




Effects of COVID-19 Pandemic on the Professional Roles and Responsibilities of Health Educators

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Public health professionals are at the forefront of the COVID-19 pandemic response. However, the roles and responsibilities of health educators in pandemic response are unknown. Researchers examined multiple factors that described how health educators' work priorities and lives have been affected by COVID-19. An electronic questionnaire was administered nationally to health educators to assess the effect of the pandemic on their professional responsibilities, the challenges they are facing, and their fears about the future. Of the 913 respondents, 487 (43%) reported changing work priorities, with 80% of that group (389) sharing that their work priorities shifted focus to COVID-19. Most felt qualified to take on the new job responsibilities, but many feared the inability to get back to previous work roles or for their organizations to financially withstand the pandemic. Regardless of workplace setting or job priorities, health educators are prepared in the skills outlined in the Responsibilities and Competencies for Health Education Specialists, which may have led to their abilities in shifting roles so quickly and effectively. Findings from this study may prepare public health agencies to better use and train health educators for their roles in rapidly shifting public health priorities.

Keywords: COVID-19; health education; career development/professional preparation; work priorities; effects of pandemic; work

► BACKGROUND

COVID-19 has spread across the globe, leading to economic, personal health, public health, and social consequences. At the time of data collection, 216 countries, territories, or areas reported 13,378,853 confirmed cases and 580,045 confirmed deaths (World Health Organization [WHO], 2020a). The United States specifically confirmed 3,483,832 cases and 136,938 deaths (Centers for Disease Control and Prevention [CDC], 2020a). COVID-19 has led to a disruption of daily lives through business closings, social distancing measures, furloughed employees, school closings, shifting to a remote workforce, widespread illness, and fear/anxiety (Pew Research Center, 2020). Most state governments imposed executive stay-at-home orders in the early months of the pandemic in order to abide by the CDC's (2020b) recommendations for social distancing, which included working from home when possible to limit exposure. Though implications due to the COVID-19 pandemic exist for all sectors of the workforce, there may be unique outcomes for the public health sector during a pandemic of this nature.

While COVID-19 is a new strain of virus, there is limited original research on the effect of epidemic/pandemic disease on the public health workforce. In a

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study of 308 local health department staff, Balicer et al. (2006) found barriers to public health workers' effectively responding to an influenza outbreak. This study found that perceived risk of disease exposure, uncertainty regarding work environment safety, performing roles for which they were not appropriately trained, and concerns for well-being of family all affected the respondents' willingness to work in the outbreak setting. In follow-up research, Barnett et al. (2009) found that approximately one in six public health workers were unwilling to respond to a pandemic threat. This study found those most willing to respond were workers concerned about the pandemic issue and those confident in their abilities/skills related to pandemic response (Barnett et al., 2009).

While these studies highlight perceptions and willingness of local public health workers' responsiveness to pandemics, there is no literature specific to health educators' roles and responsibilities in pandemic response. Health educators have a transferable skill set that may be applied to a multitude of conditions or diseases. Yet a sudden shift in the focus of health educators' work priorities may have negative, long-term effects on prevention, diagnoses, and management of chronic diseases and create unfilled gaps with other public health priorities. At this point, the WHO (2020b) has found a 104% increase in mother-to-child HIV transmission due to interruptions of services related to COVID-19. Additionally, the WHO (2020c) has found a widespread global interruption in the prevention of noncommunicable diseases due to COVID-19 related restrictions. These are only a few examples of the consequences of COVID-19 on other health priorities with which health educators may work.

► PURPOSE

The overall purpose of this study was to examine the immediate effects of COVID-19 on health educators' work and personal experiences. To achieve this, researchers focused on health educators' work settings and pre-COVID-19 work priorities in relation to three specific points: (1) whether or not health educators had to shift work priorities due to the pandemic, (2) whether a priority shift focused specifically on needs of COVID-19, and (3) responses to various professional questions in association with respondents' work settings and main work priorities prior to the pandemic. Additionally, other variables of interest were examined, such as demographics and professional characteristics. The research was approved by the Institutional Review Board of the first author.

► METHOD

Participants and Procedures

Sample size was calculated using The Survey System (Creative Research Systems, 2012) software sample size calculator and examining sample sizes and return rates from similar literature. The sample size needed was 921, for a confidence level of 95%, a confidence interval of 3.11, and an estimated population of 12,712. The 921 also coincided with sample sizes and return rates of similar literature.

