does attempt to teach skills to help faculty navigate these barriers and challenges, and the resulting data in Table 2 do suggest that these participants were able to contribute to most criteria defining scholarship.

Summary

The intent of the Scholars Program is to serve as support for faculty developing skills in the domains of teaching, mentoring, role modeling, leadership, and scholarly activity as outlined by the AOME Professional Standards and TUSM academic advancement framework.

The four conceptual qualitative themes identified from the data were: autonomy, relatedness, competence, and positive experience using both deductive and inductive approaches.

Three of these themes were identified a priori from the conceptual framework, SDT, while positive experience emerged through analysis. The three programmatic themes mentorship, academic advancement and scholarly activity support, which were identified from the data using a deductive approach and align to the metrics outlined by the framework on which the Scholars Program curriculum is based.

Multiple themes were often described by participants in conjunction with one another; this reflects the interrelated nature of the three basic psychological needs that must be met for an individual to feel engaged outlined by SDT. These themes illustrate the self-described experiences of the participants and the effect on their self-perception of motivation. While motivation wasn't a verbatim theme that emerged in the findings, the factors affecting their motivation as explained by the elements of SDT accompanied participants' positive descriptions of the program. This is shown in the conceptual themes in the qualitative data. Positive experience emerged as a conceptual theme along with the identification of the three psychological needs defined by SDT.

The quantitative data summarized the activity of the participants after graduating from the Scholars Program. Each participant demonstrated engagement in most of the criteria for academic advancement specific to TUSM requirements. Table 2 shows the number of scholarly products for each of the participants since graduating from the Scholar Program. These scholarly products are evidence of work done since participating in the program and indicates the participant was engaged in academic work.

When looking at these two data sets together, there is evidence of the Scholars Program fostering a sense of motivation in the participants and continued engagement in academics after the program. The interview data suggest that participants felt motivated to participate in

scholarship after graduating the Scholars Program. The qualitative themes show evidence that programmatic elements meet the basic psychological needs of the participants and they felt positivity because of the program. The CV assessment provided data that showed continued engagement in academics up to 2.17 years after graduating from the Scholars Program. While the CV analysis was not paired with the interview participants' transcript interpretation, some conclusions can be drawn. The qualitative data suggests the participants felt motivation and a sense of happiness as a result of the Scholars Program. The quantitative data shows evidence that program participants remained engaged in academics; producing scholarly work after the program. It can be concluded that the Scholars Program fosters a sense of motivation and cultivates engagement in academics after graduating the program. The findings for these two data sets may begin to explain the relationship between motivation and engagement at work. Thibault-Landry et al. (2018) suggests an individual's motivation is characteristic of an individual's engagement. This provides context as to the effectiveness of the program at cultivating motivation and subsequent engagement in academics.

It should be noted that the transcripts were also coded for the theme program improvement to be used to as informal findings to help refine the current curricula. Program leadership will use this feedback during the planning phase for the next academic year's curriculum. While this code was not significant in the analysis of the qualitative data, the programmatic feedback will be useful to continue to improve the Scholars Program.

CHAPTER 5

CONCLUSION

In academic healthcare competing priorities cause faculty to struggle with teaching, clinical care, and finding the resources needed to maintain a healthy work-life balance (Glasheen et al., 2011). There are significant rates of burnout, stress, and lack of engagement among faculty in academic healthcare (Glasheen et al., 2011; Shanafelt et al., 2009). Shanafelt et al. (2009) suggests that there is significant evidence that engagement in academic healthcare can reduce the risk of clinician burnout (Glasheen et al., 2011). Institutional support has been identified as a critical factor consistent with improving academic success (Glasheen et al., 2011; West et al., 2016). Institutional support in the form of resources for targeted faculty development, protected time, training to support scholarship and balance of work demands is linked to a reduction in burnout and an increase in satisfaction in faculty (Glasheen et al., 2011; Shanafelt et al., 2009). As some of the leading theorists on human motivation, Van den Berg et al. (2013) suggest that Self-determination Theory (SDT) may impact how an individual perceives their work environment contributing to an individual's positive feelings towards their work.

