HHS Public Access

Author manuscript

J Acquir Immune Defic Syndr. Author manuscript; available in PMC 2024 October 01.

Published in final edited form as:

J Acquir Immune Defic Syndr. 2023 October 01; 94(2 Suppl): S108–S115. doi:10.1097/QAI.0000000000003256.

Going to the Source: Discussions with Early and Mid-Career Faculty from Groups Underrepresented in Biomedical Research to Develop and Enhance CFAR Services

Joseph Delamerced, MA,
Brown University, Division of Biology & Medicine

Leslie Ramirez, MA,
The Miriam Hospital

Judy A. Kimberly, PhD,
Brown University, Division of Biology & Medicine

Sara Vargas, PhD,
Brown University/The Miriam Hospital

Timothy P. Flanigan, MD,
Brown University/The Miriam Hospital

C. Sanchez, MD,
Brown University/The Miriam Hospital

Kaylyn Bruciati, MHA,
Boston Medical Center

Kaku So-Armah, PhD
Boston University, School of Medicine

Abstract

Background: To include, sustain and retain HIV-focused early career faculty from groups historically excluded from biomedical research, the Providence/Boston CFAR conducted focus groups and individual interviews with early and mid-career faculty to discern their needs.

Methods: We conducted focus groups and interviews with 15 faculty at institutions affiliated with Providence/Boston CFAR from groups underrepresented in biomedical research. The discussion was guided using the domains of an Asset Bundle Model encompassing scientific human capital, social capital, and financial capital.

Result: Participants' identities, including their race, ethnicity, gender, sexual orientation and being a parent impacted their vision of themselves as scientists. Participants reported confusion

Corresponding Author: Kaku So-Armah (kaku@bu.edu); 801 Massachusetts Avenue, Crosstown Building, 2nd Floor, CARE Unit, Boston, MA 02118.

Conflicts of Interest and Sources of Funding: Providence/Boston Center for AIDS Research (CFAR) (P30AI042853), Emerging Infectious Disease Scholars at Brown University (R25AI140490), and CDEIPI was funded by the NIH through a supplemental award to the District of Columbia Center for AIDS Research (P30AI117970). The authors do not report any conflicts of interest.

or limited training on or access to resources for professional development, hiring staff, meeting NIH reporting requirements, international research, support for working parents, sabbaticals, and addressing workplace conflict or unsupportive work environments. Some described feeling like they were a burden on their mentors who appeared overextended. They identified attributes of effective mentors, such as believing in and investing in the mentee; having the requisite content area expertise and self-confidence; being able to identify mentees needs and meet them where they are; and being consistent, communicative, respectful, and kind. They described a need for additional education and support pre and post research grant award management.

Conclusion: To learn how to equitably serve all interested in HIV research, CFARs should engage and include perspectives from scientists that have historically been excluded from biomedical research. Our future work will test, implement and disseminate the ideas generated by these focus group discussions.

Keywords

underrepresented; early and mid-career faculty; focus groups; mentorship; networking

Introduction

Increasing diversity in the public health workforce is crucial for achieving health equity, especially in the field of HIV which disproportionately impacts people from groups that have been historically excluded from research.[1] Diversity contributes to the production of rigorous public health science that can advance health equity in HIV because diverse teams bring together multiple perspectives that improve scientific innovation by yielding scientific questions and study approaches that can better tackle health disparities.[2] Yet, in the United States, several groups remain underrepresented in the biomedical research enterprise. Minoritized racial/ethnic populations are less likely to receive NIH R01 grants even after controlling for educational background, country of origin, and training.[1–3] There are compelling data indicating that low-income and first-generation students have difficulty accessing higher education training, lack mentors and role models to support their academic and professional success, and risk dropping out of college.[4] Prior efforts to intervene on these disparities have important limitations including: 1) identifying racial (and other forms of) diversity as problems to be managed or accommodated when it is really discrimination (institutional and interpersonal) that is the problem to be addressed; and 2) over-emphasizing cultural competence in mentor training, which focuses on the skill development of the mentor and his/her ability to “learn the culture” of the mentee.[5–7] The long-term goal of the Providence/Boston CFAR Diversity Equity Inclusion and Accessibility (Prov/Bos CFAR DEIA) Program is to eliminate institutional barriers that limit the inclusion and retention of scientists historically excluded from HIV research and other Science Technology Engineering & Math (STEM) careers.

