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### Permalink

<https://escholarship.org/uc/item/3ph129pz>

### Journal

Journal of Womens Health, 29(12)

### Authors

Jones, Rochelle  
Miller, Jacquelyn  
Vitous, C  
et al.

### Publication Date

2020-12-01

### DOI

10.1089/jwh.2019.7999

Peer reviewed

# From Stigma to Validation: A Qualitative Assessment of a Novel National Program to Improve Retention of Physician-Scientists with Caregiving Responsibilities

Rochelle D. Jones, MS,<sup>1</sup> Jacquelyn Miller, MA,<sup>1</sup> C. Ann Vitous, MA, MPH,<sup>2</sup> Chris Krenz, BA,<sup>1</sup>  
Kathleen T. Brady, MD,<sup>3</sup> Ann J. Brown, MD,<sup>4</sup> Gail L. Daumit, MD, MHS,<sup>5</sup> Amelia F. Drake, MD,<sup>6</sup>  
Victoria J. Fraser, MD,<sup>7</sup> Katherine E. Hartmann, MD,<sup>8</sup> Judith S. Hochman, MD,<sup>9</sup> Susan Girdler, PhD,<sup>10</sup>  
Adina L. Kalet, MD, MPH,<sup>11</sup> Anne M. Libby, PhD,<sup>12</sup> Christina Mangurian, MD, MAS,<sup>13</sup>  
Judith G. Regensteiner, PhD,<sup>14,15</sup> Kimberly Yonkers, MD,<sup>16</sup> and Reshma Jaggi, MD, DPhil<sup>1,17</sup>

## Abstract

**Background:** Research is needed to improve understanding of work-life integration issues in academic medicine and to guide the implementation of the Doris Duke Charitable Foundation's Fund to Retain Clinical Scientists (FRCS), a national initiative offering financial support to physician-scientists facing caregiving challenges.

**Materials and Methods:** In 2018, as part of a prospective program evaluation, the authors conducted a qualitative study to examine FRCS program participants' initial impressions, solicit descriptions of their career and caregiving experiences, and inquire how such factors might influence their professional advancement. The authors invited all 33 awardees who had been granted FRCS funding in the first year of the program to participate in the study, of whom 28 agreed to complete an interview. Analysts evaluated de-identified transcripts and explicated the data using a thematic analysis approach.

**Results:** While participants described aspects of a culture that harbor stigma against caregivers and impede satisfactory work-life integration, they also perceived an optimistic cultural shift taking place as a result of programs like the FRCS. Their comments indicated that the FRCS has the potential to influence culture if institutional leadership simultaneously fosters a community that validates individuals both as caregivers and as scientists.

**Conclusions:** Insights garnered from this qualitative study suggest that there is a pressing need for institutional leaders to implement programs that can foster awareness and normalization of caregiving challenges. In addition to providing funding and other tangible resources, interventions should strive to reinforce a broader culture that affirms the presence of work-life integration challenges and openly embraces solutions.

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<sup>1</sup>Center for Bioethics and Social Sciences in Medicine, and <sup>2</sup>Center for Healthcare Outcomes and Policy, University of Michigan, Ann Arbor, Michigan, USA.

<sup>3</sup>Department of Psychiatry, Medical University of South Carolina, Charleston, South Carolina, USA.

<sup>4</sup>Department of Endocrinology, Metabolism, and Nutrition, Duke University School of Medicine, Durham, North Carolina, USA.

<sup>5</sup>Departments of Health Policy and Management and Epidemiology, Johns Hopkins University School of Medicine, Baltimore, Maryland, USA.

<sup>6</sup>Department of Otolaryngology/Head and Neck Surgery, University of North Carolina School of Medicine, Chapel Hill, North Carolina, USA.

<sup>7</sup>Department of Medicine, Division of Infectious Diseases, Washington University School of Medicine, St. Louis, Missouri, USA.

<sup>8</sup>Department of Obstetrics and Gynecology & Medicine, Vanderbilt University School of Medicine, Nashville, Tennessee, USA.

<sup>9</sup>Division of Cardiology, NYU Langone Medical Center, New York, New York, USA.

<sup>10</sup>Department of Psychiatry, University of North Carolina School of Medicine, Chapel Hill, North Carolina, USA.

<sup>11</sup>Stephen and Shelagh Roell Endowed Chair of the Kern Institute for the Transformation of Medical Education, Medical College of Wisconsin, Milwaukee, Wisconsin, USA.

<sup>12</sup>CU School of Medicine, University of Colorado Anschutz Medical Campus, Aurora, Colorado, USA.

<sup>13</sup>Department of Psychiatry, University of California, San Francisco School of Medicine, San Francisco, California, USA.

<sup>14</sup>CU School of Medicine, Judith and Joseph Wagner Chair of Women's Health Research, and <sup>15</sup>Center for Women's Health Research, University of Colorado Anschutz Medical Campus, Aurora, Colorado, USA.

<sup>16</sup>Departments of Psychiatry, Epidemiology, and of Obstetrics, Gynecology, and Reproductive Sciences, Yale School of Medicine, New Haven, Connecticut, USA.

<sup>17</sup>Department of Radiation Oncology, University of Michigan, Ann Arbor, Michigan, USA.

**Keywords:** stigma, caregiving, physician-scientist, academic medicine, career development

## Introduction

THE TRAINING AND experience of physician-scientists unite scientific inquiry and clinical knowledge allowing them to apply scientific discoveries to patient care and to translate clinical observations to research.<sup>1</sup> A robust pipeline of physician-scientists is needed to continue the research essential to understanding mechanisms of disease, fostering life-saving advances in medicine, ensuring research translates efficiently to patient care, and promoting public health. The term physician-scientist is used in different ways; in this study, we mean the term broadly, as including physicians who include, as a major focus of their careers, any form of research, including basic, translational, clinical, or outcome-related studies.

In recent years, concerns have arisen about the viability of the physician-scientist career path<sup>2–5</sup> as the workforce is both aging and decreasing in number.<sup>1</sup> Medical students are steadily losing interest in research,<sup>6</sup> and this may be exacerbated by disillusionment over salary caps on federal research projects.<sup>7</sup> Also concerning are the gender disparities that persist along the physician-scientist pipeline.<sup>3,5</sup> Fewer women than men medical students intend to pursue a research career,<sup>6</sup> and women remain underrepresented at the highest faculty ranks and in key positions of leadership in academic medicine.<sup>8</sup> This is particularly troubling for the future of health care and prevention, given that “gender imbalances in both the content and processes of health research” may contribute to gender inequities in health outcomes.<sup>9</sup>

Strategies to increase recruitment and retention of promising early-career physician-scientists have been proposed, including directly addressing unsatisfactory work-life integration.<sup>3–5</sup> This issue is of rising importance to the upcoming generation of both men and women, who view balance and career flexibility as increasingly central as they work to simultaneously build careers and families.<sup>10,11</sup> Moreover, addressing the work-life conflicts of all physician-scientists appears important to improving gender equity in academic medicine since these challenges are especially likely to deter the advancement of women.<sup>12,13</sup> Female physician-scientists perform the lion’s share of parenting and domestic responsibilities compared to their male counterparts,<sup>14,15</sup> which is influenced by societal gender role expectations<sup>16</sup> and time constraints related to fertility and childbearing.<sup>17</sup>