In order to support the academic development of Maine Medical Center's (MMC) faculty, the Department of Medical Education at MMC developed the MMC Institute for Teaching Excellence (MITE) Scholars Program (the Scholars Program). The Scholars Program is an institutionally supported faculty program (Rose, 2016). The program also offers support and mentoring around a discrete scholarly project. The Scholars Program goals are 1) to improve teaching, education research, and administrative skills, 2) to develop leaders and mentors, and 3) to advance careers in academic healthcare. Because there has not been an in-depth program

evaluation conducted to assess outcomes, it is unclear if this program cultivates faculty who feel motivated and engaged in their scholarly work.

This program evaluation was guided by the following research questions and the analysis of the data illustrated the following conclusions:

- 1) How do faculty members who participated in the Scholars Program describe its influence on their engagement in academic activities supported by the program?

Participants described experiences that generated conceptual qualitative themes: autonomy, relatedness, competence, and positive experience. Three of these themes were identified a priori from the conceptual framework, SDT, one of the leading theories on motivation and engagement (Deci & Ryan, 2002; Diefendorff et al., 2018; Gagné & Deci, 2005). The three programmatic themes of mentorship, academic advancement and scholarly activity support identified from the data refer specifically to opportunities created by the program that created positive associations with engagement in scholarly work. The participants describe positive experiences that generated feelings that fulfill the basic psychological needs as outlined by SDT and opportunities created by the program for them to continue to participate and engage in scholarship.

- 2) Do the curriculum vitae (CV) of faculty members who have participated in the Scholars Program demonstrate sustained academic productivity through evidence of scholarly work as defined by the Tufts School of Medicine (TUSM) criteria for academic appointment and promotion?

The quantitative data collected from the participants' CVs summarized the scholarly activity of the participants after graduating from the Scholars Program. Each participant demonstrated engagement in most of the criteria for academic advancement specific to TUSM

requirements. The scholarly works in each of the criteria are indicative of motivation to engage in scholarship for each participant, respectively. Table 2 shows the number of scholarly products for each of the participants since graduating from the Scholar Program. These scholarly products are evidence of work done since participating in the program and suggests the participants were engaged in academic work.

Interpretation of Findings

Qualitative themes that identified from the data do reflect on the conceptual and programmatic frameworks. SDT suggests that, when the basic psychological needs of an individual are met while doing work, they will be engaged in that work (Diefendorff et al., 2018). SDT defines this as the satisfaction of needs (Van den Berg et al., 2013) and this may explain the relationship between motivation and engagement at work.

The interrelated nature of the themes in the transcripts speaks to the interconnected characteristics of SDT and the suggestion that these elements are associated with motivation and engagement. Three basic psychological needs outlined by SDT were identified as conceptual themes together with positive experience emerging as a conceptual theme; as positive experience seems to reflect the feeling of motivation for the participants. Three programmatic themes were also identified from the data: mentorship, scholarly activity support and academic advancement. The qualitative themes included the a priori categories as defined by SDT and the programmatic framework for the Scholars Program. All four conceptual themes show interconnectedness with the three programmatic themes (see Figure 1 for a visualization of the interconnectedness of these themes).

Further, the literature suggests that traits of motivation and engagement in faculty may improve job satisfaction and support a reduction in feelings of burnout (Glasheen et al., 2011;

Shanafelt et al., 2009; Van den Broeck et al., 2008). A motivated and engaged faculty is crucial to academic healthcare institutions achieving their academic missions (Glasheen et al., 2011; Van den Berg et al., 2013). The quantitative results show participants' measureable scholarly products since graduating from the Scholars Program (the Scholars Program). This inventory of products illustrates each participant's quantifiable engagement in academic work. The spread of data suggests that participants are remaining engaged in academic work beyond the life of the scholars program. This finding is limited to the 2.17 years post-graduation and cannot address any engagement beyond this point.