Multiple factors explain diversity-related disparities in U.S. biomedical research institutions. *Structural factors* include an overreliance on standardized tests, bias in who gets encouraged and supported to pursue STEM careers, salary inequities, and the kinds of topics that get prioritized for funding. [1,8,9] *Institutional factors* include implicit and explicit biases affecting recruitment, hiring, retention, advancement, and promotion of faculty from

underrepresented groups in biomedicine.[10] *Inter-personal* factors include lack of culturally responsive mentorship, macroaggressions, and microaggressions.[11] *Intra-personal factors* include fear or anxiety about confirming negative stereotypes i.e., stereotype threat.[12,13] Leveraging the NIAID funded CFAR Diversity Equity and Inclusion Pathway Initiative (CDEIPI), Prov/Bos CFAR sought to learn how we could better meet the needs of trainees and early career faculty from groups underrepresented in biomedical research who are interested in HIV science.

With advice and collaboration from our CDEIPI colleagues at the University of Alabama Birmingham, we selected an Asset Bundle Model to holistically inquire about institutional, inter-personal and intra-personal factors. We used this model as a framework to guide focus group discussions early and mid-career faculty affiliated with the Providence/Boston CFAR and its partner institutions, Boston University, Boston Medical Center Brown University, The Miriam Hospital and Lifespan Community Health Institute. The current manuscript focuses on early and mid-career faculty as data collection is ongoing for trainees.

Methods

Theoretical Framework

To attract and retain students from minoritized groups with varying social identities in STEM, Johnson and Bozeman proposed an Asset Bundle Model i.e., specific sets of abilities and resources individuals develop that help them succeed in educational and professional tasks.[28] Their model has five asset bundles: educational endowments, science socialization, material resources, network development and family expectations. Educational endowments and science socialization serve to increase explicit knowledge and tactical knowledge respectively i.e., scientific human capital. Network development and family expectations contribute to social capital i.e., resources that are embedded in social networks (e.g., peers, mentors) and accessed and used by actors for actions.[29] Material resources like scholarships and grants contribute to financial capital.

Participants

Using the Asset Bundle Model to inform our questions (see Table 1), we aimed to conduct at least three focus groups with early-mid stage faculty from groups underrepresented in biomedical research. We recruited participants from a convenience sample of early-mid stage faculty at Prov/Bos CFAR affiliated institutions. We selected participants engaged in or interested in HIV research who were from groups that the NIH includes as underrepresented in biomedical research.[14] This selection was based on prior knowledge of the research team or publicly available information about research interests and underrepresented identities of the potential participants. We sent an email message to potential participants explaining our project, its goals, and a request to respond if interested in further details and/or participating. Of the 29 people we emailed, we were able to enroll and schedule 15 to participate in our study.

Focus Groups & Interviews

We selected focus groups to explore perspectives of participants; to enable participants to identify and clarify their views; and to create new or deeper connections among faculty from underrepresented groups at the same institution. Some focus groups were converted to one-on-one interviews when scheduling the group was so challenging that it risked not getting any data at all.

Focus groups and interviews were conducted by 1–2 facilitators and lasted approximately 60 minutes. Facilitators were three leaders of Prov/Bos CFAR Diversity Equity Inclusion and Accessibility team. They included an Assistant, Associate and Full Professor, a White man, Latina woman and a Black man, medical doctors and a PhD researcher.

Focus group and interview sessions were recorded, and session notes were written by the interviewer and/or research assistant. All participants were informed of the intent of use of the recordings and consented to its use. Names or other personally identifying information were removed during analysis and dissemination. Participants were compensated a $50 gift card for their time and insights. This study was approved by the Institutional Review Boards of Boston Medical Center and Lifespan.

