ORIGINAL RESEARCH

Changes in Career Thinking and Work Intentions Among Family Medicine Educators in Response to the COVID-19 Pandemic

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Introduction: **This study examined the attitudes and perceptions of family medicine educators with regards to COVID-19's impact on both career thinking and work intentions.**

Methods: **We surveyed 949 Family Medicine educators and practicing physicians as part of the 2021 Council of Academic Family Medicine's (CAFM) Educational Research Alliance (CERA) survey.**

Results: **Changes in thinking about their nonwork lives ($P < .001$, OR = 2.82), changes in life priorities ($P < .001$, OR = 2.07), along with recent changes to the educator job that are perceived as less enjoyable ($P < .001$, OR = 1.31), are associated with career thinking changes. Perception of being treated fairly ($P = .002$, OR = 0.83), changes in thinking about nonwork lives ($P = .003$, OR = 1.29), changes in life priorities ($P < .001$, OR = 1.65), and recent less enjoyable changes to the educator job ($P < .001$, OR = 1.26), are associated with an intent to reduce work hours. Perception of being treated fairly ($P < .001$, OR = 0.81), changes in life priorities ($P < .001$, OR = 1.31), recent work changes that are less enjoyable ($P < .001$, OR = 1.38), and workload increases ($P = .02$, OR = 0.87), are associated with increased thoughts of doing something different in 5 years. Older participants were more likely to intent to reduce hours ($P < .001$, OR = 1.05) and have increased thoughts of doing something different in 5 years ($P < .001$, OR = 1.04). Meanwhile, women were more likely to experience career thinking changes ($P = .02$, OR = 1.42).**

Discussion: **Our findings suggest that the career thinking and work intentions of family medicine educators have been greatly impacted by the pandemic. There may be consequences for how they think about and approach their careers and jobs in the future. Additional research is needed to determine what these actual consequences mean. In addition, employers should carefully assess these types of changes, identify which educator subgroups they may affect the most, and act accordingly, particularly in areas like recruitment and retention. (J Am Board Fam Med 2022;00:000–000.)**

Keywords: **Career Thinking, CERA Survey, COVID-19, Family Medicine, Medical Education, Workforce, Workload**

Introduction

The COVID-19 pandemic has affected health care workers everywhere, including physicians. From increased workloads and changes to their work duties, to greater job stress, burnout, and job dissatisfaction,[1–4] the pandemic has overwhelmingly disrupted the everyday work lives and thinking of a variety of doctors, including family physicians.[5,6] Generally, the pandemic experience has affected people's career-related thinking, job and workload intentions, views toward work and life, and perceptions of their customers and employers.[7,8] For physicians, at an individual level, it has heightened the need for career resilience and self-efficacy in the face of greater adverse work and career circumstances.[9]

For medical educators specifically, changes in thinking, outlook, and intentions related to life, nonwork, job, and career is a relevant area for examination, especially given how both medical

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training and patient care were disrupted during the pandemic years of 2020-21.[10,11] In primary care, the loss of face-to-face patient visit time, decreased ability to host residents on site in both hospitals and ambulatory settings to practice patient care, ongoing Covid-19 safety precautions in hospitals and physician offices, and the increased stress associated with trying to make it all work conspired to make the family medicine educator job more difficult and frustrating to perform.[6,12]

Changes in Career Thinking and Work Intentions Resulting from the Covid-19 Pandemic

The Covid-19 pandemic represents an environmental "jolt" in terms of its unpredictability in occurring; uncertainty in how long it has lasted; and its profound impact on the work of medical educators as health system stakeholders.[13] Environmental jolts consist of events which have immediate impact on organizations and workers within them. In this respect, it can be considered a "career shock" that forces individuals to adapt, develop resilience, and shift their thinking related to their everyday lives.[8]

Extant literature suggests that individuals can respond both positively and negatively to these career shocks. Examples of positive responses are building stronger resilience capabilities; developing new ways to view one's job or career;[14] greater career exploration; and embracing things like work-life balance that are seen as contributing to future well-being.[15] Negative responses include outcomes such as increased adverse psychological states (eg, burnout, job dissatisfaction, stress) and increased behaviors such as job turnover; reduced work productivity; and leaving 1's career.[16,17] For some family medicine educators, the Covid-19 pandemic has contained elements of a career shock, given how the places in which they do their work have been impacted in the short-run. Medical educators and academic physicians experienced a variety of challenges in their everyday work and suffered from outcomes such as job burnout even before the pandemic.[4] That said, this is an occupational group where there is a high level of work variety and different rewards that come with doing each element of the overall job (ie, research, teaching, administration, patient care) well.[18] Having major aspects of the job impacted for an extended time by the pandemic may trigger individual responses by educators that are associated with changes in thinking about career priorities, career planning, and overall workload. Practically, this is an important focus to gain more knowledge about, given the existing strain that primary care education is under in terms of shortages of family physician mentors and teachers, and existing aspects of the medical educator career that remain less appealing, particularly for groups such as women.[19]

The present study uses data from a national survey to examine the impact of the Covid-19 pandemic as a career shock on family medicine educators.

