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A Film: “Breaking the Stigma” An evidence-based approach to combat stigma around mental health struggles in academia

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Abstract

Mental health issues are pervasive within academia, and although much is focused on the graduate level, these issues still exist at higher levels on the career ladder. The COVID-19 pandemic has caused these numbers to increase. Despite the importance of these issues, little research has been done on ways to improve the academic environment to allow for open conversation without stigma associated with this topic. Here, we report a study conducted by Dragonfly Mental Health (Dragonfly) at the University of California Berkeley in the Molecular and Cell Biology Department, where personal stories of 6 local faculty with lived experience of mental health struggles or those that had worked with someone closely who had struggled were shown in a short film during three divisional retreats. The audience members were anonymously surveyed after the screening. The screening of the film was deemed beneficial in a number of ways by an overwhelming majority of participants, both in reducing stigma and fostering conversations around this topic. This data shows that faculty stories may be a very powerful mechanism to reduce stigma, promote more open communication, and foster change in the academic culture around mental health issues.

Introduction

Addressing mental health issues in academia is of paramount importance and must be addressed urgently. Numerous studies have demonstrated that graduate student mental health struggles are pervasive and severe, pointing to the need for timely and effective interventions [1-5]. Today's hypercompetitive academic research environment leads to little focus on well-being and mental health, despite these issues being essential for maintaining a healthy and productive research system. This is critical at the level of graduate students and postdoctoral researchers, considering these groups constitute the bulk of the workforce, and their importance to the research enterprise cannot be understated.

While much of the research around mental health in academia has focused on graduate students, large proportions of postdocs and early career researchers also report symptoms of depression, emotion or stress-related problems, or high levels of stress [6]. Despite the lack of research, mental health struggles likely do not end with graduate or professional training. Those at higher levels on the academic career ladder have been reported in smaller studies to be affected by the same mental health struggles [6, 7], particularly for women in STEM who are balancing family life with the academic lifestyle and heavy workload [8]. During the COVID-19 pandemic, these issues have been exacerbated at all levels [9-12].

Despite the importance of addressing mental health issues in academia, limited data on interventions to address mental illness among postdoctoral fellows, residents, faculty, and staff has been collected within universities. In addition, research on the effectiveness of interventions to combat the stigma against mental illness among researchers is especially thin. In order to address these issues, the National Academies of Sciences, Engineering and Medicine (NASEM) and the Counsel of Graduate Schools (CGS) in collaboration with JED Foundation are currently conducting a studies assessing the prevalence of mental health struggles and recommending ways to provide support for mental health and well-being for students.

Dragonfly Mental Health (Dragonfly) [13] is a newly formed nonprofit organization dedicated to creating sustainable cultural changes within universities in ways that support and cultivate excellent mental health among academics worldwide. While many early career scientists experience these issues [6], surveys conducted among graduate student, postdoctoral fellow, and faculty researchers at the University of California Berkeley Department of Molecular and Cell Biology and Johns Hopkins School of Public Health between 2018-2019 (personal communication) showed that stigma and fear of societal and career repercussions among early career researchers are major factors preventing those that need the most help from seeking it at their institutions.

In fact, many early career researchers rely on other colleagues during acute psychological distress [14], however these issues are still not being discussed in the open. One potential way to overcome stigma is to encourage faculty, especially senior faculty, to come forward with their stories around mental health struggles. Here we report on a study performed at the University of California Berkeley in the Molecular and Cell Biology Department, where faculty described such experiences. The resulting film was reported by audience members at all career stages (faculty, postdoc, student, staff) to be beneficial and effective at reducing stigma around mental health conditions in their department.

Overall, this data indicates that publicly viewed and openly discussed faculty stories can be a powerful mechanism by which change may be achieved in the system by encouraging early career researchers to seek help if they are struggling with their own mental health issues.

Methods

Film

Dragonfly developed a multi-media anti-stigma program which involves interviewing faculty of a given academic community who have lived experience with mental health struggles and creating a short film [15]. During an hour long event a film is introduced and screened by the academic community. This is followed by a period of independent small group discussions, followed by a facilitated large group discussion. Discussion questions for the small group discussion included: 1. “What was most striking to you about the film?” 2. “How is stigma expressed in your experience? What thoughts, feelings, words or actions perpetuate stigma?” 3. “How can/do you personally address stigma?” 4. “What can others and the department do to better combat stigma?”