To support faculty career development, academic medical centers have implemented policies that address the need for flexibility, including (1) expanding child care options or parental leave, (2) extensions of the probationary period, (3) pausing the tenure clock, and (4) part-time faculty appointments.<sup>18,19</sup> The Stanford University School of Medicine established an innovative program that grants credits for otherwise uncompensated activities, such as covering clinical duties for an absent colleague, mentoring others, or serving on a committee, which can then be redeemed for support services at home or work.<sup>13,20</sup> Other medical schools have designated funding to support the research of promising physician-scientists engaged in child-rearing or other extraprofessional responsibilities.<sup>21,22</sup> In 2015, the Doris Duke Charitable Foundation’s Fund to Retain Clinical Scientists (FRCS) launched a national multicenter initiative at

10 U.S. medical schools with the goal of providing financial support (~\$30,000 to \$50,000 per year to cover research needs or enable buy-out of clinical duties) to early-career physician-scientists facing extraprofessional caregiving demands, as a way to facilitate success and retention.<sup>23</sup> Some of the participating medical schools also offered access to other forms of support, such as leadership or career development, to complement the FRCS funding.

As part of a larger prospective program evaluation of the FRCS,<sup>23</sup> we conducted a qualitative analysis of semistructured telephone interviews with physician-scientists who were awarded funding in the first year of the FRCS program. In this study, we sought to understand the career and caregiving experiences of program participants, gain insight into how such experiences influence their professional advancement, and obtain a narrative account of their initial experiences with the FRCS program.

## Materials and Methods

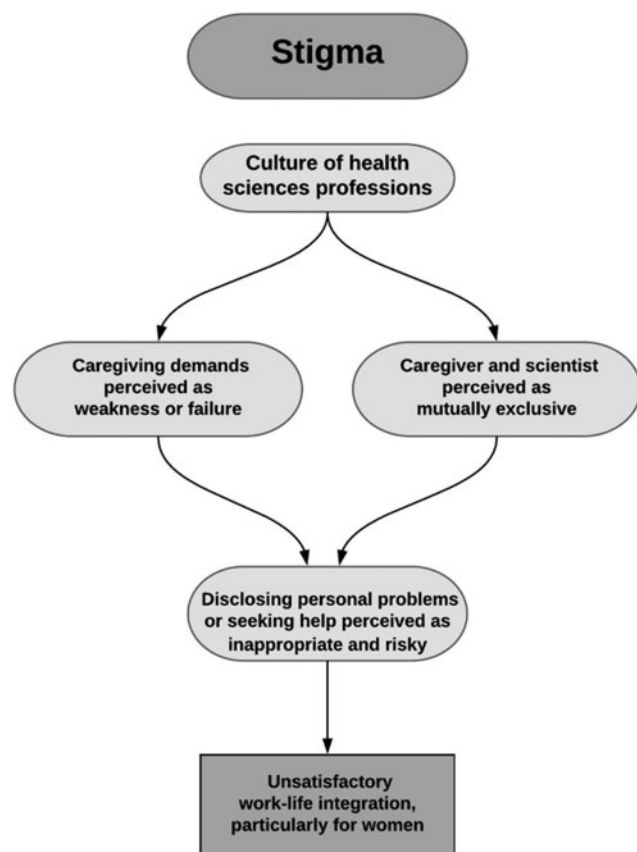
The full methods of this study were reported previously.<sup>17</sup> Briefly, after approval by the University of Michigan Institutional Review Board, physician-scientists awarded funds in the first year of the FRCS program were invited to participate in a telephone interview. All 33 physician-scientists (5 men and 28 women) who received program support in the first year of the program were sent an invitation. The interviewer (R.D.J.) followed an in-depth, semistructured interview guide (Appendix A1) that assessed career and caregiving experiences and perceptions of the FRCS program. Development of the interview guide was informed by literature review and the research group’s prior interview and survey studies pertaining to the same subject matter—career development of physician-scientists, work-life challenges and other barriers to advancement, and supportive interventions,<sup>15,16,24–27</sup> as well as multiple iterations of review by FRCS program site leaders to ensure comprehensibility and relevance. Participants were provided \$100 for their time. A professional transcription service transcribed audio-recordings of the interviews. A team comprising several analysts (J.M., C.A.V., C.K., and the interviewer, R.D.J.) conducted initial coding of de-identified transcripts using Dedoose Qualitative Analysis Software® (version 8.0.35). Each transcript was independently coded by at least two analysts who then met to resolve any discrepancy. The whole team then worked collaboratively to iteratively revise the codes and coding scheme, and to identify preliminary themes. Using an interpretive description approach<sup>28</sup> to the thematic analysis,<sup>29</sup> two of the qualitative analysts (J.M. and R.D.J.) and the senior investigator (R.J.) continued to review the dataset until they reached final consensus on overarching themes and subthemes. The remaining co-authors served as sources of additional peer review and debriefing to support the trustworthiness of the ultimate analysis presented herein.

## Results

Of those invited, 23 women and 5 men (28 out of 33; 85%) agreed to be interviewed. Participants were 39% non-Hispanic white. The majority (71%) were younger than 40 years. The most common specialties were medical (61%); obstetrics/

gynecology, pediatrics, or family medicine (21%); and hospital based (14%). The most common types of research conducted by the participants were clinical (68%), translational (43%), and health services (29%). Overall, the vast majority (93%) had childcare needs.

Qualitative analysis identified three overarching themes. This article focuses on two contrasting, yet interrelated themes: a culture of stigma and a culture of validation. Maps of the two associated themes and their subthemes are represented in Figures 1 and 2. The third overarching theme, the concept of time, is the topic of a separate publication.<sup>17</sup> In brief, we found that issues related to *time* and *timing* were especially salient to physician-scientists with caregiving responsibilities. With regard to time, the issues raised included factors related to a limited amount of time to meet multiple daily career and life demands. Regarding timing, subjects reported a lack of flexibility to integrate daily caregiving and career schedules, as well as conflict between family planning timelines and critical time points crucial to successful advancement along one's career trajectory.<sup>17</sup> Given our previous findings concerning commonly described experiences of time and timing struggles, while trying to integrate work and life, especially when there are extraordinary extraprofessional caregiving demands, the two themes identified in this study in terms of a culture of stigma and a culture of validation in academic medicine with regard to caregiving are noteworthy.



**FIG. 1.** Stigma thematic map. This thematic map illustrates a culture of health sciences professions that has perpetuated bias and stigma associated with caregiving.

### Culture of stigma

The first thematic cluster, shown in Figure 1 (with exemplar quotes in Table 1), reflects how the culture of health science professions perpetuates stigma<sup>30</sup> associated with caregiving.

Disclosing personal problems or seeking help perceived as inappropriate and risky. Participants perceived that disclosing personal problems or seeking help is often deemed unacceptable behavior, and possibly damaging to one's reputation in the workplace. Some described feeling "hesitant" (male, 40s) or "uncomfortable" (female, 30s) when applying for the FRCS award because of concerns about stigma in the institutional climate. Participants' descriptions suggest that the prevailing culture in academic medicine presumes that the individual should be able to meet career and family demands without assistance, and anyone who mentions needing help might be flagged as having significant problems (Table 1).