A nonprobability convenience sample was recruited. Email invitations were sent to health education specialists on the mailing list of the National Commission for Health Education Credentialing, Inc., to members of the Society of Public Health Education's (2020) House of Delegates to be shared with state Society of Public Health Education chapters, and through the Eta Sigma Gamma membership newsletter. Finally, recipients of the survey were asked to distribute it within their networks, which involved a snowball technique for recruitment. Investigators did not collect data to track from which channel participants received the survey.

The email invitation included an explanation of the research study, the consent language, and survey instructions. The survey was emailed out once with no follow-up emails to nonresponders. The survey instrument populated after consent was designated. All data were captured in REDCap (Harris et al., 2009), and survey responses were stored on a password-protected computer. Data were collected between May 1 and May 20, 2020, before being exported to SPSS Version 26 for data cleaning and analysis.

Measures

The survey was a composite of 43 original questions, which included 14 demographic/professional characteristics questions. The survey took approximately 10 minutes to complete and consisted of closed-ended questions with the exception to explain "other" written statements, when appropriate.

Analysis

Descriptive statistics were run to describe sample characteristics. Univariate analyses were conducted to determine the sample composition, the distribution of the study variables, and frequencies and percentages. As investigators were examining associations only, chi-square tests of association were conducted to examine relationships among variables of interest, such as respondents' work settings and main priority prior to the pandemic.

► RESULTS

Demographic and Background Characteristics of Participants

Nine-hundred and twenty individuals completed the survey; seven were eliminated due to not providing consent or incomplete surveys, leaving a sample of 913 for analysis. Descriptive statistics for the sample are found in Table 1. The majority of respondents were White ($n = 674$, 74.5%), were female ($n = 821$, 90.1%), were between the ages of 25 and 34 years ($n = 348$, 38.2%), held master's degrees ($n = 581$, 63.7%), and had worked in the field for 5 or fewer years ($n = 351$, 38.5%). Of respondents, 735 (79.9%) were Certified Health Education Specialists, 152 (16.5%) were Master Certified Health Education Specialists, and 23 (2.5%) were Certified in Public Health. Additionally, the top three work settings were university/college ($n = 227$, 24.9%), state/county health department ($n = 184$, 20.2%), and health care/hospital ($n = 177$, 19.3%). The majority of respondents spent most of their time in the areas of chronic disease/chronic disease prevention ($n = 330$, 36.2%) and K-12/college/university education ($n = 172$, 18.9%).

Professional Activities During the Pandemic

Of the 913 respondents, 487 (43%) reported needing to change work priorities due to the COVID-19 pandemic. Participants who responded yes to changing work priorities due to the pandemic were then asked about their level of concern regarding not being able to return to their normal work priorities, with 285 (59%) reporting having little or no concern. State/county health department employees (48, 24.5%), health care or hospital workers (47, 24%), and community nonprofit staff (41, 21%) reported the greatest concern. Finally, of the 487 who reported a change in work priorities due to the pandemic, the most frequently reported work settings were state/county health department (138, 28%) and health care/hospital ($n = 102$, 21%).

Of the 487 respondents reporting having to change work priorities due to the pandemic, 389 (80%) reported that some or all of their work priorities shifted to a COVID-19-related focus. Additionally, those who responded yes to work priorities shifting to a COVID-19-related focus, 331, (85%) reported having to fulfill normal work responsibilities in addition to the new responsibilities. Finally, of those shifted to a COVID-19-focus, 325 (84%) stated they felt somewhat or very qualified to provide those shifted services.

In order to examine respondents' work environments during the pandemic, they were asked whether they were

now expected to work remotely, with 706 (77%) responding in the affirmative. Of those working remotely, the highest reports were from those working at university/college settings (214, 30.3%), community nonprofit settings (112, 16%), state/county health departments (110, 16%), and health care or hospital settings (106, 15%). To further explore work environment factors, researchers asked questions regarding the remote work environment and shared spaces with dependents or partners. Findings show that 354 (39%) of total respondents reported having children or adult dependents at home, while 226 (64%) of respondents with dependents stated they were helping children with school work. Additional related results displayed in Table 2.