An anonymous post-event survey disseminated by email is then used to capture subjective responses to the film, the event, and suggestions of what the academic community can do better to combat the stigma around mental health struggles for academics at different career stages.

A 13-minute film was edited and screened at three separate multi-day divisional retreats between September 2019 and January 2020. Anonymous answers from a total of 149 participants at all career stages, hereafter referred to as “affiliation” were collected and analyzed.

Survey Respondents and Analysis

All survey respondents attended one of three University of California Berkeley Molecular and Cell Biology Department (MCB) divisional retreats. Responses were included in the analysis if the respondent confirmed that they viewed the film at one of three retreats held at Asilomar Hotel and Conference Grounds in 2019 or 2020. The divisions included: Cell & Developmental Biology (CBD) (1st retreat), Genetics, Genomics and Development (GGD) (2nd retreat), and Biochemistry, Biophysics and Structural Biology (BBS) (3rd retreat).

Following the film, participants were asked to complete a 14-question survey (questions asked in Table 1). There were 149 survey respondents in total. None of the survey questions were mandatory resulting in varying numbers of responses per question. However, all of the respondents answered at least one question. Not mentioned in this paper or included in the analysis are Question (Q.) 2 and Q.14, which were used to solely eliminate any participants who attended a previous department retreat or did not participate in the film screening. Responses for Q.3, Q.4, Q.5, Q.6, Q.7, Q.8, and Q.12 were broken down by division and by respondent affiliation for further analysis.

Qualitative Analysis

Qualitative data were coded using thematic analysis of responses provided by participants in Q.10 “Please provide specific feedback about what you liked about the presentation and ways that it can be improved” and Q.11 “Please provide any other feedback, thoughts or suggestions here. We welcome your perspective and would love to know what you think will improve mental health in the department.” We summarized the opinions in Q.10 and Q.11 into four different categories: positives, negatives, suggested improvements, and suggested actions. Then we synthesized these four categories into two main categories to identify the core topic of the general comment: a) Improve Dynamic and b) Improve Mental Health in Department/Academia. By doing so we were able to identify the main interests among the participants and report the frequency of topic reference. It is important to mention that one participant could have commented on more than one of the categories identified in a single response.

Results

Survey Responses

None of the survey questions were mandatory, thus each question had a varying number of responses, which is outlined in Table 1 below, both as total responses and by division (CDB, BBS, GGD).

Table 1 - Survey respondents by question and division.

Question Number	Questions	Response Options	Number of Respondents by Division			Total Responses
			CDB	BBS	GGD	
1	Did you attend the screening?	Yes, No, Partially	58	38	41	137
3	Did you think the screening of the film was beneficial?	Yes, No	58	37	40	135
4	Do you think that the small group discussions were beneficial?	Yes, No	57	37	40	134
5	Do you think the large group discussions were beneficial?	Yes, No	58	37	40	135
6	Do you think that the film and discussions reduced stigma among attendees about having a mental health condition?	Yes, Somewhat, No	58	37	41	136
7	Do you think that the film and discussions reduce the perception that suffering from a mental health condition precludes academic and professional success?	Yes, Somewhat, No	58	38	41	137
8	Did including this presentation as part of the retreat programming lead to meaningful discussion about the barriers to wellness and effective work/life balance?	Yes, Somewhat, No	58	38	40	136
9	Do you think that future retreats should include programming such as this?	Yes, Maybe, No	58	38	40	136
10	Please provide specific feedback about what you liked about the presentation and ways it could be improved.	Open-ended Question	33	27	24	84
11	Please provide any other feedback, thoughts or suggestions here.	Open-ended Question	22	15	15	52
12	Did you engage in discussion related to the film beyond the allotted time?	Yes, No	58	38	40	136
13	What is your affiliation with the department (division)?	Faculty, Postdoc, Graduate Student, Staff, Other	58	38	50	149

Survey Analysis

Responses to the survey were separated by affiliation and division, as shown in Figure 1. The affiliations (career levels) of respondents were as follows: Faculty (13.14%), Postdoc (21.9%), Graduate Student (49.64%), Other (1.46%) and Staff (13.87%).