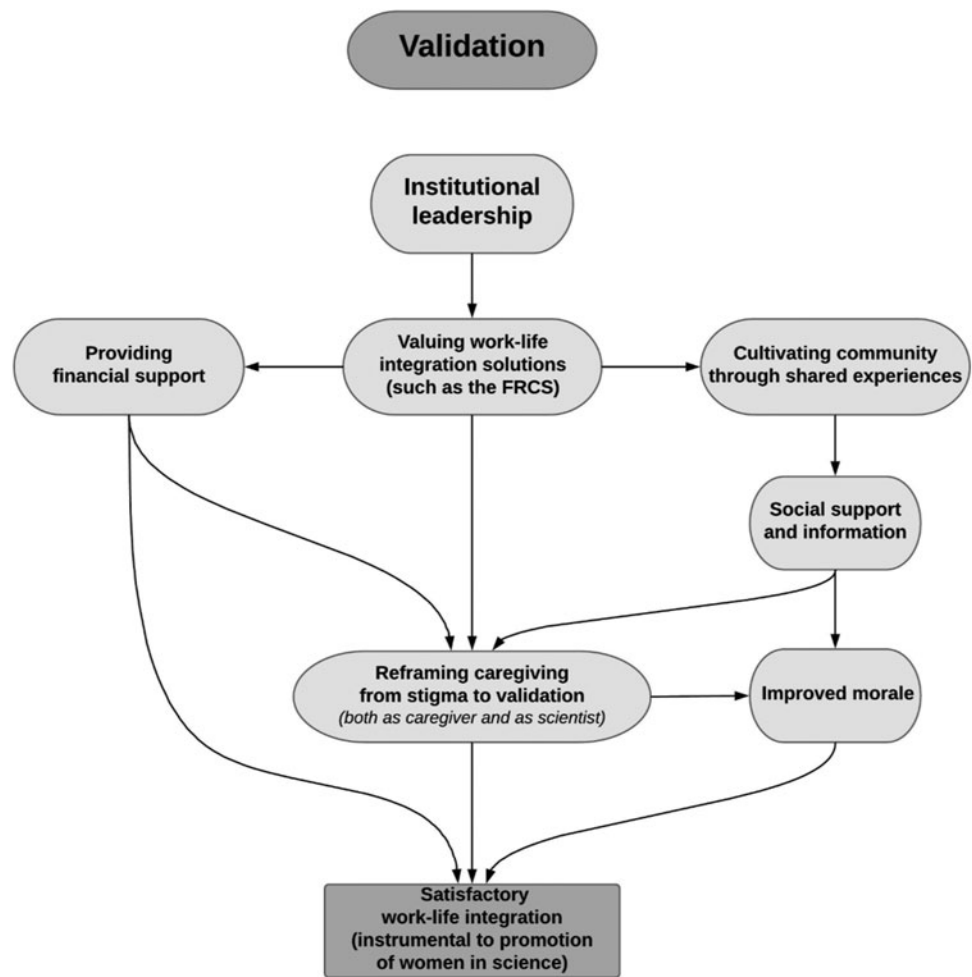
Caregiver and scientist roles perceived as mutually exclusive. Some participants observed that *caregiver* and *scientist* roles are generally considered mutually exclusive, such that one should not risk one's "scientific merit" being devalued by giving too much attention to caregiving roles (female, 40s). A participant perceived she would be "judged" negatively (using the participant's language) if caregiving responsibilities conflicted with caregiving demands, and vice versa (female, 40s). Such observations suggest that participants perceive an *us* versus *them* scenario in academic medicine, wherein caregivers are not only regarded as distinct from scientists but also as having inherently less status (Table 1).

Caregiving demands perceived as weakness or failure. Some participants are concerned that admitting to significant caregiving demands indicates weakness or failure. They expressed unease with being perceived as "whining" (female, 40s) or having received the FRCS "out of pity" (male, 40s). Such comments underscore that participants worry about being negatively stereotyped for seeking help (Table 1).

Stigma impedes satisfactory work-life integration, particularly for women. Finally, participants described how perceived bias and stigma impede satisfactory work-life integration, particularly for women during their child-bearing years. Women observed that they could be perceived as "unreliable" (female, 40s) or "irresponsible" (female, 40s) if they attempted to combine career and family. Their accounts highlight the perception that women are especially more likely to bear the brunt of family and childrearing demands along with the associated stigma, status loss, and discrimination that can hinder their career advancement (Table 1).

### Culture of validation

In contrast to the first, the second thematic cluster (Fig. 2; exemplar quotes in Table 2) suggests a perceptible shift toward a culture of validation at some FRCS participating institutions. Participants observed that the FRCS has the potential to influence culture if institutional leadership simultaneously fosters an atmosphere that validates individuals both as caregivers and as scientists. This includes genuinely valuing and supporting work-life integration programmatically with financial resources such as the FRCS and



**FIG. 2.** Validation thematic map. This thematic map illustrates a culture of validation that acknowledges and supports caregiving values.

cultivating a workplace community for caregivers by providing social support and information. These multipronged programs appear to improve morale and further boost satisfactory work-life integration.

**Valuing work-life integration solutions.** Implementing the FRCS was evidence to most interview participants of a genuine commitment to valuing work-life integration by both their institutional leaders and the Doris Duke Foundation. Participants' comments suggest that the FRCS serves as a sign of leadership's willingness to "acknowledge" caregivers' needs (female, 30s) and offer tangible support, which is perceived as validating the importance of engaging on issues important to caregivers (Table 2).

**Reframing caregiving from stigma to validation.** Independent of the financial support and perhaps more important, participants described enhanced confidence in one's own ability as well as the feeling of being "recognized" by others (female, 40s). Receiving the FRCS award was seen as an indicator that a participant's research is "important" (female, 40s) and "worth supporting" (female, 30s). Similarly, some participants recounted how being nominated for the FRCS felt "validating" (female, 40s) because it was presented as constructive rather than judgmental recognition (male 30s) for their caregiver responsibilities (Table 2).

Participants also offered examples of how to positively reframe stigma-perpetuating assumptions associated with caregiving. An example of this is shifting from avoiding disclosing the need for help with work-life integration, out of concern that it would be inappropriate and risky, to feeling able to openly confer with others to find solutions to work-life dilemmas that might maximize career success for all. Such insights suggest practical guidelines for how to promote a validating rather than stigmatizing institutional culture (Table 3, reframes and exemplar quotes).

**Cultivating community through shared experiences.** The FRCS has the potential to influence culture by cultivating community. Participants discussed how the FRCS and similar programs contribute to a positive sense of community, acknowledging and validating physician-scientist caregivers' shared experiences. This community of caregivers created around the FRCS was described as extending beyond the award recipients themselves, promulgating awareness and discussion of work-life integration solutions among prospective applicants and others on campus, who are "actively supporting each other" (female, 30s) (Table 2).