Data Analysis

Structured review of the focus group recordings or session notes was conducted by a research assistant trained in qualitative methods. Discussions were initially summarized by question/Asset Bundle domain (see Table 1), and then across focus groups such that key points and the range of the perspectives were identified for each question. With support from the entire research team, cross-topic themes were identified for each question. Lastly, we identified actionable steps either explicitly recommended by participants or that appeared to be responsive to issues raised by participants.

Results

For the Brown University affiliated groups, a total of nine CFAR-funded researchers who identified as being members of underrepresented groups participated in three focus groups in August and September 2022. The groups ranged in size from two to four participants. For the Boston University affiliated groups, a total of six researchers with interest in HIV research who identified as being members of underrepresented groups participated in one focus group and three individual interviews in January and May 2023.

Several themes and unique experiences emerged from the focus group sessions. These will be discussed as they relate to scientific human capital, social capital and financial capital domains of the Asset Bundle Model. Table 2 highlights summarized responses.

Scientific Human Capital (science socialization and educational endowments)

Participants' identities, including their race, ethnicity, gender, sexual orientation and being a parent impacted their vision of themselves as scientists. These identities influenced the choice of research topic or population of interest being studied. Some described a sense of duty/responsibility when talking about how their identity led them to choose careers and

research foci involving health equity and/or marginalized populations. Others described limited availability of colleagues with whom they shared identities. One expressed a sentiment of feeling left out of diversity, inclusion and equity discussions in biomedical research as an Asian American.

Some participants described the challenges of being the first in their families to receive doctoral degrees. Challenges included perceptions that they were not as prepared as peers to transition from trainee to independent faculty and navigating the federal biomedical research funding landscape as a non-US citizen. One participant described an experience where academic research training time was prematurely stopped in order to make space for professional (clinical) work. Another described limited exposure to grant writing in their graduate program such that they first learned about the different types of NIH grants series (F, T, K, R) during their post-doctoral training.

Participants reported confusion or limited knowledge about resources available to them for professional development, hiring staff, meeting NIH reporting requirements, international research, support for working parents, sabbaticals, and addressing workplace conflict or unsupportive work environments. Participants stated that classes and workshops designed to improve their skills through the CFAR had been helpful.

Social Capital (network development and family expectations)

Due to COVID-related restrictions, many opportunities to create professional connections had been lost, and some noted that their mentors left their jobs during the height of the COVID lockdown. Those earliest in their research careers faced greater challenges to foster these relationships. Participants noted how crucial it was to build both professional and social relationships in the workplace. They voiced a desire to have “real and strong” social connections; a desire sometimes impeded by the limited availability of colleagues with shared identities, which are helpful as foundations for relationship building.

We asked specifically about mentoring relationships. Participants described feeling like they were a burden on their mentors who appeared overextended. They also highlighted luck – particularly early in career – as a key determinant in finding an effective mentor. Participants identified several attributes of their effective mentors: a person who: believes in and invests in the mentee; has the requisite content area expertise and self-confidence (doesn’t feel threatened by mentee); is able to help identify mentees needs and meet them where they are; and is consistent, communicative, respectful, and kind. Participants noted a more diverse pool of mentors is needed to benefit an increasingly diverse pool of researchers and emphasized the need to have multiple mentors with diverse experiences and expertise. Participants also discussed the benefit of NIH program officers from diverse backgrounds who may be better able to support researchers from groups underrepresented in biomedical research to succeed. Finally, participants discussed the need for mentors to be institutional advocates – to guide mentees to find the right resources at the right time – and sponsors to equitably nominate them for leadership roles and high-value assignments.

In addition to challenges mentioned above about being the first in the family with a doctoral degree, participants also described feeling like people in their families did not

understand what they did. They discussed feelings of guilt since there is often an imbalance in time spent with family and time spent working. Having a supportive partner who invests in equitable parenting was helpful. Likewise, being able to bring breastfeeding children to conferences was described as one way of meeting challenge of parenting as an academic researcher. These feelings of guilt and challenges around family expectations existed simultaneously with family feelings of pride about the educational achievements of participants.