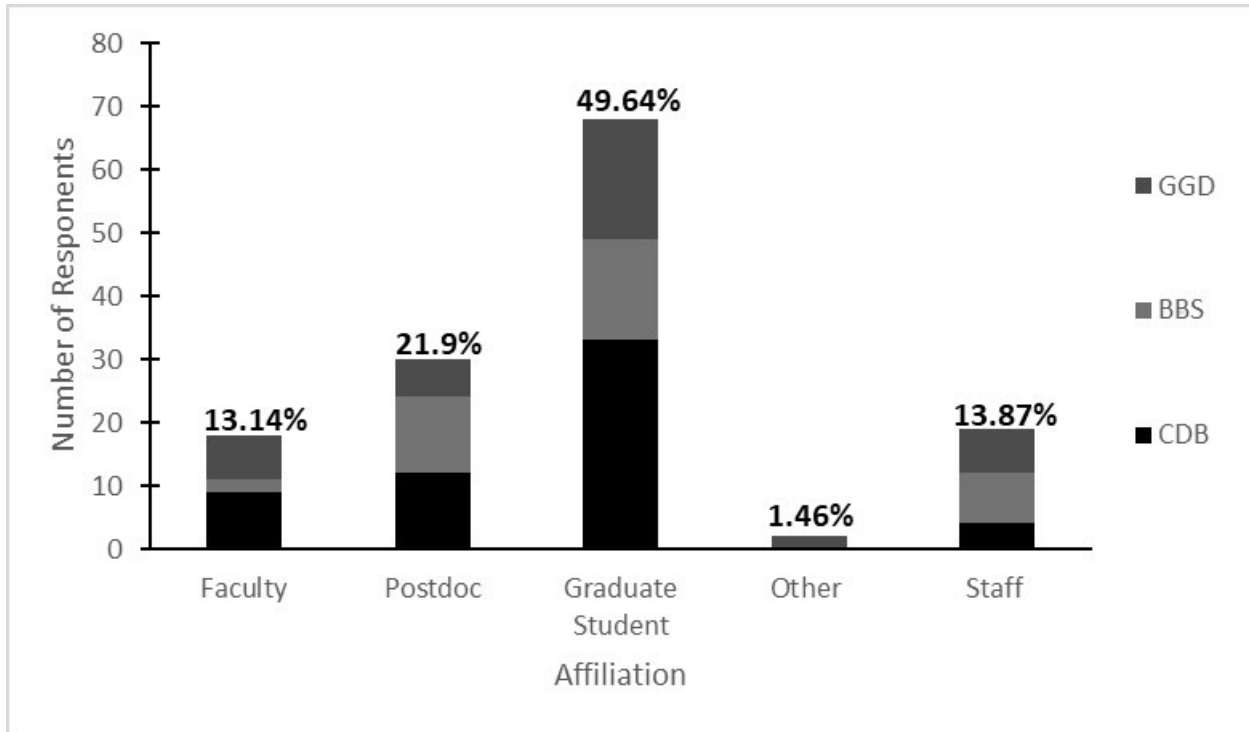


Figure 1 - Clustered bar chart of survey respondents organized by affiliation and division.

The majority of respondents (95.52%) found the film beneficial (2A), and this extended both across divisions (2B) and affiliations surveyed (2C). This consisted of 86.49% of responses from BBS, 98.28% of responses from CDB and 100% of responses from GGD. All of the responses from faculty, staff and the other, were “Yes”, with majority of the graduate and postdoc responses also saying that the film was beneficial.