The quantifiable data also provides context to the qualitative findings that were identified from the transcript analysis. This is an embedded mixed-methods study, meaning that these two data sets should stand independently; there is opportunity for adding context from one to the other in their descriptive capacities only. These two data sets provide insight into the motivation and engagement of the participants in academic work after graduating the Scholars Program. The qualitative findings suggest participants' self-described feelings associated with the fulfillment of their basic psychological needs: autonomy, competence, and relatedness, as defined by SDT. Van den Berg et al. (2013) suggests that meeting these psychological needs may contribute to how an individual perceives their work environment contributing to an individual's positive intentions towards their work (Van den Berg, et al., 2013). The participants of this study self-reported these feelings of fulfillment with positive experiences; suggesting a self-reported sense of motivation during and after the time of the program. These findings compared to the quantitative inventory of engagement in scholarly activity in Table 2, suggests the participants may have felt this motivation up to 2.17 years post-graduation of the program. After the participants graduated from the Scholars Program, the quantitative data describes measurable

scholarly products of the participants. This data illustrates the continued engagement in scholarly work. While the quantitative data set does not offer statistically significant change, it illustrates engagement in academics.

Implications

This study was limited by the small sample size. The researcher felt, due to the SARS-CoV-2 pandemic, potential participants could not fully commit time and energy to participating in this program evaluation. Some participants felt they didn't have time to update their CVs for prior to submission for analysis, while others simply did not have the time to participate in anything beyond their formal clinical and academic roles. For this study, the researcher chose not to pair the CVs and interview responses. This allowed for more participation and respected the participant's time. Despite this unpaired format, mixed methods studies can improve the validity and reliability of a study and may obtain a less biased understanding of the phenomenon under study (Creswell & Clark, 2017). Future studies could employ a paired methodology using larger N to "directly compare and contrast quantitative statistical results with qualitative findings or to validate or expand quantitative results with qualitative data" (Creswell, & Clark, 2017, p. 62). Paired data sets could optimize triangulation in subsequent studies. Additionally, a larger N over more time could explore statistically significant differences in scholarly activity criteria pre-post participation. Participants could also be statistically compared to non-participants.

The findings suggest the program is creating a self-reported sense of motivation. The participants felt a sense of autonomy, competence and relatedness; these are the needs that must be met to feel a sense of motivation as outlined by SDT (Diefendorff et al., 2018; Van den Berg et al., 2013). It should be noted that this methodology may not account for differences in participants' previous experience or attention individual professional goals beyond the scope of

the Scholars Program. The curriculum of the Scholars Program is based on the Academy of Medical Educators (AOME) Professional Standards framework (see Appendix A). These findings may suggest that a program based on this framework of desired academic healthcare competencies creates a sense of motivation in participants of the program. The quantitative data in Table 2 shows the measureable engagement in scholarly activity as defined by the Tufts University School of Medicine (TUSM) academic appointment and promotions framework faculty must meet in order to hold an academic appointment or promote to a senior appointment, Appendix B. For the purposes of this study scholarly activity defines the all-encompassing term academics. Thus, participants self-reported motivation during and after the Scholars Program and demonstrated engagement in scholarly activity after graduating the program for the period of 2.17 years. The findings from this program evaluation suggest that institutionally supported faculty development based on the frameworks from AOME Professional Standards and steered by TUSM academic appointments and promotion do impart a self-reported sense of motivation and minimally sustained engagement in academics.