Researchers conducted bivariate analyses to examine relationships between respondents' work settings (Table 3) and main work priorities prior to the pandemic and other variables of interest. Chi-square was used to examine whether relationships existed between the respondents' reported prepandemic main work priorities and needing to change work priorities due to COVID-19. There was a statistically significant finding, $\chi^2(11) = 45.83$, $p < .001$, indicating association. The association was moderately strong (Cramer's $V = .224$), with chronic disease and K-12/university education contributing the most to the significant finding (adjusted standardized residuals of 3.1 and -5.1, respectively). When examining the related frequencies, those working in chronic disease were most likely to report needing to shift work priorities (182, 37.4%).

Chi-square was used to examine relationships related to respondents' work setting and variables of interest. A statistically significant relationship was found, $\chi^2(7) = 90.2$, $p < .001$, when examining the relationship between respondents' work setting and whether their work priorities changed due to COVID-19. The association was moderate (Cramer's $V = .297$), with the state/county health department and university/college setting contributing the most to the significant finding (adjusted standardized residuals of -7.0 and 6.7, respectively). Additionally, researchers examined the associations between respondents' work settings and their levels of concern regarding being unable to return to previous work priorities after the emergent needs of the pandemic are over, $\chi^2(7) = 14.6$, $p < .05$. The association was small (Cramer's $V = .173$) with community nonprofit and federal health organizations contributing most to the significant finding (adjusted standardized residuals of 2.5 and -2.1, respectively). Finally, statistical significance was discovered when examining respondents' concern for the long-term financial security of their work organization due to COVID-19 and their work settings, $\chi^2(7) = 47.6$, $p < .001$. The association was moderate (Cramer's $V = .229$),

TABLE 1
Demographic and Background Characteristics of
Participants

<i>Variable</i>	<i>n</i>	<i>% of total</i>
Age, years		
18–24	71	7.8
25–34	348	38.2
35–44	201	22.0
45–54	165	18.1
55–64	95	10.4
65+	26	2.9
Prefer not to say	6	0.7
Gender		
Male	78	8.6
Female	821	90.1
Transgender	5	0.5
Prefer not to say	7	0.8
Race		
White	674	74.5
Black/African American	121	13.4
American Indian	8	0.9
Asian American	24	2.7
Native Hawaiian and Other Pacific Islanders	1	0.1
Multiracial	45	5.0
Prefer not to say	32	3.5
Hispanic		
No	807	88.8
Yes	91	10.0
Prefer not to say	11	1.2
Education		
High school or equivalent	1	0.1
Bachelor's degree	193	21.2
Master's degree	581	63.7
Doctoral or other terminal	137	15.0
How many Certified Health Education Specialists		
Total	735	79.9
How many Master Certified Health Education Specialists		
Total	152	16.5
How many Certified in Public Health		
Total	23	2.5
Public health work		
Full time	757	83.2
Part time	153	16.8
Management position		
Yes	335	36.8
No	576	63.2

(continued)

TABLE 1 (CONTINUED)

<i>Variable</i>	<i>n</i>	<i>% of total</i>
How position financially supported		
Fully funded by grants/outside support	247	27.1
Partially funded by grants/outside support	165	18.1
Not funded by grants/outside support	387	42.5
It can vary depending on available funds	56	6.2
I do not know	55	6.0
Years working in field		
0–5	351	38.5
6–10	208	22.8
11–15	122	13.4
16–20	82	9.0
20+	148	16.2
Type of setting		
State/county health department	184	20.2
Federal health organization	42	4.6
Health care or hospital	177	19.3
University/college	227	24.9
Community/nonprofit	136	14.9
K–12 school	20	2.2
Worksite health	41	4.5
Other	86	9.4
Area spend majority of time		
Chronic disease/disease prevention	330	36.2
Infectious diseases	58	6.4
Epidemiology	9	1.0
Health policy, advocacy, lobbying	26	2.9
Environmental health	21	2.3
Maternal/infant/child health	57	6.3
Grant writing	2	0.2
Biostatistics	1	0.1
Research or program evaluation	71	7.8
Minority health/health equity	23	2.5
K–12/college/university education	172	18.9
Other	142	15.6

with the state/county health department and community nonprofit setting contributing the most to the significant finding (adjusted standardized residuals of –5.2 and 3.7, respectively).