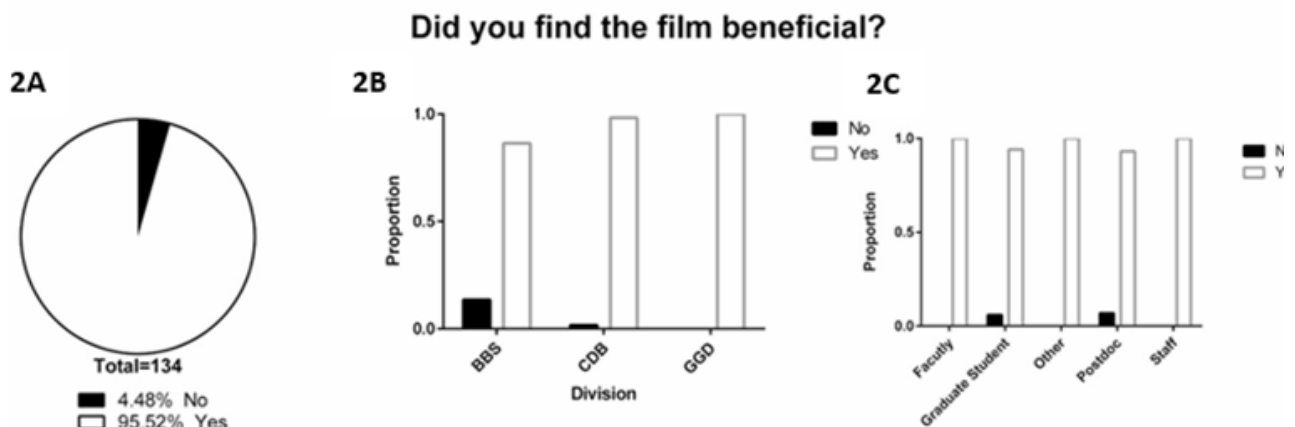


Fig 2 - Survey responses for Q.3 “Did you find the film beneficial?”; organized by total responses (2A), response by division (2B) and response by affiliation (2C).

For Q.4 “Did you think the small group discussions were beneficial?”, 93.98% (figure 3A) of respondents said “Yes”, 86.49% of BBS, 96.94% of CDB and 97.44% of GGD (3B). Looking at responses by affiliation, the faculty, and staff affiliations returned only “Yes” answers, with the other affiliations (graduate students, other and postdoc) returning majority “Yes” answers also (3C).

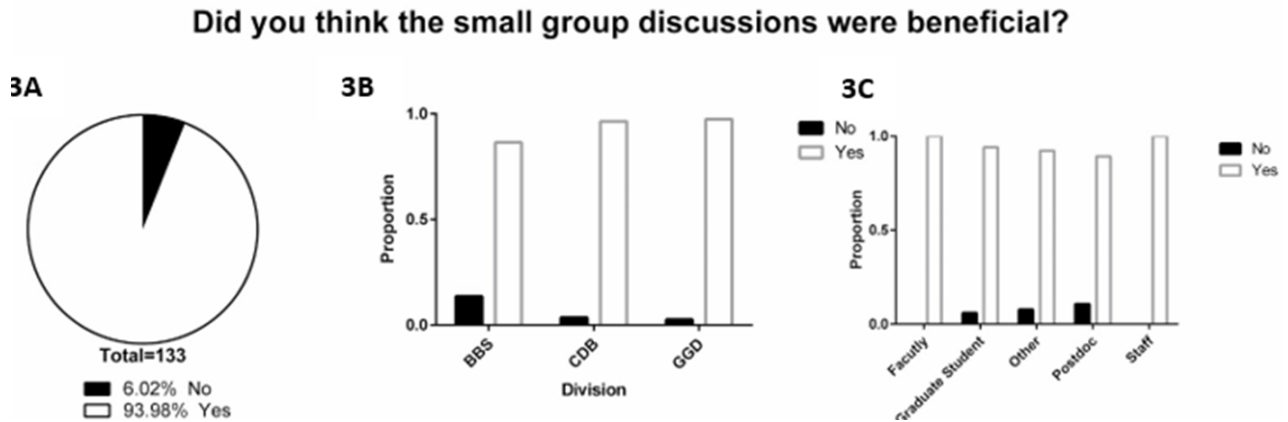


Fig 3 - Survey responses for Q.4 “Did you think the small group discussions were beneficial?”; organized by total responses (3A), response by division (3B) and response by affiliation (3C).

For Q.5 “Did you think the large group discussions were beneficial?”, 82.84% of respondents said “Yes” (figure 4A), consisting of 87.5% of responses from BBS, 98.28% of responses from CDB, and 100% of responses from GGD (4B). The negative responses (17.16%) for this questions came from a mix of all affiliation categories, however as can be seen by Figure 4C, the majority of the respondents from all affiliations concluded that the large group discussion were beneficial.