Recommendations for Further Study

Institutionally supported faculty development offers a broader range of support than individual faculty selecting faculty development opportunities on their own (Glasheen et al., 2011). The findings suggest that participants enjoyed and found value in the program. Institutions who may be struggling with faculty engagement might explore programs that utilize a similar approach. Academic healthcare faculty are often challenged by competing demands that create significant pressure and a reduction in job satisfaction (Emans et al., 2008). Low job satisfaction and burnout are associated with poorer faculty academic performance in areas, for example, as outlined by the metrics for TUSM academic appointment and promotion (Glasheen

et al., 2011). The literature suggests that institutionally supported faculty development strategies can result in significant reductions in burnout among clinical faculty (West et al., 2016). Further research such as this program evaluation specifically looking at engagement and reductions in burnout are needed to establish which academic interventions may be most effective in additional populations (Shanafelt et al., 2009; West et al., 2016). Programs could consider using the interrelated themes identified from the qualitative data working together when assessing faculty needs. More investigation should be done, as these findings are not generalizable. All further study should include a larger sample size. Additionally, quantitative research will continue to be underpowered, but could prove to offer an illustration of engagement over time. Newman et al. (2016) were able to show statistically significant engagement from 42 participants in 10 criteria through CV analysis. The participants for the study were recruited from a cohort of graduates from the Harvard Medical School Fellowship between 1999-2007 (Newman et al., 2016). The consistent nature of the themes, however, suggests that SDT could be useful for developing programs for institutionally supported faculty development specifically.

Conclusion

Institutional support has shown demonstrated reduction burnout in clinical faculty, and there is significant evidence suggesting that engagement in academic healthcare also reduces the risk of clinician burnout (Glasheen et al., 2011; Shanafelt et al., 2009). The participants in this study associated positive experiences with aspects of SDT and scholarly work as defined by TUSM criteria for academic appointment and promotion. Van den Berg et al. (2013) suggested that these types of positive work associations have “a buffering effect” on burnout and can stimulate motivation (p. 266). The findings from this study contribute to the literature that suggests academic healthcare institutions can reduce burnout and increase faculty engagement

and motivation by investing in an infrastructure that supports these activities and characteristics (Glasheen et al., 2011; Shanafelt et al., 2009; Van den Berg, et al., 2013; West et al., 2016). By investing in the SDT-defined needs of faculty through institutionally supported programming such as the Scholars Program at MMC, faculty may feel more motivated and engaged, and ultimately satisfied in their work. These positive associations for faculty may have a lasting impact on achieving the academic mission for academic healthcare institutions.

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Appendix A

Academy of Medical Educators' Professional Standards

I: Designing and planning learning	Standard Level 1	Standard Level 2	Standard Level 3
Learning and teaching principles	1.1.1 Shows how the principles of learning and teaching are incorporated into educational developments 1.1.2 Is aware of different ways of learning and teaching	1.2.1 Applies learning and teaching principles in the design of a course, unit, module or subject area 1.2.2 Matches course design to support different ways of learning and teaching	1.3.1 Applies learning and teaching principles in the design of a curriculum for a whole course or degree program
Learning needs	1.1.3 Shows how the needs of learners are considered	1.2.3 Gathers and interprets basic information on the needs of learners	1.3.2 Conducts complex learning needs analyses including those of learners, groups, professions or healthcare systems
Learning outcomes	1.1.4 Is aware of the need to define what is to be learned	1.2.4 Constructs appropriate learning outcomes that can be measured or judged	1.3.3 Defines learning outcomes within theoretical frameworks
Learning and teaching methods and resources	1.1.5 Is aware of a range of learning methods, experiences, and resources and how they may be used effectively	1.2.5 Matches learning methods, experiences, and resources to intended outcomes 1.2.6 Develops learning resources for planned courses	1.3.4 Is adaptive and effective in securing resources and dealing with constraints
Evaluation of educational interventions	1.1.6 Responds appropriately to feedback and evaluation of educational interventions	1.2.7 Evaluates and improves educational interventions	1.3.5 Conducts, interprets, acts on and disseminates evaluations of learning programs
II: Teaching & facilitating learning	Standard Level 1	Standard Level 2	Standard Level 3
Delivering Teaching	2.1.1 Appropriately uses a basic range of educational methods and technologies to achieve intended learning outcomes	2.2.1 Appropriately uses a broad range of educational methods and technologies to achieve intended learning outcomes	2.3.1 Is adaptive and innovative in using and developing educational methods and technologies to achieve intended learning outcomes 2.3.2 Supports others to innovate