Additionally, researchers were interested in examining relationships between respondents' current work environments during the pandemic with variables

TABLE 2
Factors Related to Working From Home

<i>Factor</i>	<i>Yes</i>	<i>No</i>	<i>Missing or N/A</i>
Expected work from home (<i>n</i> = 913)	706 (77.4)	206 (22.5)	1 (.1) ^b
Able to conduct work from home (<i>n</i> = 703) ^a	638 (90.8)	65 (9.2)	—
Work provided necessary resources to work from home (<i>n</i> = 702) ^a	580 (85.6)	122 (17.4)	—
Provide quality services from home (<i>n</i> = 703) ^a	529 (75.2)	146 (20.8)	28 (4.0) ^c

^aThese questions were asked only to those responding yes to expected work from home. ^bRepresents missing. ^cRepresents N/A option for this question.

of interest. A statistically significant interaction was found when examining respondents' work settings and whether they were expected to work from home due to the pandemic, $\chi^2(7) = 108.9, p < .001$. There was a moderate association (Cramer's $V = .346$), with state/county health department, health care or hospital setting, and university/college setting contributing the most to the significant finding (adjusted standardized residuals of 5.8, 6.1, and -7.3 , respectively). No other significant findings were evident.

► DISCUSSION

The purpose of this study was to examine the immediate effects of COVID-19 on health educators' work and personal experiences. The findings present the first look at health educators' work experiences during the COVID-19 pandemic, reducing the gap in knowledge and limited literature on health educators' roles and responsibilities during a pandemic. Of the 913 respondents, 43% reported their work priorities had shifted as a result of the COVID-19 pandemic, with 389 (80%) of those reporting a shift to a COVID-19 focus. This is an interesting finding for two reasons. First, it documents the significant shift in public health priorities during a pandemic of this nature. Just under half of health educators reported being pulled from some level of their normal, prepandemic duties. This may mean that programs, such as chronic disease prevention or maternal and infant health initiatives, are short-staffed, are underresourced, or may have halted altogether. For example, some sources are reporting significant shifts in health care and a lack of prevention services like cancer screenings as a result of the pandemic (IQVIA, 2020). Additionally, service disruptions due to COVID-19 are reported as leading to significant increases in mother-to-child HIV infection as individuals are struggling to access preventive services (WHO, 2020b). Additionally, WHO (2020c) also reports significant

disruptions related to noncommunicable disease prevention such as hypertension, heart disease, cancer, and diabetes. Could there be long-term health effects in communities as a result of the decreased programming or prevention services being offered during the time of shifted resources to the COVID-19 pandemic? The outcome seems plausible based on the shifted priorities reported here.

Second, of those reporting a shift to a COVID-19 focus, 39% reported they felt very qualified to conduct the new job tasks required of them, and 45% felt at least somewhat qualified. Previous authors have documented that concerns about being trained properly for responsibility shifts during a pandemic influenced professionals' willingness to help (Balicer et al., 2006). The reports of qualifications for their new roles during the COVID-19 pandemic might be explained from both positive and negative perspectives. Positively, 84% of health educators stated they felt somewhat or very qualified for the new roles. This may be due to health educators being trained as experts with broad, foundational skills that can apply to many settings and content areas (National Commission for Health Education Credentialing, 2020). On the other hand, approximately 16% of health educators did not feel qualified to take on their shift in priorities and fill job responsibilities involving pandemic-related work, indicating that not all health educators feel they have the transferable skills or the desire to accommodate the need. Feeling qualified may be the reason behind the high number of individuals feeling willing to shift priorities, similar to the previous findings of Balicer et al. (2006).

The pandemic provides a teachable moment for both organizations and staff members. Organizations may need procedures in place for training staff for a role shift prior to implementing these needed types of changes during a pandemic. Additionally, academic institutions could include pandemic response skills in their curricula and prepare future health educators for the

TABLE 3
Selected Frequency and Bivariate Analysis Regarding Work Setting and Main Work Priority, *n* (%)