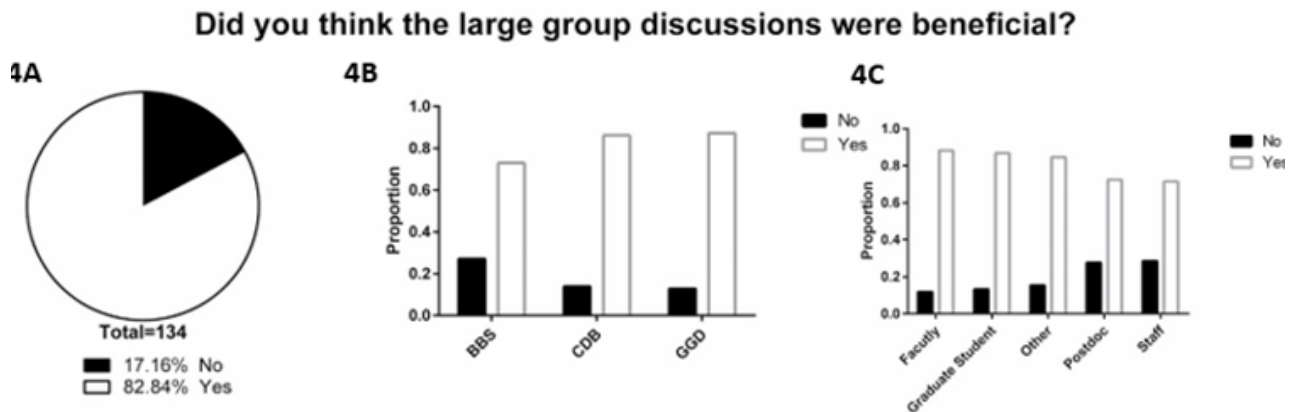


Fig 4 - Survey responses for Q.5 “Did you think the large group discussions were beneficial?”; organized by total responses (4A), response by division (4B) and response by affiliation (4C).

For Q.6 “Do you think the film and discussion reduced stigma?”; 42.54% of respondents said “Yes”, 50% said Somewhat and 7.46% said No (figure 5A), with a more even split between

“Yes” and “Somewhat” coming from the CDB and GGB division and more “Somewhat” responses coming from the BBS division (5B). Looking at affiliation, no faculty and staff responded “No” to this question and the majority of both these affiliation categories indicated that “Yes” this film and discussion reduced stigma (5C). The Postdoc and Other affiliation responses mostly responded “Somewhat”, whereas the Graduate Student affiliation was similar in “Yes” and “Somewhat” responses (5C).

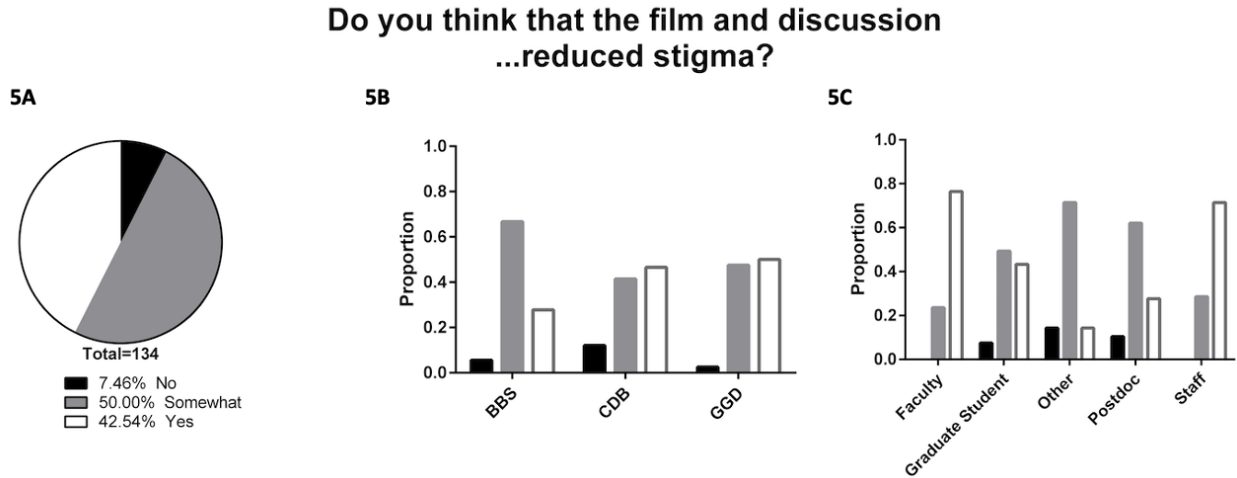


Fig 5 - Survey responses for Q.6 “Do you think that the film and discussion reduced stigma?”; organized by total responses (4A), response by division (4B) and response by affiliation (4C).