Specifically, the analysis examines the relationship between specific career- and job-related circumstances; specific postpandemic educator attitudes; and outcomes such as thinking differently about their careers, doing something different career wise, and reducing overall work hours.

Methods

The data used in this study were collected from the 2021 Council of Academic Family Medicine's (CAFM) Educational Research Alliance (CERA) survey of Family Medicine educators and practicing physicians. CAFM is composed of several academic family medicine organizations including: the North American Primary Care Research Group, Society of Teachers of Family Medicine, Association of Family Medicine Residency Directors, and Association of Departments of Family Medicine. Questions in the survey were evaluated by the CERA steering committee for readability, reliability, validity, and consistency with topical focus. The survey was also pretested with family medicine educators who were excluded from the final sampling frame to determine estimated time to completion and flow.

The final sampling frame excluded program directors, clerkship directors, and department chairs. Invitations to participate in the study were sent via e-mail with a link to the survey, which was conducted using SurveyMonkey®. The survey was distributed to 4538 potential respondents, of which 160 were returned as undeliverable and an additional 64 were excluded due to electing to opt out. Therefore, the survey was delivered to a final sample of 4314 members of the CAFM organizations (4167 US and 147 Canada) between September 29,

2021 and October 29, 2021. Five separate follow-up requests were sent to nonrespondents to increase participation. The study was approved by the American Academy of Family Physicians Institutional Review Board (IRB) in September.

Measures

The survey included 10 questions related to our analysis which could be examined in conjunction with 19 additional questions in the CERA survey (see Table 1 for description of variables used in the models). There were 3 dependent variables in our analysis including: Covid-19 driven changes in how participants think about their career (*career thinking change*), intent to reduce working hours (*reduce hours*), and intent to do something different as a career within 5 years (*doing something different*). Independent variables included the perception of being treated fairly by one's employer (*treated fairly*), changes in how participants think about nonwork life (*nonwork thinking change*), pandemic driven changes in priorities (*life priority changes*), recent changes to job (*recent work change*), recent workload increases (*workload increase*), and not feeling prepared for newer aspects of work (*work preparation*). Finally, we used *age* as a control variable, which was collected as part of the larger CERA survey.

Analysis

Data analysis was conducted using Stata version 15 (College Station, TX). After examining descriptive statistics and bivariate correlations, we employed ordered logistic regression to identify relationships between variables. Ordered logistic regression estimates the relationships between independent variables and an ordinal dependent variable (eg, single Likert-type scale that is ordered) yielding results that are displayed and interpreted as proportional odds ratios.[20] Relationships were considered significant at the $P < .05$ level.

Results

The overall response rate for the 2021 CERA survey was 22.0% (949/4314). Of the respondents, 63% were female, 81% self-identified as White, 54% worked in a geographically urban setting, and 57% indicated working in an underserved area. In addition, 80% of participants had either an MD or DO degree and 83% indicated that they saw patients in their jobs (Table 2).

In terms of univariate frequency data, 70.1% of respondents indicated being satisfied in their job, 51.3% shared aspirations to move continuously into leadership roles whereas only 9.7% indicated regretting their career choice. Still, 70.1% of participants noted recent workload increases, 60.0% felt the need to acquire additional skills for the job in the next several years, and 48.6% shared that their job recently changed in ways that they do not enjoy. When assessing bivariate correlations (Table 3), most associations were very weak-to-weak

Table 1. 2021 CERA Survey Questions About How Covid-19 Influenced Career Thinking and Job Intent

Question	Variable Name	Response Options
My employer treats me fairly in all aspects of my job.	Treated fairly	Strongly Disagree to Strongly Agree
The Covid-19 pandemic has changed the way I think about my non-work life.	Non-work thinking change	Strongly Disagree to Strongly Agree
Because of the Covid-19 pandemic, I changed my priorities about what is important in life.	Life priority changes	Strongly Disagree to Strongly Agree
My job has changed recently in ways that I do not enjoy.	Recent work changes	Strongly Disagree to Strongly Agree
My weekly workload has increased over the past year.	Workload increase	Strongly Disagree to Strongly Agree
There is more work I am doing that I do not feel adequately prepared to do.	Work preparation	Strongly Disagree to Strongly Agree
The Covid-19 pandemic has changed the way I think about my career.	Career thinking change (DV)	Strongly Disagree to Strongly Agree
I plan to reduce the total number of weekly hours I work in the next few years.	Reduce hours (DV)	Strongly Disagree to Strongly Agree
I could see myself doing something very different from what I do now in my career in 5 years.	Doing something different (DV)	Strongly Disagree to Strongly Agree

*Likert-type questions used a five-point scale ranging from Strongly Disagree to Strongly Agree.
Abbreviation: DV, Dependent variable examined in the study.

