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Stress, Sleep, and Exercise Habits Among Extension Employees During the COVID-19 Pandemic

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Abstract. We compared perceived stress among 804 Extension employees during the initial months of the COVID-19 pandemic and again six months later. Work expectations, sleep and exercise habits were assessed. More than 46% of those responding believe work expectations are “much” or “moderately more” since the pandemic began. Nearly 60% report moderate levels of stress and 54% were sleeping less. Of those who were physically active (n=677) before the pandemic, 39% were exercising less. Because stress, sleep, and physical activity affect health, supervisors should recognize the impact the pandemic has on employees, and encourage the use of available resources to promote wellness and work/life balance.

INTRODUCTION

Cooperative Extension employees, especially Extension agents, educate and serve their communities on a daily basis. When the COVID-19 pandemic began in 2020, Extension employees in Texas and across the country became homeschool teachers, childcare providers, and caregivers for elderly parents and disabled family members—all while continuing their existing job responsibilities. This meant supporting basic county functions as lockdowns began and learning new technologies in order to deliver critical education virtually. The pandemic also brought about new responsibilities for Extension employees in support of the Texas Department of Emergency Management and the Texas Department of State Health Services, including contact tracing, transport of COVID-19 testing supplies, and delivery of personal protective equipment and other critical medical supplies.

Disasters breed trauma and can lead to long-term stress and mental health challenges. After certain disasters, like hurricanes or tornadoes, people are able to physically congregate to grieve and process the event. The COVID-19 pandemic has been unique in that physical distancing requirements have inhibited the ability to see family members and friends in person for social support and connection. Healthcare workers and other front-line professionals have endured elevated levels of stress from COVID-19, leading to an increased risk of anxiety and depression (Pearman et al., 2020). But these effects have not been limited to healthcare workers and have impacted the general U.S. population (Park et al., 2020). The

2020 Household Pulse Survey found that between April 23 and May 5, 2020, 35.9% of U.S. adults reported experiencing symptoms of anxiety or depression associated with diagnoses of generalized anxiety disorder or major depressive disorder. By July 21, 2020, this had increased to 40.9% (National Center for Health Statistics, 2021). As a comparison, the National Health Interview Survey used the same measures for symptoms of depression or anxiety in 2019 and reported a prevalence of only 10.8% (Terlizzi & Schiller, 2021).

Peltz et al. (2020) found that parents with children ages five to 18 reported lowered sleep quality and energy levels during the pandemic. Lifestyle factors including sleep and physical activity are closely linked to overall wellbeing and the ability to cope with stress (Prather et al., 2013; Perchtold-Stefan et al., 2020). Physical activity and physical exercise are believed to be effective coping strategies for quarantines and lockdowns such as those experienced by many due to COVID-19 (Amatriain-Fernandez et al., 2020). The long-term effects of pandemic-related stress on overall wellbeing are unknown.

PURPOSE AND OBJECTIVES

To better understand the impact of COVID-19 on Texas Extension employees, we administered an online survey to assess their perceived stress levels and changes in sleep and exercise habits. The survey also assessed the extent to which employees are using telecommunication/distance technology to stay connected to family and friends. The study was

intended to assist organizational supervisors and leaders in identifying the amount of stress experienced by employees during the pandemic. Results from this study could be used to identify solutions for improving employee wellness and promoting work-life balance during the pandemic and long-term.

METHODS

The survey utilized questions from an existing instrument called Psychological Stress Associated with the COVID-19 Crisis (Adamson et al., 2020), which included a 10-item perceived stress scale (PSS) developed by Sheldon Cohen and colleagues (Cohen et al., 1983). We utilized the PSS in a retrospective manner to assess perceived stress at the beginning of the pandemic (mid-March 2020) and again during the month prior to survey implementation (August 2020). We also included open-ended questions to identify employee concerns and suggestions for resources or policies to assist employees with their job responsibilities during this pandemic. The survey was distributed to Texas Extension's 1,627 employees through Qualtrics over a two-week period. Weekly invitations were sent to employees to encourage participation. Statistical analyses were completed with SPSS Version 27 and included Chi-square and Students t-tests with Cohen's *d* to calculate effect size. Study protocol was approved by the Texas A&M University Institutional Review Board for human subjects. Of the 1,001 employees who enrolled in the study, 804 completed the survey and identified their job title. The results and discussion reflect the data from those 804 employees.

RESULTS

Of the 804 employees surveyed, 49.4% were Agents, 18.9% were Staff, 16.9% were Specialists, 5.6% were Extension Assistants/Associates, 4.9% were Administration/Management and 4.4% were Program Assistants/Coordinators. Most respondents were female (63.7%), married (70%), white (88.9%), non-Hispanic (81.6%), and employed full-time (96.8%). More than 45% of employees were between 25 and 44 years of age; nearly 47% were between 44 and 64. Most respondents (83%) had earned at least a bachelor's degree.