Financial Capital (Material Resources)

Grant writing workshops or classes that had mentors guiding junior faculty through the various steps of the grant submission process were highlighted as empowering. This was especially true for to those with limited experience writing and applying for grants or those new to an institution. Participants noted how frustrated they felt not knowing what was expected of them when they first began the grant writing process e.g., after submitting an application, there are still steps that need to be taken to receive the grant funds if approved.

Asked how they would spend a no strings attached $40,000 grant, they proposed using such a resource to doing research with limited existing funding opportunities or with populations often excluded from biomedical research e.g., undocumented people. Other ideas included paying for research support staff time; paying for childcare to enable more time for research; purchasing research materials that may be restricted on federally funded grants (e.g., harm reduction supplies); and compensating subject matter experts as research consultant (e.g., people with lived experience of HIV).

Discussion

This study captured perspectives of early and mid-career faculty with an interest in HIV research who were from groups underrepresented in biomedical research as defined by the National Institutes of Health. The discussion identified several challenges this group experienced and opportunities for CFARs to intervene to increase the likelihood of success, feelings of inclusion and to sustain excellence in research toward ending the HIV epidemic.

Scientific Human Capital:

Participants described their science socialization (seeing oneself as a scientist[15]), which illustrated an important structural factor driving diversity-related disparities in U.S biomedical research. Identity, background and experiences were important factors in defining their vision of themselves as scientists and choice of research focus. This is in line with prior research showing identity (e.g., race) is correlated with grant proposal research topic choice.[1] Prior research also indicates that topic choice (e.g., human subject vs. non-human subject research) is correlated with likelihood of NIH funding.[1] Putting these findings together provides an illustration of a structural factor driving (at least) race-related inequity in research funding where one’s background shapes one’s scientific identity and research focus in ways that are correlated with lower likelihood of successful NIH grant proposal funding. Addressing this structural issue will be required to enable or optimize effects of interventions at the intuitional, inter-personal or intra-personal level discussed

below. Future research on how other, more stigmatized, less disclosed dimensions of under-representation (e.g., disability status) impact science socialization, research topic choice and likelihood of funding for said research topic will be needed.

Participants identified opportunities for improving education endowments emphasizing grant award process education. They proposed institutional level interventions: professional development activities, such as classes and workshops with a focus on instructing mentees through the grant application process would be beneficial. We extend these ideas from our study participants ideas and additionally propose a proactive approach for academic institutions where pre and post-award/development offices identify common issues that impede grant submission and collaborate with research education offices to develop and/or disseminate curricular content to address these real-world issues.

Social Capital

Participants were clear about characteristics they sought in effective mentors. Characteristics included perceiving the mentee as a whole person and developing a relationship in which incentives are aligned such that the mentees success is also perceived as the mentors success. We note that many of the domains of characteristics of effective and less effective mentoring relationships participants discussed are covered in existing evidence-based mentor training curricula.[16] What our data suggest is that there is room to improve formalized and consistent use of these curricula in academic institutions and to incentivize mentors to engage in these trainings. Our data also suggest there is room to supplement standard mentor training with refresher courses and continuing education modules that emphasize concepts like cultural humility. Cultural humility is a lifelong learning process where mentors use self-reflection to understand personal and systemic biases and acknowledge themselves as learners when it comes to their mentees experiences.[17] We hypothesize that a positive effect of expanded, formalized mentor training is increasing the volume of available effective mentors, which might reduce the load on existing mentors so mentees feel less like they are over-burdening mentors. Another positive effect may be improved identification and documentation of characteristics salient to mentor-mentee matching (e.g., some trainings offer personality assessments or mentoring compacts, which mentors may include in their public profiles to increase the intentionality in matching mentors and mentees.)

In addition to mentoring, network development enhancement was also identified as a critical element for these scholars. Participants suggested that having a space dedicated to networking and socializing that welcomes both junior and senior faculty of all backgrounds could be formed. One focus group started with participants discussing how pleased they were that the focus group afforded them the opportunity to meet others with shared backgrounds that they had not yet met.