Table 2. Demographic Information on the Educator Sample (n = 949)

Demographic Variables	Sample %
Female	63
White	81
Age (Mean)	48
MD/DO degrees	80
Urban work location	54
Working in underserved community	57
Assistant or associate professor	57
See patients in a clinical setting	83

Abbreviations: MD, Doctor of Medicine; DO, Doctor of Osteopathic Medicine.

(below 0.39), whereas only 4 were moderate (between 0.40 and 0.59).[21]

In terms of the multivariate analysis, as Covid-19 changed how educators think about their nonwork lives, their larger life priorities, and modified their workloads and jobs in more unfavorable ways, they were more likely to agree with having experienced a change in the way they think about their career (Model 1; Table 4). Women family medicine educators were also more likely than their male colleagues to agree that the pandemic experience had modified how they thought about their careers. In statistical terms, for each 1 unit increase on the Likert-scaled question responses in how participants think about nonwork life, pandemic driven changes to their life priorities, and changes to the job, the odds of strongly agreeing about experiencing a change in the way they think about career (vs combined other categories) are 2.8, 2.1, and 1.3 times greater, respectively. For women, the odds of strongly agreeing are 1.4 times greater.

When considering not an attitude but rather an intention to reduce weekly work hours as the dependent variable, as Covid-19 changed how people think about their nonwork lives, their life priorities, and modified their workloads and jobs in more unfavorable ways, there was higher agreement with the intent to reduce hours (Model 2; Table 4). Older individuals were also slightly more likely to intend to reduce weekly work hours. Alternatively, the perception of being treated fairly by their employers inversely correlated with the intent to reduce hours. With each 1 unit increase on the Likert-scaled question responses in how participants think about nonwork life, pandemic driven changes to their life priorities,

Table 3. Bivariate Correlations Between Study Variables

	Mean-Level	Treated Fairly	Non-Work Thinking Change	Life Priority Changes	Recent Work Changes	Workload Increase	Work Preparation	Age	Gender (Female)	Career Thinking Change	Reduce Hours	Doing Something Different
Treated fairly	3.58	1.00										
Non-work thinking change	4.03	−0.08	1.00									
Life priority changes	2.78	−0.20	0.54	1.00								
Recent work changes	3.11	−0.45	0.19	0.18	1.00							
Workload increase	3.82	−0.21	0.20	0.20	0.35	1.00						
Work preparation	2.57	−0.19	0.16	0.18	0.36	0.33	1.00					
Age	47.69	0.03	−0.14	−0.14	0.01	−0.11	−0.17	1.00				
Gender (female)	0.64	−0.10	0.13	0.12	0.08	0.10	0.14	−0.21	1.00			
Career thinking change	3.52	−0.18	0.58	0.53	0.28	0.17	0.20	−0.13	0.16	1.00		
Reduce hours	3.10	−0.22	0.25	0.33	0.26	0.13	0.07	0.22	0.02	0.33	1.00	
Doing something different	3.10	−0.23	0.12	0.19	0.29	0.05	0.11	0.20	−0.01	0.24	0.34	1.00

Table 4. Ordered Logistic Regression of Pandemic Changes in Career Thinking and Job Intent

	Career Thinking Change (Model 1)		Intent to Reduce Hours (Model 2)		Doing Something Different (Model 3)	
	OR	*P value*	OR	*P value*	OR	*P value*
Treated fairly	0.92	0.18	0.83	0.002	0.81	*P* < .001
Non-work thinking change	2.82	*P* < .001	1.29	0.003	1.05	0.54
Life priority changes	2.07	*P* < .001	1.65	*P* < .001	1.31	*P* < .001
Recent work changes	1.31	*P* < .001	1.26	*P* < .001	1.38	*P* < .001
Workload increase	0.93	0.27	1.01	0.90	0.87	0.02
Work preparation	1.02	0.80	0.96	0.53	1.05	0.37
Age	1.00	0.69	1.05	*P* < .001	1.04	*P* < .001
Gender (female)	1.42	0.02	1.04	0.76	0.97	0.82

Abbreviations: OR, odds ratio.

and changes to the job, the odds of strongly agreeing about the intent to reduce hours (vs combined other categories) are 1.3, 1.7, and 1.3 times greater, respectively. On the other hand, for each 1 unit increase in perception of being treated fairly, the odds of agreeing with the intent to reduce weekly work hours decreased by a factor of 0.17.