For Q.8 “Did you think the film and discussion reduced the perception that suffering from a mental health condition precludes academic and professional success?”, 58.52% (figure 6A) of respondents said “Yes”, 36.30% said “Somewhat” and 5.19% said “No”, with only “Yes” and somewhat responses coming from CDB (6B). Looking at affiliation, again no faculty responded “No” to this question and the majority of this affiliation category said “Yes” (6C). The other affiliation categories were more evenly split between “Yes” and “Somewhat” responses with a minority of “No” responses (6C).

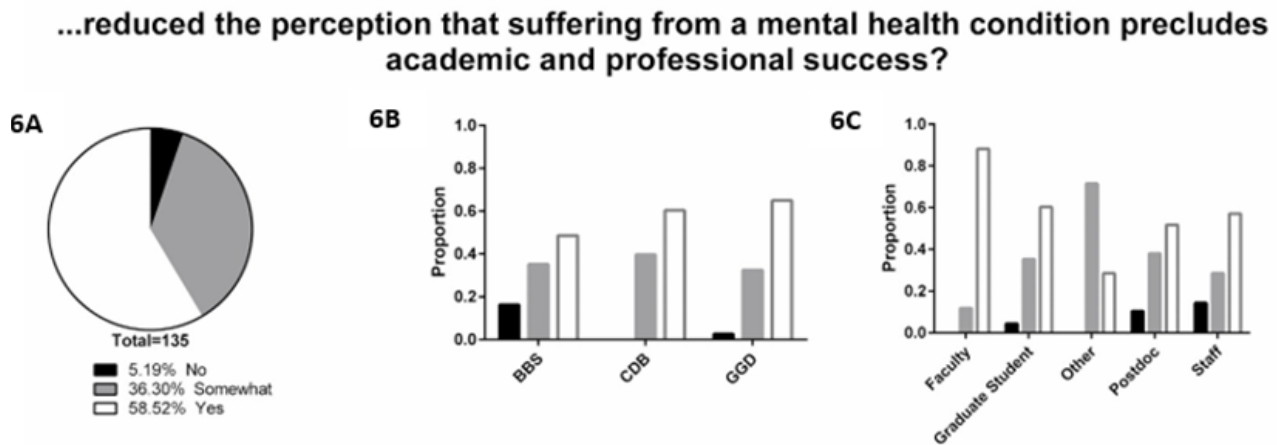


Fig 6 - Survey responses for Q.7 “Do you think that the film and discussion reduced the perception that suffering from a mental health condition precludes academic and professional success?”; organized by total responses (6A), by division (6B) and by affiliation (6C).

For Q.8 “Did including this presentation as part of the retreat programming lead to meaningful discussion about the barriers to wellness and effective work/life balance in the MCB community?” 69.40% (figure 7A) of respondents said “Yes”, 26.87% said “Somewhat” and 3.73% said “No”, with only “Yes” and “Somewhat” responses coming from GGD (7B). Looking at affiliation, again no faculty responded “No” to this question and the majority of this affiliation category said “Yes” and all staff and other category responses were “Yes” (7C). The other affiliation categories (Postdoc and Graduate Student) included a majority of “Yes” and “Somewhat” responses, with a minority of “No” responses (7C).