Maintaining an effective learning environment	2.1.2 Is aware of the importance of establishing a safe and effective learning environment	2.2.2 Establishes a safe and effective learning environment 2.2.3 Provides educational, personal and professional support in relevant contexts	2.3.3 Monitors and manages the safety and effectiveness of complex learning environments 2.3.4 Proactively seeks to improve the learning environment
Learning and teaching methods and resources	2.1.3 Is aware of a range of learning methods that may be used in learning and teaching activities	2.2.4 Applies learning and teaching methods that are relevant to intended learning outcomes and program content 2.2.5 Uses learning resources appropriately	2.3.5 Adapts learning and teaching methods to unexpected, dynamic or evolving circumstances 2.3.6 Develops innovative learning resources
Feedback on learning	2.1.4 Understands the importance of seeking, receiving and responding to feedback about learning and teaching	2.2.6 Develops self-awareness in learners 2.2.7 Provides effective feedback to learners using a range of methods 2.2.8 Acknowledges and responds actively and appropriately to feedback	2.3.7 Develops self-awareness in learners and teachers 2.3.8 Interprets, synthesizes and deals with conflicting information arising from feedback from learners and educators 2.3.9 Effectively demonstrates to learners the rationale for changing or not changing teaching and learning activities in response to feedback
Ensures active participation and learner engagement	2.1.5 Describes ways of involving learners in actual clinical practice e.g. experiential learning opportunities	2.2.9 Engages learners in reflective practice	2.2.10 Uses systems of teaching and training that incorporate reflective practice in self and others
Reflection	2.1.6 Is aware of the importance of reflection on practice	2.3.10 Actively seeks to incorporate learners into a community of practice	2.3.11 Demonstrates a commitment to reflective practice in self, learners faculty and colleagues
III: Assessment of learning	Standard Level 1	Standard Level 2	Standard Level 3
The purpose of the assessment	3.1.1 Is aware of the general purpose of assessment	3.2.1 Relates assessments to the educational outcomes of the course or program	3.3.1 Designs complex assessment strategies and blueprints
The content of the assessment	3.1.2 Is aware that assessment should align with learning outcomes	3.2.2 Demonstrates that the contribution of any assessment addresses the learning outcomes and the assessment blueprint	3.3.2 Maintains and manages assessment blueprints for one or more courses and/or levels

The development of assessment	3.1.3 Is aware that robust assessment practices are integral to course development and effective educational practice	3.2.3 Contributes to the construction of assessment items	3.3.3 Leads design and development of assessments utilizing accepted good practice such as in the determination of reliability, validity, acceptability, cost-effectiveness, feasibility and educational impact
Selecting appropriate assessment methods	3.1.4 Is aware that assessment methods are chosen on the basis of the purpose, content, and level of the assessment 3.1.5 Uses a basic range of methods to assess learners	3.2.4 Selects assessment methods that match the purpose, content, and level of the learner 3.2.5 Uses a broad range of methods to assess learners	3.3.4 Integrates assessment methods into a coherent assessment strategy 3.3.5 Makes high stakes professional judgments
Maintaining the quality of assessment	3.1.6 Is aware that assessment practices require continuous monitoring and improvement	3.2.6 Maintains assessment quality by accurately interpreting assessment reports 3.2.7 Contributes under guidance to standard-setting processes	3.3.6 Applies standard-setting procedures most relevant to particular methods and format 3.3.7 Interprets technical data about the effectiveness of assessment practices 3.3.8 Prepares assessment reports for learners, examination boards and external stakeholders
IV: Educational Research & Scholarship	Standard Level 1	Standard Level 2	Standard Level 3