**Social support and information.** Participants described how workplace community cultivated by FRCS program leaders benefits caregivers by offering "social networking" (female, 40s) and practical information, both of which were

TABLE 1. OVERARCHING THEME: STIGMA INGRAINED IN CULTURE OF HEALTH SCIENCE PROFESSIONS

<i>Sub-theme</i>	<i>Exemplar quotes</i>
Disclosing personal problems or seeking help perceived as inappropriate and risky	<p>“... I’ve been very hesitant about describing personal things in life ... It’s not easy to say those kinds of things because you don’t know who’s reading them and what their perception might be and that could become part of your reputation so that is always a concern.” (male, 40s)</p> <p>“...when I showed [my mentor] the application essay [for the FRCS award], it specifically said talk about your caregiving struggles and I [said], “okay. I’m going to be honest and talk about my caregiving struggles.” [My mentor] looked at this and [said], “I don’t know [what] they are looking for but this feels like a lot of disclosure,” and [my mentor] was understandably hesitant because it’s not something that you usually talk about at all... I kept it in [the application], but it was definitely uncomfortable because it’s usually the stuff you absolutely do not mention... under any circumstances.” (female, 30s)</p> <p>“... we are all so abused by the system that we must think that it only takes a child with cancer or paralysis for us to need help. And I think that it says a lot about the system which is interesting.” (female, 40s)</p>
Caregiver and scientist perceived as mutually exclusive	<p>“Most people in science want to be competing for the awards based on [their] scientific merit, so to compete for an award based on [their] caregiving needs primarily is a little [irregular for] academic medicine.... I was not on the [review] committee [that decided]...who gets and who does not get [the award]...whether this was based on both caregiving needs and scientific merit. Probably it was both, but the way it was advertised, it was like the biggest eligibility criteria was caregiving needs.” (female, 40s)</p> <p>“I wonder [what] the more basic science people around me think when they see on my resume [Doris Duke FRCS caregiver scholar at institution].” (female, 40s)</p> <p>“...I have felt a little judged that I was continuing to work. And then, I have also felt judged that I would take time out of the day to go do things for my kid.” (female, 40s)</p>
Caregiving demands perceived as weakness or failure	<p>“...I really wrestled with how much I should reveal without being perceived as being weak or whining...if I were to coach another woman in my shoes, another applicant .... I would also advise them to be careful about how much they disclose...” (female, 40s)</p> <p>“I think there’s always a fear that you’ll be thought of as being weaker because you have more family quote unquote ‘problems’... when I had my child, it was very difficult for me... it was hard for me to be productive, too, so I think I was even more concerned about what people would think of [me].” (female, 30s)</p> <p>“... I do remember when I did get the [FRCS] award and [another junior faculty researcher] congratulated me, I scoffed at it a little bit, because in a way, one might say it was well out of pity. It’s a pity type of award. I say that tongue-in-cheek, of course, but the fact is, yes, that thought did cross my mind.” (male, 40s)</p>
Stigma hinders satisfactory work/life integration, particularly for women	<p>“Just thinking about the work environment for women, I think the one thing that tends to kind of still be an issue is just that, when you’re in your childbearing years as a woman... there’s... a sense amongst colleagues that you’re kind of unreliable or that you’re not as serious as them or that you’re not able to keep up like the others...there’s still a stigma around somebody who wants to have a job, have a career and have a family. Somehow, I think there’s still a sense culturally amongst the professionals in this field that you can’t do both, which I think is wrong.... You get a sense from your colleagues that what you’re trying to do, that they’re not really supportive of it.” (female, 40s)</p> <p>“...I love [the FRCS]. It’s innovative. It fits perfectly into what I need in my life...as a woman, I have spent most of my professional career trying to make it look like my family is completely in the background, that whatever it is that they need, it won’t take away from what I have to give to my professional life...” (female, 40s)</p> <p>“...when I first announced that I was pregnant, I think the general feeling amongst women, at least my main mentors, was that I wasn’t serious; I was maybe looking for a vacation by coming and doing the training program and that I wasn’t serious about my career, and that it wasn’t responsible... not looking at pregnancy as an irresponsible thing when you are advancing in your career, I think that is maybe a little bit of a cultural difference, maybe a perspective difference, maybe a man/woman thing.” (female, 40s)</p>

FRCS, Fund to Retain Clinical Scientists.

TABLE 2. OVERARCHING THEME: SHIFT TOWARD CULTURE OF VALIDATION AT SOME FUND TO RETAIN CLINICAL SCIENTISTS PARTICIPATING INSTITUTIONS

<i>Subtheme</i>	<i>Category</i>	<i>Exemplar quotes</i>
Valuing work-life integration solutions		<p>“... just knowing that the Doris Duke Foundation has been willing to think about this issue and acknowledge the needs of working early-stage clinician investigators who are trying to balance a lot. That in and of itself is very helpful.” (female, 30s)</p> <p>“When you see leadership being willing to engage in programs like these and valuing them...it affects everybody to some extent, because it’s just part of who we become... [The FRCS] just sort of highlighted and was emblematic of the culture that already existed .... the administration could put their money where their mouth is and say ‘no, we really do value work life balance; we really do value you taking care of your family, and here are some mechanisms that we’re going to put in place to help you with that.’” (male, 30s)</p>
Reframing caregiving from stigma to validation	<p>Recognition of the value of participants’ research</p> <p>Constructive recognition of caregiver responsibilities</p>	<p>“I think in a way I [applied for the FRCS award] not just for the financial assistance but, really, kind of to show to myself more than anyone else that I can still do it, that my work is worth continuing and that it’s worth supporting. I think it was really just for myself that if you get this, somehow, it’s like a sign that you should keep going.” (female, 30s)</p> <p>“I think it’s also just nice to be recognized as somebody who’s really trying to continue to strive under circumstances that are difficult. I think in that way it’s kind of psychologically beneficial to have it recognized that ‘we think your work is important, and we know you’re going through a difficult time right now, and we want to make sure that you’re able to continue to do this work.’” (female, 40s)</p> <p>“I think [the FRCS has] been huge. Again, I feel like as a junior faculty under so many stresses career-wise, as a caregiver, a parent, a son, to be under all these pressures and I think number one, just to have the recognition of that...” (male 30s)</p> <p>“It actually was my department chair who said, “I know what you’ve been through, I’ve seen this before and you seem like you would be a good fit for this, I suggest you try for it.” It wasn’t just me feeling that way...That was sort of validating...” (female, 40s)</p>
Cultivating community through shared experiences		<p>“... absolutely I think it’s important to create a community and to kind of build on this energy that Doris Duke has started in making those people like myself who are balancing a lot feel supported and like this is an issue that the institution recognizes.” (female, 30s)</p> <p>“... all the FRCS events that have been held on campus so far are not only for people who get the award but also prospective applicants and whoever are interested and curious about it. [The FRCS] reaches out to an audience that is already aware of the issue...for them, it must be extremely gratifying to know that, “yes, people on our campus are actively supporting each other with these kinds of scenarios” ... I’m sure many of them are thinking about applying because they have these similar challenges at home.” (female, 30s)</p>
Social support and information		<p>The other part of the [FRCS] program that I really appreciated is the social networking...we’ve had the opportunity to meet...for a meal outside of work with the other [Doris Duke award recipients] ... knowing that there are other junior faculty...who also juggle significant caregiving responsibilities and hearing their very specific stories about how they managed it, how they managed the sort of the multiple roles, has been very helpful to me. (female, 40s)</p> <p>... serving as a forum for people to have discussions about caregiving issues and challenges [is] something that this [FRCS] award already is doing. I remember attending a few lunches not just for FRCS recipients but people who applied for the FRCS just to talk about what we need as faculty, as caregivers, at this phase in our lives, and talk about the resources available. (male 30s)</p>
Improved morale		<p>“Many, many, many of my colleagues have kids and sick in-laws and sick parents, and I suppose they’ve all had their different methods and tactics and help to get through it, but it felt like a safe place to finally talk about the truth of how many sacrifices I had to make on a daily basis to keep everything rolling and to keep achieving at the level that I’d been achieving...” (female, 40s)</p> <p>“... I think having programs like this where you can relax and sort of talk to other people about the struggles you face and other people that understand what you’re going through, is really beneficial.” (female, 40s)</p> <p>... having the acknowledgment that this is an issue, and that a foundation like Doris Duke recognizes that this is an issue, and that I’m not the only one going through it. That, emotionally, is a huge benefit. (female, 30s)</p> <p>[The FRCS is] actually a really nice moral support just to know that there’s someone out there who thinks this is important, that recognizes that juggling these things is a challenge and that it’s reasonable to offer some additional help to people like me. (female, 30s)</p>