Financial Capital

In addition to requests for pre/post grant award education, participants discussed other gaps in material resources. The competing demands of childcare and other family responsibilities with research can be difficult for faculty from all backgrounds, but particularly for faculty that may not have privileged financial resources or family support. Participants requested

policies and resources (e.g., grants to support child during conference attendance) that recognize support for these needs. Additionally, one participant proposed that they would have benefited from sabbatical leave in response to our question about resources needed during an academic low-point. Innovative programs like Junior Scholar Leave/Early Career Sabbaticals may help provide the space and time needed for early stage faculty transitioning to independence to avoid burnout.[18] Such programs may be particularly beneficial among faculty from groups underrepresented in biomedical research exposed to weathering[19] factors that drive burnout like the structural, institutional, inter-personal, and intra-personal factors described in our introduction.

Limitations

We acknowledge important limitations including our convenience sampling approach and potential selection bias therein; lack of access to information on non-publicly available dimensions of under-representation in biomedicine (e.g., financial hardship, disability status); lack of explicit attention to positionality/reflexivity during the conduct of this research; lack of a transcript to enable coding (we employed rapid qualitative analysis[20] using field notes taking during the focus group/interview or while listening to recording of focus group/interview); and deploying Prov/Bos CFAR faculty as focus group leaders/interviewers may have limited disclosure by some participants;

Implications

Data from this study will inform our broader Prov/Bos CFAR efforts to improve diversity, equity, inclusion and accessibility (DEIA). For example, we are piloting a summer training program that places three undergraduate and post-baccalaureate students in the same laboratory collaborating on the same research project to provide exposure to team science and peer mentorship within a supportive learning community. We plan to conduct additional focus groups with students participating in an NIH-funded Post-Baccalaureate Research Education Program (PREP) at Prov/Bos institutions. These additional focus groups will illustrate how the content of Asset Bundles differs at earlier career stages and how training programs such as PREP may fill in some of the gaps identified by the early and mid-career faculty.

Conclusions

We described experiences of early and mid-career HIV researchers from groups underrepresented in biomedical researchers in terms of their contributions to scientific human capital, social capital and financial capital. These focus groups and interviews reinforced the value of inclusion of scientists from underrepresented groups in qualitative research – beyond the rich insights gained, many participants expressed joy at the opportunity to speak for an hour about the ups and downs of pursuing academic careers with people with whom they shared one or more identities. Future work will complete all planned focus groups and testing or implementing some of the suggestions elicited from the focus groups.

Acknowledgements

This project was supported by Award Number P30AI042853 from the National Institute of Allergy and Infectious Diseases of the National Institutes of Health, which funds the Providence/Boston Center for AIDS Research (CFAR). The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

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Table 1.

Mapping of theoretical framework and main interview questions

Asset Bundle Framework Domain	QUESTIONS
Scientific Human Capital	- Consider your vision of yourself as a scientist. In what ways do your race, ethnicity, and gender impact this vision? - Discuss factors, both positive and negative, that have had significant impact on your research training and your research. - Discuss a resource you wish would have been available during a professional low point or stressful time.
Social Capital	- Describe qualities of your most effective research mentors. - Discuss challenging barriers or helpful facilitators you encountered when seeking or working with your research mentors. - Support can take many different forms. Discuss other sources of support you have used or benefitted from. - In what ways does your research career impact relationships in your family? - In what ways does your family impact your research career impact? - Describe, if any, ways that CFAR may or may not have helped provide a sense of belonging.
Material Resources	- Describe your experiences with research funding. - How would you spend a no-strings-attached $40,000 research grant?

Table 2.