Theoretical and evidence-base of medical education	<p>4.1.1 Is aware of basic educational theories and principles</p> <p>4.1.2 Is aware of literature relevant to current developments in medical education</p> <p>4.1.3 Is aware of the principles of critical appraisal</p> <p>4.1.4 Is aware of the major issues and challenges facing medical educational research</p>	<p>4.2.1 4.2.1 Understands and applies a range of educational theories and principles</p> <p>4.2.2 Critically evaluates the educational literature and applies this learning to his or her educational practice</p> <p>4.2.3 Participates in the design and development of educational programs, projects or research</p> <p>4.2.4 Interprets and applies the results of educational research to his or her educational practice</p>	<p>4.3.1 Demonstrates advanced understanding of a wide range of educational theories and principles</p> <p>4.3.2 Critically evaluates the literature at an advanced level and applies this to his or her educational practice</p> <p>4.3.3 Develops new educational insights, theories, and practices, through scholarly endeavors</p> <p>4.3.4 Designs, supervises, manages and evaluates research strategies or projects</p> <p>4.3.5 Contributes to educational research or projects applying appropriate research methods</p> <p>4.3.6 Mentors and supports the professional development of educational researchers or educational project leads</p>
V: Educational management and leadership	Standard Level 1	Standard Level 2	Standard Level 3
Education management	<p>5.1.1 Manages personal educational time and resources effectively</p> <p>5.1.2 Understands and delivers intended educational outcomes</p>	<p>5.2.1 Manages educational programs and resources, including individuals and/or financial resources at a local level</p>	<p>5.3.1 Manages educational programs and resources, including individuals and/or financial resources beyond the local level</p>
Educational leadership	<p>5.1.3 Understands and takes professional responsibility for own role in local education</p>	<p>5.2.2 Leads educational projects or programs locally</p> <p>5.2.3 Supports the educational development of others within a local team, faculty or department</p>	<p>5.3.2 Demonstrates advanced ability to communicate, lead, develop, integrate and formulate a wide range of educational interventions and programs</p> <p>5.3.3 Has an impact on medical education beyond the immediate geographical locus</p> <p>5.3.4 Contributes to educational policy and development at a national or international level</p> <p>5.3.5 Successfully discharges senior roles in medical education</p>

Educational governance	5.1.4 Understands the roles and responsibilities of statutory and other regulatory bodies in the provision and quality assurance of medical education	5.2.4 Is involved in the provision and quality assurance of medical education	5.3.6 Is involved in the development of effective educational standards or governance frameworks
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Appendix B

Tufts University School Of Medicine Clinical Faculty Curriculum Vitae And Bibliography

Format Instructions

GENERAL GUIDELINES

- Your CV is a key document in the assessment of your promotion dossier. As such, please include all relevant professional activities and accomplishments.
- List the data in each section chronologically from past to present (except where otherwise indicated).
- Each item should appear only once on your CV, except where an academic appointment is the same as employment.
- Do not use abbreviations or acronyms as faculty colleagues from other departments and specialties will be reviewing your dossier.
- Do not delete major categories; if a section does not apply then simply use 'N/A'.
- Remember to add your name to the second page header of the CV template.

FORMATTING GUIDELINES

- Most sections contain tables enforcing consistent format of data; use the TAB key to create additional rows. If you cannot view the tables, then from the "Home" tab (MS Word version 2010 and higher) select the "Borders" icon and enable the option "View Gridlines".

TIPS ON MAJOR CATEGORIES

- **Licensure and Certification:** indicate dates of certification and recertification; do not include DEA number.
- **Academic Appointments:** list all faculty appointments -- primary & secondary, CTSI, Sackler -- and appointments at other academic institutions; please indicate the primary appointment. (Typically at Tufts, your primary appointment is within the academic department.) Also include academic appointments held during training.
- **Employment:** include all work experience in academic institutions (even if it is also listed as an academic appointment), hospital/health care positions, military service, government, industry, and other private and non-profit sector employment.
- **Administrative Appointments:** leadership positions at universities and/or hospitals, e.g., Program Directors (Assistant or Associate), Divisions Chiefs, Center Directors, Department Chairs, decanal titles (Dean, Assistant Dean, etc.)
- **Awards & Honors:** include undergraduate or graduate awards, student prizes, AOA, teaching awards, fellowship awards, clinical awards, academic awards, honorary societies, etc.
- **Institutional Committee Service:** list hospital and/or university committee assignments during your employment at the institution.