(continued)

TABLE 2. (CONTINUED)

<i>Subtheme</i>	<i>Category</i>	<i>Exemplar quotes</i>
Satisfactory work-life integration and promotion of women in science		<p>I think that what [the FRCS program has] been really trying to do is normalize the fact that there are other considerations that can impact the productivity of physician scientists and that there are things that we can do to practically make it better...also since I think most of the people who've applied have been younger...junior female investigators, I think that it has also been intentionally or not linked to the need to help promote women in science. (female, 30s)</p> <p>...I think [the FRCS has] begun to create more of a culture of open discussion and recognition that extraprofessional caregiving responsibilities impact—I should say can significantly impact the early career trajectory for clinician investigators. And I think that that openness and recognition is really important... until there is that recognition...it will be more difficult for people like me who wear these numerous hats, especially female faculty because of the biological reality of carrying pregnancies and going out on maternity leave, to actually compete and, therefore, stay involved in the clinician investigator track. (female, 40s)</p> <p>... a lot of my mentees are females...they always asked me, “When am I going to get married? How does it work? And, how do I do research when I’m having kids?” and to say, “There are funds... people recognize this and are supporting it....It’s a matter of putting it on the table and then creating a plan and working the plan and being professional but still honest with your mentors about what you need to succeed and being, solution oriented”... I think that has benefited trainees...It has sort of inspired a little bit of hope. And it’s also changed culture. (female, 40s)</p>

TABLE 3. REFRAMING CAREGIVING FROM STIGMA TO VALIDATION

<i>Stigma</i>	<i>Reframe</i>	<i>Exemplar quotes</i>
Disclosing personal problems or seeking help perceived as inappropriate and risky	It is useful to evaluate work-life areas that need improvement, to seek help in implementing solutions, and to confer with others to maximize career success for all	<p>I think that [the FRCS program is] definitely something that is very much needed... it allows the conversation, which I think almost never happens...you’re almost never allowed to talk about personal and family-related needs... As a young clinician researcher, who’s going through it, it’s a relief just to have it publicly out there that this is something that somebody wants to invite as a conversation and that someone wants to try to think about how to make it better... The fact that it’s there and inviting those conversations is symbolic and I think important institutionally. It’s very good for [institution] that they’ve joined this. I think it will be very good, as the program continues, for the people who are able to be a part of it... (female, 40s)</p> <p>“... I think it was helpful to try and just self-reflect and understand all of the balls you have up in the air and how that may impact your professional development, just through the process of applying [for the Doris Duke FRCS award], right? Step one is acknowledging that you have a lot going on and just understanding what that is and what that means and more importantly how it may impact your professional development... That’s not really something that’s tangible and quantifiable in many ways, but probably impacts promotion and career trajectory quite a bit...going through the process and understanding how [the FRCS] may, indeed, affect my professional development and the speed by which or hopefully the success of my career development really was very helpful to me.” (female, 40s)</p>
Caregiver and scientist perceived as mutually exclusive	One can achieve success both as a caregiver and as a scientist	<p>“Some of it’s just changing people’s attitudes...there’s still a fairly pervasive attitude of, ‘Well, if you make that choice to have a family, or if you make that choice to move your in-laws in with you, that was your choice, and you have to give up the things that you could do professionally.’ I don’t really think that’s true. I do think it’s going to take me longer... but it doesn’t mean I can’t do it...” (female, 40s)</p>

(continued)



TABLE 3. (CONTINUED)

<i>Stigma</i>	<i>Reframe</i>	<i>Exemplar quotes</i>
Caregiving demands only exist in extraordinary situations and are perceived as weakness or failure	Caregiving demands are a normal part of everyday life and pertain to all physician-scientists. Facilitating the management of caregiving responsibilities is an investment in all promising research careers	"...[the FRCS award is] advertised as 'an emergent crisis happened in your family and you can't deal,' as opposed to more of these chronic issues that are really just life...instead of being like 'a crisis happened and we're here to help,' a little bit more of a, 'when you feel that your caregiving responsibilities in life are potentially competing with your ability to realize your potential, we are looking for high ceiling, junior investigators who could demonstrate how us investing in their scientific trajectory in this way and protecting their family and career life will lead to success.' Something that doesn't make it seem like you have lost, or you have failed, or you are failing.... might help people come out of the woodwork a little bit, and actually can promote success of the work that they are doing." (female, 40s)
Caregiving demands perceived as weakness or failure	Acknowledge the resilience of those who continue to persist in their careers, while tackling extraordinary work-life challenges	"... I think to also know that other people are struggling, and that other people need help kind of is validating that it's not that you're weak or something like that, it's that you're facing extraordinary circumstances..." (female, 40s) "For me, it was almost cathartic to have to write it all down. You knew what you were dealing with, but to actually almost enumerate it was sort of, 'Wow, okay, maybe I do have a lot going on here. Maybe I'm just not a weakling or what have you.'" (female, 40s)

perceived to be critical resources for effective work-life integration (Table 2). This type of social support within a community of caregivers, described as a "forum for people to have discussions about caregiving issues and challenges," (male 30s) appears integral to reframing caregiving from stigma to validation and is perceived to also play an important role in improving morale.

**Improved morale.** Participants described how morale can be improved by offering validation and social support within a shared community. One participant specified that the FRCS program provided a "safe place" in which one could openly acknowledge caregiving-related challenges (female, 40s). Similarly, another participant underscored being able to "relax" and discuss caregiving concerns with others in similar situations, who can understand such challenges (female, 40s). Participants pointed out that this atmosphere and community improve morale by recognizing the participant's caregiver experience as opposed to disregarding or isolating them because of that experience (Table 2).