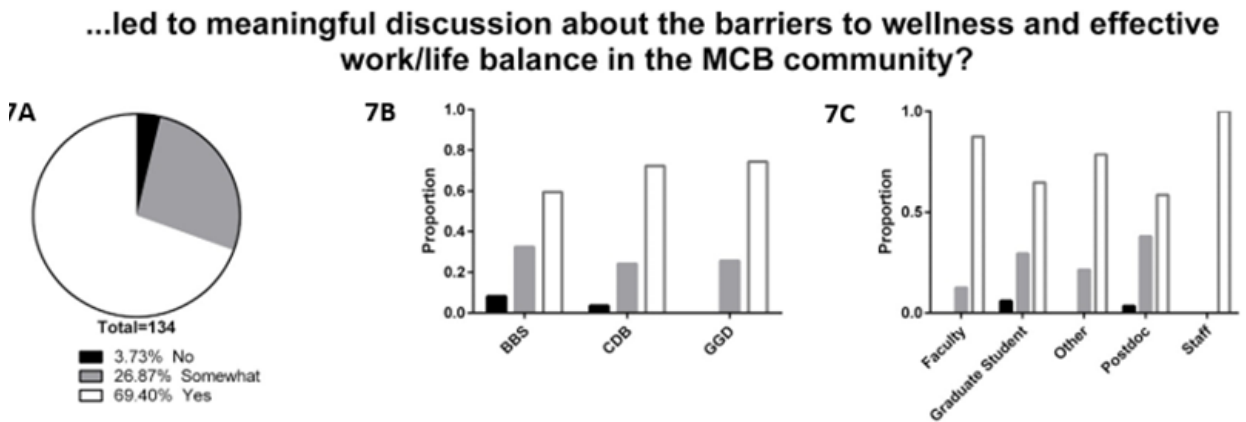


Fig 7 - Survey responses for Q.8 “Do you think that the film and discussion lead to meaningful discussion about the barriers to wellness and effective work-life balance in the MCB community?”; organized by total responses (7A), by division (7B) and by affiliation (7C).

For Q.12 “Did you engage in discussion related to the film beyond the allotted time?” 73.13% (figure 8A) of respondents said “Yes”, with respondents from all divisions returning majority “Yes”, with “No” responses being slightly higher from BBS (8B). Looking at affiliation, the vast majority of the Faculty affiliation category said “Yes” (over 90%, figure 8C), with “Yes” also being the majority for every other affiliation category of respondents.

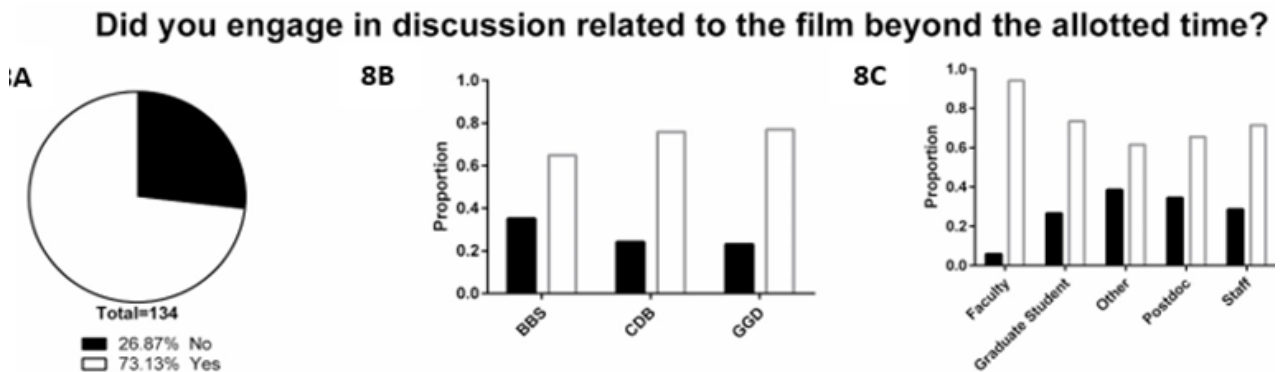


Fig 8 - Survey responses for Q.12 "Did you engage in discussion related to the film beyond the allotted time?"; organized by total responses (8A), by division (8B) and by affiliation (8C).

Free Responses

Responses to the survey were divided by division, and we obtained 40.7% from CDB, 30.2% from BBS, and 29.1% from GGD. By affiliation, we had 48.8% graduate students, 24.4% postdoctoral fellows, 10.5% faculty, 5.8% staff and 10.5% other.

For the first dynamic analysis topic, responses can be divided among a few categories related to: comfort with faculty sharing (24.2%); improved perceptions on experiences shared if made in a more open and direct way (19.6%), while the more indirect ways of sharing were perceived as not very honest and could even perpetuate stigma. Respondents indicated this helped in some way to combat the stigma around mental health (17.9%) and provide a sense of belonging when seeing faculty share personal experiences (15.3%).