More than half (57%) of those responding reported having a family member or friend test positive for COVID-19. During the initial months of the pandemic, more than one-third (38%) of the employees had to facilitate home schooling due to the pandemic. Nearly 16% provided home care to elderly individuals and/or someone with a disability. Approximately 19% had to provide care to young children due to daycare closures. As shown in Figure 1, these percentages were lower by September.

At the time the study was conducted, 278 (34.6%) of the employees reported working from home an average of four days a week. Most (58%) were working between five and eight hours a day; 31% were working more than eight hours a day.

PERCEIVED WORK EXPECTATIONS

When asked how work expectations had changed since the onset of the pandemic, 46% of the employees responding reported that expectations "moderately more" or "much more." Nearly 16% perceived work expectations as "slightly more" while 30% believed they were about the same (Table 1). Less than 9% perceived that work expectations were lower (slightly less, moderately less, or much less). When examined stratified by job title, agents reported higher work expectations (moderately or much more) compared to other employee categories.

PERCEIVED STRESS SCORE

During the initial months of the pandemic, all employee groups reported moderate levels of perceived stress based on their PSS score (Table 2). By September, PSS scores were statistically lower for Agents, Specialists, and Extension Assistants/Associates, but the change was minimal.

SLEEP AND PHYSICAL ACTIVITY HABITS

More than half (54.1%) of all responding employees reported getting less sleep since the pandemic began. Less than 5% of employees were getting more sleep, while 41.2% reported no change in sleep habits. More than 84% ($n=677$) of employees are physically active at least once a week (average of 3.5 days per week). Of those employees, however, 39.2% reported exercising less while 42% characterized their level of physical activity as unchanged.

USE OF TELECOMMUNICATION TO CONNECT WITH FAMILY AND FRIENDS

Of those employees who use telecommunication or virtual technology to communicate with family and friends ($n=639$), 38.9% are using the technology more often; 16.4% are using it less than they were before the pandemic began.

USE OF WORK-LIFE BALANCE AND OTHER EMPLOYEE ASSISTANCE RESOURCES

We asked employees to identify how often they used employee wellness and work-life balance resources provided by Texas A&M University during the initial months of the COVID-19 pandemic. These resources (GuidanceResources®) are part of the employee assistance program and include counseling services and training programs that address stressful events. When asked how often employees were using the tools available through GuidanceResources®, more than 63%

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% who responded "yes" to having to facilitate child or eldercare due to closure of schools or daycare facilities

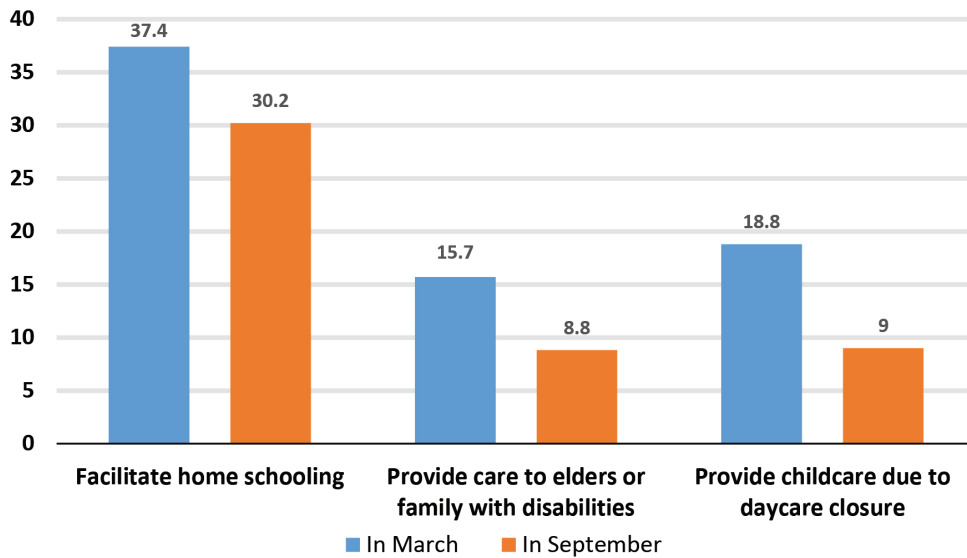


Figure 1. Impact of COVID-19 on school, childcare, and eldercare.

Table 1. Perceived Work Expectations by Job Title

	Sample N (%)*	Agent	Specialist/ Program Specialist	Extension Assistant/ Associate	Admin.	Staff	Program Assistant/ Coordinator
Much More	178 (22)	122 (31)	17 (13)	12 (27)	7 (18)	10 (7)	10 (29)
Moderately More	194 (24)	119 (30)	31 (23)	8 (18)	16 (41)	17 (11)	3 (9)
Slightly More	125 (16)	44 (11)	33 (24)	9 (20)	5 (13)	29 (19)	5 (14)
About the Same	241 (30)	72 (18)	52 (38)	13 (29)	9 (23)	80 (53)	15 (43)
Slightly Less	35 (4)	23 (6)	3 (2)	1 (2)	1 (3)	6 (4)	1 (3)
Moderately/ Much Less	30 (4)	17 (4)	0	2 (4)	1 (3)	9 (6)	1 (3)
Total	803	397	136	45	39	151	35

*percentages rounded to nearest tenth; $\chi^2=138.266$; $p=0.0001$.