**Satisfactory work-life integration and promotion of women in science.** Participants see the FRCS as instrumental to advancing and retaining women in research careers because it validates and pragmatically supports the caregiving needs of physician-scientists. Several women discussed the perceived impact of the FRCS with regard to the normalization of caregiving and the encouragement of an open culture, which can more effectively acknowledge and address caregiver needs (Table 2). Some also see the atmosphere of validation engendered by the FRCS program as especially important in supporting their roles as mentors and role models to future female physician-investigators. For example, one participant explained that the FRCS program set the precedent that work-life integration concerns and identifying a plan for success are explicitly discussed (female, 40s) (Table 2). This solution-oriented approach was perceived as especially useful to female mentees

who are seeking information, guidance, and encouragement, while contemplating pursuit of a research career.

## Discussion

Through interviews with physician-scientists receiving support in their struggle to integrate career development and extraordinary caregiving needs, we highlight two contrasting but interrelated themes. On one hand, participants suggest that a culture exists that harbors stigma against caregivers and creates a demoralizing atmosphere incompatible with satisfactory work-life integration by alienating the caregiver and hindering open problem-solving. On the other, our findings also suggest an important optimistic cultural shift is taking place as a consequence of programs such as the FRCS. Overall, although some participants perceived stigma, most described positive experiences of feeling acknowledged and supported because of the FRCS. These experiences underscore an emerging culture that validates caregiving needs and experiences, promotes a sense of community that improves morale, and, through transparency, social support, and the sharing of information, generates work-life integration solutions that are germane.

Scholars have proposed that stigma exists in power situations where (1) particular attention is placed on noting the differences between people, (2) persons are perceived as either "us" or "them," (3) persons perceived as "them" are negatively stereotyped by the dominant culture, and (4) persons perceived as "them" experience different outcomes because of status loss and discrimination.<sup>30</sup> In the professional work environment, stigma can exist against those who do not conform to "ideal worker" and "work devotion" norms, such as caregivers who may need access to certain resources or flexible work hours to meet both career and family demands.<sup>31-33</sup>

Both men and women in this qualitative study described how stigma shaped their professional experiences, including their decision to apply for the FRCS award. They described

concerns about a culture in which discussion of work-life needs is not only incongruent with workplace expectations but also a sign of weakness, failure, and/or lack of commitment to a serious scientific career. A key element of stigma observed by interview participants was that it was considered unacceptable to ask for help. Participants perceived it was risky to reveal too much about their personal lives by seeking work-life integration solutions because they might be perceived as incompetent or unprofessional. These narratives reflect work-life concepts and challenges previously described in the literature. Drago et al. document bias against caregiving,<sup>31</sup> which can lead caregivers to forgo using and/or discussing work-life integration programs to avoid career penalties and negative reactions from co-workers. Williams and others describe a flexibility stigma, which produces bias against those who do not conform to the cultural norm of “work devotion.”<sup>32</sup> In our study, comments suggest presence of these factors and a similar concept known as the ideal worker norm,<sup>33</sup> a picture that presumes a strict separation between work and home and expects workers to be entirely devoted to their employers. The ideal worker norm seems to impact educational interventions designed to increase awareness and use of career flexibility policies in academic medicine. Researchers have observed that commonly reported barriers to family-friendly or work-flexibility policy use include concern about perceptions regarding career commitment<sup>34</sup> and fear of negative consequences or stigmatization.<sup>35,36</sup>

As noted above, both men and women can experience negative effects arising from the presence of the ideal worker norm, flexibility stigma, and bias against caregiving in the workplace. Yet our findings underscore how stigma impedes satisfactory work-life integration for women in particular. Some female participants discussed pressures to prove that their family life or a pregnancy did not interfere with their professional advancement, strongly suggesting a bias resulting from flexibility stigma against motherhood because it violates the work devotion schema.<sup>31,32</sup> When these biases are activated, women are unlikely to be perceived as ideal workers if it is assumed that they are or intend to be mothers. Under these conditions, women succumb to caregiving bias-avoidance behaviors, such as deciding not to take advantage of workplace flexibility policies. The ideal worker norm<sup>33</sup> upholds an old-fashioned, but still present, gendered separation between work and home. In this study, we see that some of these norms and stigma remain active in the modern workplace and must be addressed if we are to maintain well-prepared physician-scientists in the pipeline.

Hearteningly, evidence suggests a cultural shift underway at some of the participating FRCS institutions. Institutional leadership is credited with dedication to work-life integration solutions by offering the FRCS and similar award programs, which participants interpret as validation of the caregiving role alongside that of physician-scientists. Evidence suggests that stigma is socially constructed and can be changed over time by recasting stereotypical negative characteristics so that those traits eventually come to be viewed as assets rather than liabilities.<sup>37</sup> We believe that our data suggest that this caregiving stigma reframing is happening. By championing the positive characteristics typical of physician-scientists with caregiving responsibilities (*e.g.*, resilient, solution-oriented, promising researchers worthy of having their work protected, representative of the current and future workforce), the FRCS is facilitating a culture change likely to help

caregivers maintain satisfying and productive work-life integration.

Several participants also pointed out that the FRCS fostered an atmosphere of social support for work-life integration, which seemed to further validate the lived experiences of caregivers. Evidence suggests the importance of “developing broad perceptions of workplace support” at the organizational level.<sup>38</sup> In line with this, interview participants’ accounts of a shared caregiving community highlight a general perception that institutional leaders were at the helm of a broader cultural shift toward validation of physician-scientist caregivers allowing for such communities to thrive.

Notably, in some cases, the same participant’s comments denoted both themes of stigma and themes of validation. Many participants reflected upon the positive aspects of being able to acknowledge (and to have others acknowledge and support) their common, shared, everyday experience of integrating work and family life. At the same time, they considered how the negative reactions of others might impact their reputation. They highlighted that the culture of academic medicine traditionally does not encourage open discussion of one’s personal life, and it is uncomfortable discussing such matters regardless of the profession. This complex interaction within individuals suggests tension between the need to be validated as both a caregiver and a scientist on the one hand, and the reality of having to uphold one’s career status amid the prevailing culture in academic medicine on the other. In addition, some participants discussed the benefits of having their work-life experiences validated and supported, while at the same time recognizing the importance of confidentiality and maintaining privacy with respect to certain personal information. Program leaders must be sensitive to this internal tension and be considerate of program participants’ needs for privacy as they work to bring awareness to and provide tangible support for the common need for work-life integration in academic medicine.<sup>23</sup>

How can workplace culture bolster women’s careers? Westring et al. devised a measure to identify factors contributing to what they referred to as a “culture conducive to women’s academic success.”<sup>39,40</sup> They identified four distinct dimensions of culture that support women’s careers, one of which is encouragement of work-life balance. In our study, the atmosphere of the acknowledgment and support of caregivers surrounding the FRCS program was perceived as bolstering the professional advancement of women and fostering opportunities to mentor the next generation of female physician-scientists. Others have advocated that mentorship should include discussion of work-life integration to promote the advancement of women in academic medicine. Aimed at closure of the gender leadership gap, Valentine and Sandborg described the Academic Biomedical Career Customization (ABCC) model, a mentoring process at Stanford University School of Medicine, which they expect will be instrumental in changing culture.<sup>13</sup> In this approach, mentees establish a formal career plan, including work-life integration goals through discussions with coaches and institutional leadership.