Work issue	State/county health department	Federal health organization	Health care or hospital	University/college	Community nonprofit	K-12 school	Worksite health	Other	<i>p</i>
Priority change	138 (28.3)	28 (5.7)	102 (20.9)	76 (15.6)	77 (15.8)	7 (1.4)	22 (4.5)	37 (7.6)	$\chi^2(7) = 108.9, p < .001$
Priority change to COVID-19 focus ^a	129 (33.2)	21 (5.4)	78 (20.1)	57 (14.7)	52 (13.4)	4 (1.0)	18 (4.6)	30 (7.7)	$\chi^2(7) = 28.23, p < .001$
Expected work home	110 (15.6)	37 (5.2)	106 (15.0)	214 (30.3)	112 (16.0)	18 (2.5)	30 (4.2)	79 (11.2)	$\chi^2(7) = 108.9, p < .001$
Worry job security	41 (11.3)	9 (2.5)	73 (20.1)	106 (29.1)	72 (19.8)	8 (2.2)	21 (5.8)	34 (9.3)	$\chi^2(7) = 47.6, p < .001$
Worry financial security of organization	84 (16.1)	12 (2.3)	91 (17.4)	159 (30.5)	98 (18.8)	12 (2.3)	19 (3.6)	47 (9.0)	$\chi^2(7) = 61.7, p < .001$

Note. Priority change reports yes to changing priorities; priority change to COVID-19 focus reports yes to focus on COVID-19; expected work from home reports yes response to now working from home; worry job security reports very or somewhat concerned about job security; worry financial security of work report yes to worry about organization financial security.

^a*n* = 484; only those answering yes to priority change could answer this question.

flexibility and shifting job responsibilities that can happen in public health. It would be impossible to prepare health educators for every potential role due to a limitless number of health topics and social issues, but the ability and responsibility of these professionals to shift from one role to another certainly can be viewed as a benefit to their broad training.

In the current pandemic, just under half of the respondents reported their jobs had shifted due to organizational needs for dealing with COVID-19, but 331 (85.3%) of those respondents continued to work in their previous roles in addition to taking on new COVID-19-associated responsibilities. The majority of health educators were accepting of the new COVID-19 roles (88%), yet 40.3% reported concern they will not be able to get back to their previous work responsibilities, potentially leading to work dissatisfaction. The percentage of those willing to shift is similar to findings of previous authors (Barnett et al., 2009), but the concern about being able to return to previous priorities has not previously been studied. Though this research did not specifically inquire about stress or burnout levels, there have been multiple reports of stress levels increasing significantly during the COVID-19 pandemic (Park et al., 2020; Taylor et al., 2020). It will be interesting to see the short- and long-term consequences related to the personal and professional health of health educators. Likewise, this is especially interesting when one considers that 354 (39%) of respondents reported being responsible for dependents at home, while 226 (25%) of those respondents said they were helping a school-aged child with distance learning while juggling work responsibilities. Approximately 29% of the U.S. workforce needs child care for children aged 3 to 12 years (Bayham & Fenichel, 2020). This may present a challenge for health educators as they seek to find care for their children while many child care centers closed due to the pandemic. The combination of these factors may have a significant effect on the mental and emotional well-being of health educators.

Limitations

This study was cross-sectional, so researchers could not assess changes over time. This was not a random sample of health educators; however, the recruitment efforts resulted in a large number of responses, representing health educators in many different work environments. A second limitation is that no peer-reviewed work has been published thus far on the effect of COVID-19 on health educators. For this reason, it was difficult to ground the research efforts here in the findings of past authors. Continuing to study this phenomenon

with additional analyses and samples over time will help bridge this gap in knowledge. Last, authors did not ask questions about stress or mental health. It would have been helpful to explore relationships between the reported professional and personal experiences of health educators with their mental health.

Implications for Practice and Research

Health educators are a group of professionals trained in a wide array of skills that can be applied across a vast number of settings and health topics. Their versatility likely has affected their abilities to move from pre-COVID-19 job tasks to roles combining those previous tasks with newer COVID-19-related tasks as well. This speaks well to the skills acquired within the profession. Health educators' reports of added job responsibilities, in combination with the high rates of caring for family members and helping children with distance learning are bound to bear significant effect over time, and may mean they will face mental and emotional fatigue, burnout, and stress. If the pandemic continues at current rates, it is unlikely that health educators will be able to shift back to previous job responsibilities in the near future, potentially stressing the workforce. Certainly, health educators are playing important roles across the country in addressing significant community needs during the COVID-19 pandemic, and their work should be applauded.

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