Summaries of Focus Group Responses

Questions	Summary Responses
Scientific Human Capital	
Consider your vision of yourself as a scientist. In what ways do your race, ethnicity, and gender impact this vision?	(1) Identities included person of color, immigrant, grew up in Africa, female and Hispanic, cisgender gay white male first generation MD, public school educated immigrant, Asian American, working mom, black Haitian. (2) Identities contribute to being driven to, uniquely positioned to, and feel a sense of duty to engage in research with populations of people who share their identities and address health injustice and inequity; this simultaneously feels empowering but also inequitably burdensome. (3) Identities contribute to being driven to, uniquely positioned to, and feel a sense of duty to support trainees with shared underrepresented identities (4) Identities enable bringing different perspectives from well-represented colleagues though this sometimes feels isolating. (5) Identities contributed to having skills, expertise and experiences that did not appear to align with what NIH is looking for in fundable investigators (e.g., teaching).
Discuss positive factors that have had significant impact on your research training and your research.	(1) Finding mentors and other faculty who have similar cultural backgrounds reduced feelings of isolation. (2) Availability of developmental grants. (3) Bouncing ideas off of colleagues and having an assigned CFAR person who talk through my responses to feedback. (4) Having NIH program officers from groups underrepresented in biomedicine provided support when and how it was needed and enabled success.
Discuss negative factors that have had significant impact on your research training and your research.	(1) Not finding complementary collaborators or experiencing toxic power dynamics with supervisors contributes to lost time. (2) Others who come from a family with a medical/academic background are better equipped to cultivate professional relationships. Sometimes, those relationships are already cultivated for them. (3) Lack of familiarity with how to thrive in US academic medical settings. E.g. non-US trained faculty may not have had same opportunities (exposures) as US trained faculty. (4) Being over-mentored and under-sponsored impacts ability to get funding and be productive (5) Insufficient training in implementation science and mixed methods early in career. (6) Not having sufficient time to dedicate to academic training; feeling pressured to truncate training early to begin clinical work without the mentoring or resources to balance clinical schedule and nascent research career; competing demands from clinical/public health practice especially during COVID (7) During early career, teaching faculty received less support to do research despite having a demonstrated interest in research
Discuss a resource you wish would have been available during a professional low point or stressful time.	(1) Mental health support (2) Greater sense of community (3) Funds that working parents can apply for to help with childcare e.g., to enable conference attendance (4) Funding to support building a research team (5) Better accessibility and availability of workshops on applying for grants. (6) Guidance on how to hire staff, navigate the IRB and NIH grant progress reporting (7) Institutional advocate who would guide to appropriate resources rather than reflexively perceiving issue as “diversity equity inclusion (DEI)-related” and referring to institutional diversity office (8) Institutional support to report, manage and modify toxic relationships (9) Junior sabbatical to provide a natural break and time to reflect and recompose in some of most intense early career stages e.g., K to R transition or going up for tenure or promotion
Social Capital	
Describe qualities of your most effective research mentors.	(1) Understands, is enthusiastic about, and has achieved successes in a relevant science field (2) Understands the institution and its official and unofficial policies (e.g., parental leave policies) (3) Is invested in the success of the mentee and is willing and able to share their own resources (e.g., network, data analyst time) to achieve this success (4) Willing to share a scientific lane; counts mentees success as their success (5) Learns and understands mentees goals, perspectives, and needs including addressing things like low self-esteem, imposter syndrome. (6) Perceive mentee as a whole person; develops a relationship that is not only project-based; is respectful to, inspires trust in, and believes in the mentee (7) Promotes consistency and accountability; avoids condescension or arrogance; able to recognize their own knowledge gaps and provide effective referrals to mentee to help fill those gaps (8) Role model (particularly where identities or backgrounds are shared) that enable mentee to feel inspired to succeed and recognize that succeeding is achievable for a person with an identity/background like theirs
Discuss challenging barriers or helpful facilitators you encountered when seeking or working with your research mentors.	(1) Feeling like a burden on mentors who are over-extended. (2) It can be hard to trust someone when you don’t know if they understand your background and values. (3) As early career faculty, you do not know what you do not know and mentors may not recognize that. Prior mentees may be able to help current mentee figure out how to get the best out of the mentoring relationship. Can look at mentors CV and mentoring table to identify prior mentees. (4) Not having access to networks outside home institution makes it difficult to find mentors to fill specific