The strengths and limitations of this study have been previously detailed.<sup>17</sup> Our research benefits from careful use of qualitative research methods and a sound analytical approach (*i.e.*, comprehensive data collection resulting in rich narratives, iterative examination of the data, thematic saturation, analyst, and disciplinary triangulation).<sup>28,29,41,42</sup> For example,

data collection and analysis continued iteratively until the analysts confirmed that thematic saturation had been reached. Also, the analysts were diverse both professionally (sociology, psychology, medical anthropology, and public health) and personally (gender, age, and race), which further helped to minimize systematic bias and increase validity. The remaining co-authors possess a depth of content expertise in physician-faculty career development and served as sources of peer review and debriefing to further validate the trustworthiness of the findings of the qualitative analysis. Some of our findings are specific to the population studied. Nevertheless, participants were recruited from 10 different U.S. medical schools participating in the FRCS program, and thus were sampled from a variety of settings that were diverse in terms of institution size, prestige, demographics, culture, and geographic location. Themes such as the stigmatization of those with family responsibilities<sup>16,34–36</sup> and the role that culture can play in acknowledging and validating work-life issues<sup>13,39,40</sup> likely have broader relevance.

### Conclusions

The insights from this study can serve as a framework for understanding the impact of institutional culture on the lived experiences of physician-scientists with caregiving responsibilities. These findings illuminate the pressing need for institutional leaders to implement programs, like the FRCS, which can foster awareness and normalization of caregiving challenges. In addition to providing funding and other tangible resources, interventions should strive to reinforce a broader culture that affirms the presence of work-life integration challenges and openly embraces solutions. Leaders who aim to build a sustainable and strong pool of physician-scientists at their institutions and nationally could improve their processes and practices by validating these professionals both as caregivers and as scientists. Even when it is not feasible to implement a program with the scope of FRCS, leaders have many opportunities to convey respect and material support for the importance of work-life integration.

### Acknowledgments

The authors wish to thank the recipients of the Fund to Retain Clinical Scientists award who took the time to participate in this study.

### Ethical Approval

This study was approved by the University of Michigan Institutional Review Board.

### Author Disclosure Statement

Dr. R.J.—this work was funded by the Doris Duke Charitable Foundation (funding to Dr. R.J. to conduct the program evaluation research). The funders played no role in the analysis or interpretation of the results of this investigation or decision to submit for publication. Drs. K.T.B., A.J.B., G.L.D., A.F.D., V.J.F., K.E.H., J.S.H., S.G., A.L.K., A.M.L., C.M., J.G.R., and K.Y.—funding from the Doris Duke Charitable Foundation was received for support of the FRCS program at their site institution.

### Funding Information

This work was funded by the Doris Duke Charitable Foundation. The funders played no role in the analysis or interpretation of the results of this investigation or decision to submit for publication.

### Supplementary Material

Supplementary Data

### References

1. National Institutes of Health. Physician-Scientist Workforce Working Group Report. June 2014. [https://acd.od.nih.gov/documents/reports/PSW\\_Report\\_ACD\\_06042014.pdf](https://acd.od.nih.gov/documents/reports/PSW_Report_ACD_06042014.pdf) Accessed April 6, 2020.
2. Schafer AI, ed. *The Vanishing Physician-Scientist?* Ithaca: Cornell University Press, 2009.
3. Schafer AI. The vanishing physician-scientist? *Transl Res* 2010;155:1–2.
4. Salata RA, Geraci MW, Rockey DC, et al. U.S. physician-scientist workforce in the 21st century: Recommendations to attract and sustain the pipeline. *Acad Med* 2018;93:565–573.
5. Andrews NC. The other physician-scientist problem: Where have all the young girls gone? *Nat Med* 2002;8:439–441.
6. Guelich JM, Singer BH, Castro MC, Rosenberg LE. A gender gap in the next generation of physician-scientists: Medical student interest and participation in research. *J Investig Med* 2002;50:412–418.
7. National Institutes of Health. Salary Cap Summary (FY 1990—Present). December 2014. [https://grants.nih.gov/grants/policy/salcap\\_summary.htm](https://grants.nih.gov/grants/policy/salcap_summary.htm) Accessed April 6, 2020.
8. Lautenberger DM, Dandar VM, Raezer CL, Sloane RA. *The State of Women in Academic Medicine 2013–2014: The Pipeline and Pathways to Leadership*. Washington, DC: Association of American Medical Colleges. [https://store.aamc.org/downloadable/download/sample/sample\\_id/228/](https://store.aamc.org/downloadable/download/sample/sample_id/228/) Accessed April 6, 2020.
9. Sen G, Ostlin P. Gender inequity in health: Why it exists and how we can change it. *Glob Public Health* 2008;3 Suppl 1:1–12.
10. Bickel J, Brown AJ. Generation X: Implications for faculty recruitment and development in academic health centers. *Acad Med* 2005;80:205–210.
11. Howell LP, Joad JP, Callahan E, Servis G, Bonham AC. Generational forecasting in academic medicine: A unique method of planning for success in the next two decades. *Acad Med* 2009;84:985–993.
12. Westring A, McDonald JM, Carr P, Grisso JA. An integrated framework for gender equity in academic medicine. *Acad Med* 2016;91:1041–1044.
13. Valentine H, Sandborg CI. Changing the culture of academic medicine to eliminate the gender leadership gap: 50/50 by 2020. *Acad Med* 2013;88:1411–1413.
14. Carr PL, Ash AS, Friedman RH, et al. Relation of family responsibilities and gender to the productivity and career satisfaction of medical faculty. *Ann Intern Med* 1998;129:532–538.
15. Jolly S, Griffith KA, DeCastro R, Stewart A, Ubel P, Jagsi R. Gender differences in time spent on parenting and domestic responsibilities by high-achieving young physician-researchers. *Ann Intern Med* 2014;160:344–353.