Other relevant issues that emerged are the feeling that the faculty members are humanized and facilitates the approach of students towards them especially when they know them personally, as well as the importance and relevance of starting open dialogues around mental health in the academy. The importance of maintaining the anonymity of those who wished to participate in the large group discussion this way emerged on more than one occasion. In addition, 23.0% of postdoctoral fellows felt excluded due to the design of the intervention having faculty speak to students.

58 comments were catalogued regarding perceived needs to attend to mental health in the department. These ranged from the response that structural changes promote, cause, or perpetuate negative mental health effects among academia (35.2%), and that departments and institutions should be involved in the change process (25.9%). Participants also considered it important to be provided with the necessary tools both to take care of their own mental health and to be able to assist (16.7%), accompany or help others in academia, including by having or creating peer support or peer networking opportunities (11.1%). This was especially prevalent among postdoctoral fellows (19%).

It was also perceived that faculty need to have professional training to understand or help students with mental health related struggles (11.1%). Among the faculty members that responded to the questionnaire, 44.4% reported the importance of having professional training in this area.

Other relevant subjects mentioned were 1) the importance of having prevention mechanisms, considering the barriers and challenges that people may face when seeking help to take care of their mental health, and 2) the importance of having specialists in the institution that support students of postgraduate.

Conclusions

The goal of this study was to investigate whether encouraging faculty from within a particular department to come forward and publicly speak about their personal mental health struggles using the medium of a film would help decrease stigma and foster discussions around the mental health and work-life balance within the department. We found that the screening of the film was deemed beneficial by an overwhelming majority of survey respondents, many of whom also said these results may help reduce stigma and foster conversations in academia on these issues, based on conversations which occurred after the film was shown. The results in this study, along with the feedback obtained from the open ended questions, indicated overwhelmingly positive responses related to the utility of faculty stories on mental health struggles for overcoming stigma and changing academic culture on this topic.

Discussion

As faculty participation in the making of the film (telling their stories) was voluntary, the authors were pleasantly surprised at the number of faculty who agreed to take part. Further, the authors were also pleasantly surprised at the volume of responses to the feedback form that the results of this paper are based on, as all questions were voluntary.

Participants appreciated the format of the event, but pointed out that the presence of faculty may have influenced their responses, as indicated by comments such as: *'my group was only students and postdocs which was good because it was comfortable and open.....it may be beneficial to have two different small group discussions - with and without PIs.'* This response indicates that early career researchers still feel most comfortable among their peers and more work needs to be done in order to bridge the communication gap with faculty.

Nevertheless, the openness of faculty to discuss their struggles was much appreciated, such as: *'It's so much more powerful and close to home knowing the amazing MCB faculty have these struggles too. My biggest hope is that the whole department sees this film.'* Another participant also appreciated this aspect in relation to faculty members whom they look up to, in saying: *'It was totally eye-opening (and oddly empowering) to learn that some of my scientific heroes also struggle or have seen people struggle with mental health issues on occasion.'* This sort of feedback is encouraging, and we urge more departments to adopt these open conversations with faculty.

Another participant responded to the open-ended questions: *'My impression has always been that those with serious mental health challenges filter out of the academic system, so it was powerful to see current professors who have faced these challenges and who have not filtered out.'* This quote may be especially encouraging in seeing role models who have remained and continue to perform well in research positions, helping to maintain the continuity of the pipeline through their example.

Among mental illnesses, depression and anxiety are most common, and they are both biologically and environmentally driven [16]. One of the takeaways from this survey was also that these particular disorders need to be discussed more, as well as others, including bipolar disorder. We hope these studies shed light onto how academics are experiencing mental health

issues, and that more institutions will adopt some of the practices resulting from this work as recommendations for improvements in the research environment.

A limitation of this research is the small sample size and the voluntary participation. These findings may not be generalizable to other larger populations or across disciplines or institutions. The survey being a voluntary response may have resulted in report bias, only collecting the responses of those particularly interested in mental health topics and skewing our data towards the overwhelming positive responses we observed. Although the responses analyzed here provide insightful and necessary initial data, we are limited in the ability to measure the impact of a study such as this on a department as a whole or across the University.

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