Questions	Summary Responses
	gaps in mentoring team. (5) Minority fellows program through professional society filled a mentoring gap that was present in academic program. (6) Difficulty finding a person who has travelled a similar non-traditional route to research to serve as a mentor (7) There is sometimes luck involved in making a good mentor match
Support can take many different forms. Discuss other sources of support you have used or benefitted from.	(1) Having collaborators with complementary expertise outside of one's home institution. Zoom facilitates these collaborations. Suggestion that it would be beneficial if CFAR created moments where people can socialize and build up their network without having to go to an academic conference. (2) Grant writing courses/workshops taken as faculty fills gaps in grant education during training and also enables linkage to others at similar career stage including people with shared identities/backgrounds who may be at a different institution. (3) Writing groups with both a scientific focus (e.g., substance use) and shared identity (e.g., racial/ethnic underrepresented group) support professional development and productivity. (4) Having access to prior funded grant proposals and analytic consultations (e.g., survey design). (5) Working in a department with supportive leadership that engages in regular dialog increases opportunities for collaboration.
In what ways does your family impact your research career and vice versa?	(1) Having a supportive partner who invests in equitable parenting is helpful (2) Families do not understand what academic researchers do; COVID was a helpful experience to show the need for and lifecycle of research. (3) Family is primarily proud of academic achievements though some may perceive that advanced degrees confers perception of superiority. (4) Having the ability to bring children to scientific conferences during breastfeeding is helpful. (5) There is a need to be intentional about carving out time for family since research is a consuming career. Strategies include not scheduling work events during important family events. (6) There was recognition that others can achieve one's research goals, but others cannot parent one's child. Made conscious decisions to be present as a parent, which may limit ability to be prolific in research.
Describe, if any, ways that CFAR may or may not have helped provide a sense of belonging.	(1) Cultures, norms, and values in academia determined by well-represented people with resources are elusive and challenging. (2) Building community of underrepresented investigators with complementary scientific interests is difficult because, by definition (i.e., under-represented) those intersections are rarer. (3) Allyship from well-represented colleagues is helpful
Financial Capital	
Describe your experiences with research funding. How could the process of applying for grants be improved? How could the process of grant management be improved?	(1) There is need to have institutional support at all stages of the grant process otherwise the work will not get done. Post-award processes need particular attention and education for early stage investigators. (2) Funding opportunities need to be presented to early-stage faculty who should be supported and mentored to successfully apply. Opportunities specifically directed at people from underrepresented groups would be appreciated. (3) Funding award should be commensurate with the time investment needed to submit the grant (4) Letters of intent are helpful to quickly gauge whether an idea is fundable.
How would you spend a no-strings-attached $40,000 research grant?	(1) Buy dedicated time for research if you're a clinician. (2) For childcare to have more time for research. (3) Doing work with limited funding opportunities e.g., working with undocumented people, sex workers. (4) Align spending with grant deliverables (5) Staffing research support to free up early stage investigators time e.g., hiring a postdoc (6) $40,000 is insufficient to do research. (7) Obtain preliminary data for an NIH grant or for a high-risk project. (8) Purchase materials that are not allowable on government funded grants e.g., harm reduction supplies, information technology enhancements, support for querying electronic medical records (9) Compensating subject matter experts e.g., people with lived experience of HIV
Additional thoughts	
The roles of CFAR in career development of early stage investigators from underrepresented groups	(1) CFAR should be more proactive in providing networking and social activities to cultivate a collaborative HIV research community. This can include specific communities of people from underrepresented groups. (2) People with long histories involved with CFAR seem to enjoy it – more needs to be done to make it more inviting and enjoyable for new members including new faculty and post-docs. Suggestion to systematically reach out to department chairs to invite newly hired investigators with interest in HIV to join CFAR. (3) The guided approach to applying to career development grants works very well. Hearing how you can improve your application from an internal colleague enables corrections prior to official NIH review. (4) It's helpful that the CFAR is shared between Brown and Boston University. CFAR facilitates conferences, collaborations and mentorship. (5) Many claim to want to improve diversity, equity, inclusion and accessibility but are afraid to do something different for people from underrepresented groups. However, to achieve equity requires doing something different for groups e.g., providing additional support to people who have been historically excluded from additional support. Yet institutions are often afraid or hesitant to do something different. (6) CFAR should share data about representational diversity at CFAR institutions and amongst recipients of CFAR support.