Table 2. Perceived Stress Score* by Job Title

Category	PSS-initial*	PSS-recent*	P-value	Cohen's d
Agent	18.2	17.2	.003	.164
Specialist	17.2	15.8	.002	.296
Extension Assistant/Associate	19.4	17.8	.032	.367
Administration/Management	14.2	12.4	.080	.301
Staff	16.4	15.7	.112	.138
Program Assist/Coordinator	15.9	15.5	.791	.056

*Scores 0 to 13 = low perceived stress; 14 to 26 = moderate perceived stress; 26 to 40 = high perceived stress. Scores were rounded to the nearest tenth.

(n=508) reported “never” or “almost never” while almost 5% (n=39) reported “fairly often” or “very often.” More than 13% (n=107) of the employees were not familiar with these resources at all.

EMPLOYEE CONCERNS

When asked to share their concerns related to work or home, 667 employees responded. We identified thirteen general areas of concern:

1. Becoming infected and the continued spread of COVID-19
2. Maintaining a healthy work/life balance and caring for children
3. Protecting vulnerable family members
4. Staying safe at work
5. Having job security
6. Handling finances
7. Managing stress, mental health, and social isolation
8. Understanding inconsistent or contradictory communication from Admin/Manager
9. Dealing with a lack of support from supervisors
10. Learning new technology and delivering programs virtually
11. Managing an insurmountable workload or one including tasks outside of the scope of work
12. Returning to “normal”
13. Worrying about politics and the presidential election.

POTENTIAL SOLUTIONS IDENTIFIED BY PARTICIPANTS

Participants were invited to offer ideas, resources, or policies that would help them manage their job and family responsibilities during the pandemic. We categorized the 530 suggestions offered by participants into nine areas:

14. More technological support
15. Long-term schedule flexibility and alternate work locations
16. Increased support for employees with young children
17. Improved communication in general
18. Improved communication about employee benefits
19. Increased time off and/or wages
20. Equal and consistent treatment of employees

21. Greater support of employee mental and physical health
22. Decreased workload.

DISCUSSION

We believe this study is the first to examine stress levels among Cooperative Extension employees during the COVID-19 pandemic. Findings support the idea that a large proportion of Texas Extension’s employees have experienced moderate levels of stress during the pandemic, with over half (54.1%) reporting a reduction in sleep and 39.2% reporting a reduction in physical exercise. The pandemic forced employees to care for their children and families in new ways while simultaneously completing their Extension job responsibilities. Over half of all employees (62%) reported some level of increase in their work expectations; this fact is not surprising given the addition of responsibilities directly related to the state of Texas COVID-19 response. Except for employees in the “Administration/Management” category, all employees reported moderate levels of stress both in the early months of the pandemic and in the month of August when the survey was administered.

Our study has several limitations. First, there was no pre-pandemic assessment of stress to serve as a baseline measure; therefore, we cannot assume that the reported levels of perceived stress were directly linked to COVID-19. We also asked employees to report retrospectively about their stress levels during the early months of the pandemic and we did not ask whether they had become ill themselves as a result of COVID-19. Finally, this was a self-administered assessment and self-reporting of the key areas is likely a limitation.

CONCLUSIONS AND RECOMMENDATIONS

Extension employees, especially agents, work in a service and “helping” capacity within their counties and communities. Texas Extension agents, especially those working within the Disaster Assessment and Recovery Unit, may be at an elevated risk for job-related burnout because of how closely they work with vulnerable community members. Ongoing monitoring of employee stress levels and overall wellness would benefit the organization and its employees.

The study also revealed a disconnect between existing employee benefits and employee knowledge or use of those resources. Specifically, GuidanceResources® is a component of the Texas A&M employee assistance program that can provide counseling to employees separately from their employee benefits. The finding that 13% of employees were not familiar with the resources at all and almost a two-thirds (63%) said they had *never* or *almost never* used GuidanceResources® suggests that there is either insufficient communication

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about the benefit and/or that this benefit does not adequately meet employee needs. Understanding the work-life needs of employees could help identify meaningful resources for employees. In addition, strategic efforts to increase awareness and encourage use of these resources could help identify which types of resources employees view as beneficial. Finally, it may be important for decision-makers to consider a comprehensive examination of strategies—including organization policies—for supporting employees during disasters or other times of elevated stress. For example, supervisors could permit flexible work schedules and locations when reasonable. It is vital to the health of organizations to be aware of employee stress levels and respond with practical and meaningful solutions. These solutions must be easy to access and communicated clearly to employees.

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