- **External Committee Service:** list committee assignments in order of local, regional, national, international organizations; examples include cooperative groups, consensus panels, etc. (Do not include committee assignments from professional organizations here.)
- **Professional Societies:** list the organization, role (as associate, member, fellow), and any important committee assignments/leadership roles (council, president, chairman, etc.)
- **Grant Review Activities:** list types of grant reviews, including the names of specific study sections, as well as other federal or foundation grant review committees.
- **Health-Related Advocacy & Community Service:** list activities related to your profession, e.g., patient education, global health-related, community boards, and international work.
- **Major Educational Responsibilities:** list all education-related activity, e.g., course director, clerkship director, program director, lecturer, small group facilitator, preceptor, mentor/advisor. Details of specific educational responsibilities should be included in the Educator Portfolio.
- **Practice Activities & Innovations:** e.g., quality improvement activities, clinical practice redesign, and web-based practice programs.
- **Visiting Professorships & Invited Academic Presentations:** list in the order of local, regional, national, international. Please include type of presentation, e.g., grand rounds, annual meetings, conference, CME course, board certification course, invited presentation, etc.
- **Major Research Interests:** ½ page maximum in narrative format; includes clinical, basic science, medical education, evaluation, and public health research.
- **Research Support:** include present and brief summary of past, and provide the following information for each grant; for multiple grants, copy and paste the entire table:
 - o **Dates**
 - o **Grant Title**
 - o **PI**
 - o **Funding Source:** includes federal, foundation, industry, NGOs, etc. For federal grants include grant numbers.
 - o **Amount:** specify if amount is annual/total, direct/indirect. For clinical trials, list per patient and [estimated] patient enrollment if available.
 - o **Role:** e.g., P.I., Dual-P.I., Co-Investigator, Site Investigator, etc.
- **Editorial Boards**
- **Ad Hoc Journal Reviewer**
- **Patents**
- **Bibliography:** number publications in each category and list all authors (**highlight your name in bold; underline any trainee authors you supervised**). You may indicate your role for multi-authored publications. List in reverse chronological order, with most recent publications on top. Include published and in press articles recorded; if in press indicate journal and use the standard format of PubMed

(http://www.nlm.nih.gov/bsd/policy/cit_format.html). Include Pub Med ID for each publication, where applicable. Please list in the following order and number each subcategory:

- a) **Refereed** (i.e., peer-reviewed) **Publications** (print and electronic)
- b) **Books Authored/Books Edited**
- c) **Book Chapters/Invited Reviews**
- d) **Monographs, Proceedings, and White Papers** (includes guidelines and consensus papers)
- e) **Editorials**
- f) **Letters to the Editor**
- g) **Case Reports**
- h) **Theses/Dissertation**
- i) **Published Abstracts** (if numerous, select those that reflect the range and breadth of your accepted submissions; if abstract became a paper, only list under papers)
- j) **Non-print Scholarship** including electronic media e.g., radio/tv, YouTube videos, blogs or Twitter; provide URL, if applicable.

Appendix C

Interview Questions for Semi Structured Interviews

- What are your current roles and responsibilities? What teaching responsibilities do you currently hold?
- Do you hold any academic or administrative leadership positions? If so, what are they?
- Have you felt motivated to grow an academic career path since graduating from the Scholars Program?
- Can you give me examples of any of any academic or scholarly work in which you're currently engaged?
- Have you taken on any scholarly projects? Can you describe that project and how it fits into your larger career planning or personal goals?
- Do you feel the Scholars Program provided you the skills necessary to pursue an academic career?
- Did the Scholars Program foster a sense of academic community for you as a faculty member? Can you give an example?
- How has your role changed since the Scholars Program?
- Do you feel that your CV accurately reflects your academic career post graduation from the Scholars Program?
- Other academic accomplishments or influences of the Scholars Program you have yet to mention?