Finally, as the Covid-19 pandemic experience changed life priorities among family medicine educators and modified their workloads and jobs in more unfavorable ways, there was higher agreement with the intent to do something different with their career (Model 3; Table 4). Similar to model 2, as educators felt treated more fairly by employers, there was less agreement with the intent to do something different with their career. Educators feeling their weekly workload had changed in less favorable ways were found to have lower odds of intending to do something different in their career. In addition, older participants were slightly more likely to strongly agree with the intent to do something different with their career. Notably, for each 1 unit increase in pandemic-driven changes to life priorities and unfavorable changes to the job, the odds of strongly agreeing about doing something different career-wise (vs combined other categories) are 1.3 and 1.4, respectively. On the other hand, for each 1 unit increase in perception of being treated fairly and increased weekly workload, the odds of strongly agreeing to do something different decreased by a factor of 0.13 and 0.19, respectively.

Discussion

The results of our study show clear evidence that the pandemic experience is associated with important changes in thinking among family medicine educators. Changes in thinking due to the pandemic experience related to their nonwork lives and life priorities were associated with other important career attitudes and work intentions. Moreover, the study shows that these changes in thinking for family medicine educators regarding their nonwork lives and life priorities also may be accompanied by unfavorably perceived changes in the job for some; perceptions that also contribute to the shift in career attitudes and work intentions. The general takeaway from the results is that for those educators affected by the pandemic experience, there may be consequences for how they think about and approach their careers and jobs in the future.

Still, more research is needed to determine what these actual consequences mean. For example, some of these consequences may be detrimental to the organizations these educators work within, in the sense of if doing something different in their careers or reducing their weekly work hours (the outcomes explored here) implies lowering their future involvement in specific aspects such as teaching, patient care, administration, or research. For individual educators, it may be a set of more positive career shocks in providing them with the motivation and drive to change career paths and job situations in which they are less satisfied or seek a new direction. Conversely, it may also be that the pandemic experience has intensified negative psychological states like burnout, as the extant literature implies,[4] although the medical educators in this survey held at least a moderate level of job satisfaction on average.

Other results are also worth considering. First, workload increases were not related to reducing their work hours or changing how they thought about their career, and surprisingly it reduced the likelihood that these educators would want to do something different in 5 years' time. It could simply be that increases in workload make the individual too busy to consider alternative opportunities or, worse, that they may feel trapped in their current environment. This phenomenon should be explored in future research.

Second, when considering a more actionable dependent variable, our results suggest that physicians still do not plan to reduce their work hours to as great of an extent when compared with changing how they think about their career. This could also be interpreted as evidence of the discrepancy between what individuals would like to be able to do within their careers and what they can do in the present reality. Third, our results suggest that older individuals are more likely to reduce their work hours and to do something different in the next 5 years, but not necessarily change how they think about their career. In this light, older individuals may be later in their careers, thus more comfortable and capable of limiting working hours and well-established professionally, such that the pandemic does not alter their career perspective in significant ways. Lastly, our results show that, as individuals perceive to be treated fairly, they are less likely to reduce their hours and or to consider doing something different with their career. This is consistent with prior research that identified being treated fairly as a motivating factor and protective of negative consequences such as burnout.[22]

The practical implications of the results for recruiting, retaining, rewarding, and motivating family medicine educators also must be considered and explored in greater depth. The results suggest that employers such as medical schools, academic medical centers, hospitals, and community-based primary care organizations should consider carefully that they are dealing with an educator group whose thinking and intent could both have fundamentally changed because of the pandemic experience. Employers should carefully assess these types of changes, identify which educator subgroups they may affect the most, and act accordingly, particularly in areas like talent management.

Our study has several limitations. First, the survey response rate was 22%. Unfortunately, the CERA survey does not collect information about nonrespondents thus limiting our ability to accurately compare participants to those who neglected to participate. However, the overall sample size (949) was large enough to achieve statistical power for the analyses conducted and, therefore, gives us confidence in the results in that regard. In addition, given that the pandemic experience is still very much fresh in many people's minds, it may be that some of the questions asked of that experience might provoke different answers in a year's time. That said, there is value in knowing the answers to such questions right now.

In conclusion, this study, one of the first to examine the impact of the pandemic experience on family medicine educators, reveals that both the thinking and intentions of this important group has been affected in potentially significant ways. Additional research is needed to better understand what this all means, how it might ultimately impact primary care education, and if the changes observed loom as temporary or longer-term.

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