16. Strong EA, De Castro R, Sambuco D, et al. Work-life balance in academic medicine: Narratives of physician-researchers and their mentors. *J Gen Intern Med* 2013;28:1596–1603.
17. Jones RD, Miller J, Vitous CA, et al. The most valuable resource is time: Insights from a novel national program to improve retention of physician-scientists with caregiving responsibilities. *Acad Med* 2019;94:1746–1756.
18. Bristol MN, Abbuhl S, Cappola AR, Sonnad SS. Work-life policies for faculty at the top ten medical schools. *J Womens Health (Larchmt)* 2008;17:1311–1320.
19. Bunton SA, Corrice AM. Evolving workplace flexibility for U.S. medical school tenure-track faculty. *Acad Med* 2011;86:481–485.
20. Fassiotto M, Simard C, Sandborg C, Valantine H, Raymond J. An integrated career coaching and time-banking system promoting flexibility, wellness, and success: A pilot program at Stanford University School of Medicine. *Acad Med* 2018;93:881–887.
21. Jagsi R, Butterson JR, Starr R, Tarbell NJ. A targeted intervention for the career development of women in academic medicine. *Arch Intern Med* 2007;167:343–345.
22. Munson M, Weisz O, and Masur S. Juggling on the ladder: Institutional awards help faculty overcome early-mid career obstacles. *American Society of Cell Biology Newsletter Newsl* 2014; 37:9.
23. Jagsi R, Jones RD, Griffith KA, et al. An innovative program to support gender equity and success in academic medicine: Early experiences from the Doris Duke Charitable Foundation's fund to retain clinical scientists. *Ann Intern Med* 2018;169:128–130.
24. DeCastro R, Sambuco D, Ubel PA, Stewart A, Jagsi R. Mentor networks in academic medicine: Moving beyond a dyadic conception of mentoring for junior faculty researchers. *Acad Med* 2013;88:488–496.
25. DeCastro R, Sambuco D, Ubel PA, Stewart A, Jagsi R. Batting 300 is good: Perspectives of faculty researchers and their mentors on rejection, resilience, and persistence in academic medical careers. *Acad Med* 2013;88:497–504.
26. Jones RD, Griffith KA, Ubel PA, Stewart A, Jagsi R. A mixed-methods investigation of the motivations, goals, and aspirations of male and female academic medical faculty. *Acad Med* 2016;91:1089–1097.
27. DeCastro R, Griffith KA, Ubel PA, Stewart A, Jagsi R. Mentoring and the career satisfaction of male and female academic medical faculty. *Acad Med* 2014;89:301–311.
28. Thorne S, Kirkham SR, O'Flynn-Magee K. The analytic challenge in interpretive description. *Int J Qual Methods* 2004;3: 1–11.
29. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006;3:77–101.
30. Link BG, Phelan JC. Conceptualizing stigma. *Annu Rev Sociol* 2001;27:363–385.
31. Drago R, Colbeck CL, Stauffer KD, et al. The avoidance of bias against caregiving: The case of academic faculty. *Am Behav Sci* 2006;49:1222–1247.
32. Williams JC, Blair-Loy M, Berdahl JL. Cultural schemas, social class, and the flexibility stigma. *J Soc Issues* 2013;69:209–234.
33. Davies AR, Frink BD. The origins of the ideal worker: The separation of work and home in the United States from the market revolution to 1950. *Work Occup* 2014;41:18–39.
34. Howell LP, Beckett LA, Villablanca AC. Ideal worker and academic professional identity: Perspectives from a career flexibility educational intervention. *Am J Med* 2017;130:1117–1125.
35. Shauman K, Howell LP, Paterniti DA, Beckett LA, Villablanca AC. Barriers to career flexibility in academic medicine: A qualitative analysis of reasons for the underutilization of family-friendly policies, and implications for institutional change and department chair leadership. *Acad Med* 2018;93:246–255.
36. Villablanca AC, Beckett L, Nettiksimmons J, Howell LP. Career flexibility and family-friendly policies: An NIH-funded study to enhance women's careers in biomedical sciences. *J Womens Health (Larchmt)* 2011;20:1485–1496.
37. Wang CS, Whitson JA, Anicich EM, Kray LJ, Galinsky AD. Challenge your stigma: How to reframe and revalue negative stereotypes and slurs. *Curr Dir Psychol Sci* 2017;26:75–80.
38. French KA, Dumani S, Allen TD, Shockley KM. A meta-analysis of work-family conflict and social support. *Psychol Bull* 2018;144:284.
39. Westring AF, Speck RM, Sammel MD, et al. A culture conducive to women's academic success: Development of a measure. *Acad Med* 2012;87:1622–1631.
40. Westring AF, Speck RM, Dupuis Sammel M, et al. Culture matters: The pivotal role of culture for women's careers in academic medicine. *Acad Med* 2014;89:658–663.
41. Giacomini MK, Cook DJ. Users' guides to the medical literature: XXIII. Qualitative research in health care A. Are the results of the study valid? *JAMA* 2000;284:357–362.
42. Giacomini MK, Cook DJ. Users' guides to the medical literature: XXIII. Qualitative research in health care B. What are the results and how do they help me care for my patients? Evidence-Based Medicine Working Group. *JAMA* 2000;284:478–482.

Address correspondence to:  
*Reshma Jagsi, MD, DPHl*  
*Department of Radiation Oncology*  
*University of Michigan*  
*UHB2C490, SPC 5010; 1500 East Medical Center Drive*  
*Ann Arbor, MI 48109-5010*  
 USA

*E-mail: rjagsi@med.umich.edu*

## Appendix

### Appendix A1. Interview Guide

#### Work-Life Integration Experiences and Need for Program

- (1) The Fund to Retain Clinical Scientists (FRCS) award is for clinician-scientists with caregiving responsibilities, so I know you do lots of things—can we start with you telling me a bit about the different hats that you wear in your life?
- (2) Please tell me some stories about the sorts of challenges you have faced integrating all of those responsibilities.
- (3) What were your career goals at the time you applied for the FRCS award, and have those goals changed since then?
- (4) Please tell me more about the nature of the caregiving need that you faced when you applied for the award and whether it has changed. [Characterize duration of caregiving and living arrangements]. Specifically, what physical and/or psychosocial needs do you fulfill and how?
- (5) Please describe any stressors you have experienced as a caregiver, including financial, emotional, or other challenges. Are you the primary breadwinner in your household—do you have a partner who contributes financially or in other ways?
- (6) Do you share your caregiving responsibilities with anyone else? What sorts of networks are available to you for support?
- (7) Have you discovered any creative way to help facilitate work-life integration or maintain your emotional well-being through all of this?
- (8) We have heard some stories from applicants that suggest race, religion, cultural background, socioeconomic status, and/or family upbringing (including your own and/or that of your partner) might play a role in affecting the ways one integrates work and life. What thoughts could you share along those lines?

#### Experiences with FRCS and the Institutional Environment

- (1) When you applied for the FRCS award, what were your hopes about what receiving the award might do for you?

- (2) Did you have any worry about stigma or privacy relating to having to describe a caregiving role to apply for this award? [If yes and no description, prompt to describe—“tell me more about those; in what way”].
- (3) How have you used the funding you received as part of this program?
- (4) I understand from the program directors that many sites offer additional services as part of the program, like coaching, workshops, social networking events, and other opportunities for career development. Has your program offered any of these additional services, and what have been your own experiences with and impressions of them?
- (5) How has being a part of the FRCS program affected you, your career, and your home life so far?
- (6) Do you have any reason to believe the program might have affected any individual who is not directly funded by the awards like you are? [If yes, how so].
- (7) What has been the overall impact of the FRCS program at your institution so far, in your opinion?

#### Future Guidance

We want to close by getting your advice. First, regarding the program itself:

- (1) How might program leaders improve the FRCS program at your institution?
- (2) How should program leaders spread the word about future opportunities to apply for the FRCS program?

Finally, we have a few parting bigger-picture questions.

- (1) What kinds of things might institutions and leaders in academic medicine do that might help alleviate the sorts of challenges you face?
- (2) What are the biggest barriers that are faced by young people trying to stay in careers as physician-researchers?
- (3) Is there anything else you think institutions and leaders in academic medicine can do to promote the success and retention of junior faculty pursuing careers as physician-scientists?
- (4) Is there anything I have not asked, which you think is important?