


Spring 4-1-2019

# Exploring the relationships of Email Overload, Stress and Burnout in Social Workers

Lisa M. Lowrie  
llowr054@live.kutztown.edu

Follow this and additional works at: <https://research.library.kutztown.edu/socialworkdissertations>

 Part of the [Comparative Psychology Commons](#), [Graphics and Human Computer Interfaces Commons](#), [Industrial and Organizational Psychology Commons](#), [Other Computer Sciences Commons](#), and the [Social Work Commons](#)

---

## Recommended Citation

Lowrie, Lisa M., "Exploring the relationships of Email Overload, Stress and Burnout in Social Workers" (2019). *Social Work Doctoral Dissertations*. 9.  
<https://research.library.kutztown.edu/socialworkdissertations/9>

This Dissertation is brought to you for free and open access by the Social Work at Research Commons at Kutztown University. It has been accepted for inclusion in Social Work Doctoral Dissertations by an authorized administrator of Research Commons at Kutztown University. For more information, please contact [czerny@kutztown.edu](mailto:czerny@kutztown.edu).

Exploring the Relationships of Email Overload,  
Stress, and Burnout in Social Workers

A Dissertation Presented to  
the Faculty of the Doctor of Social Work Program of  
Kutztown University|Millersville University of Pennsylvania

In Partial Fulfillment  
of the Requirements for the Degree Doctor of Social Work

By Lisa M. Lowrie

April 1, 2019

This Dissertation for the Doctor of Social Work Degree

by Lisa M. Lowrie

has been approved on behalf of

Kutztown University|Millersville University

Dissertation Committee

---

Dr. Alex Redcay, Committee Chair

---

Dr. Ed Hanna, Committee Member

---

Dr. Sharon Lyter, Committee Member

March 9, 2019  
Date

ABSTRACT OF THE DISSERTATION

Exploring the Relationships of Email Overload,  
Stress, and Burnout in Social Workers

By

Lisa M. Lowrie

Kutztown University/Millersville University, 2019

Kutztown, Pennsylvania

Directed by Dr. Alex Redcay

Technostress is the inability to cope with information and communication technology which may result in stress and burnout. Email overload, stress, and burnout among social workers is a phenomenon that may impact retention in social and human service organizations. This mixed methods design uses the transactional theory of stress as the theoretical framework for measuring the relationship of email overload (email invasion, email volume, and email rapid response expectation) to stress and burnout in the social work workforce. This dissertation also explores generational cohort, gender, and social work degree as predictors of email overload. Participants in this study were social workers recruited through one of three membership organizations: Juvenile Detentions Centers and Alternative Programs (JDCAP), National Partnership for Juvenile Services (NPJS), and the Pennsylvania Council for Children, Youth, and Family Services (PCCYFS). Students enrolled at Kutztown University were also included in this study. There were 119 (N=119) participants that completed the email overload survey and six (N=6) participants that were interviewed. The findings of the study show that email overload was statistically significant and GenXers and Millennials reported higher levels of stress, anxiety and depression, and poor coping than that of the Boomer generational cohort. Further studies on email overload and technology overload may provide a basis for needed technology self-care strategies for social workers.

*Keywords:* anxiety and depression, burnout, poor coping, email overload, generational cohort, social work, stress, transactional theory of stress, technostress

Signature of Investigator

Lisa M. Lowrie

Date

4/1/19

## Dedication

Bailey, my sweet girl. Though you are no longer with me, you were my rock for the first two years of this program. You kept me entertained and sat with me for hours while I was writing and reading. I miss you every day.

Rachel and Nathan, my children...we all began new journeys during this time. Rachel, you began nursing school as your journey to care for our world and took on a job working in inpatient mental health, and Nathan, along with tackling college, you joined the Army, to take on the job of protecting our country and world. I could not be prouder of your accomplishments and have enjoyed sharing our educational experiences. "I love you."

My mom, dad, brother and sister-in-law. You have been there, listened to me, supported me, and encouraged me to always make a difference. This adventure has been one of my biggest challenges, and you have been there...just there, when I thought I could no longer continue this journey. I am so lucky to have your love. Marlee and Carter, I am excited to hear you call me "Aunt Doctor Lisa!"

Lu, Joan and Regina, your support, mentorship, and friendship over the years have been a guiding star. You taught me that challenges are opportunities to become a better person. I am forever in your debt.

All Friends and Family. You have been so incredibly supportive, excited, and understanding. So often, I have missed socializing with you. Our "four-hour Friday free time" dancing nights, forced me to get out, relax, exercise, and enjoy our friendship. You often saved me from myself, listening to me rant and cry, but Friday nights were my refuge. You all encouraged me to continue during the 1000 times I decided to quit. My cohort family, each of you has been such a support through this process.

## Acknowledgements

Committee members and Kutztown faculty. Dr. Redcay, my cheerleader and chair. I get emotional just thinking about how you were there to push me, to help me find my “confidence,” and to believe in me. There were times I remember texting or emailing you that I was “quitting” and your response was some funny message. You let me throw my temper tantrum, and then redirected that anxiety, and encouraged me take on my next challenge. I am forever grateful that I had the opportunity to learn from you. Dr. Hanna and Dr. Lyter, I feel so lucky. When we met to discuss the progress, my excitement was met with your excitement for my topic. It created an energy that was motivating. Dr. Svistova and Mary Bononno, thank you for always going above and beyond to help me reach my goal. Also, I am thankful for Kutztown University for their partial support of this dissertation through the Graduate Student Research Grant.

## Table of Contents

<b>List of Tables</b> .....	
<b>List of Figures</b> .....	
<b>Problem Statement</b> .....	<b>1</b>
Technostress.....	4
<b>Literature Review</b> .....	<b>8</b>
Early History of Technostress.....	8
Technostress-2000 to Present .....	9
Transactional Theory of Stress .....	13
Theoretical Application .....	15
Generational Theory .....	18
<b>Variables</b> .....	<b>20</b>
Volume.....	20
Invasion.....	20
Rapid Response Expectation.....	21
Age/Generational Cohort.....	22
Gender.....	22
Stress .....	23
Anxiety and Depression.....	24
Coping.....	24
Burnout .....	25
Social Workers and Technology.....	27
Social Work Ethics .....	31

<b>Methodology .....</b>	<b>33</b>
Research Questions .....	33
Hypotheses .....	33
<b>Research Design .....</b>	<b>34</b>
Institutional Review Board .....	34
Ethical considerations .....	34
Reimbursement .....	35
Anonymous and confidential .....	35
Study Setting.....	36
Sampling and Recruitment.....	36
<b>Measures .....</b>	<b>38</b>
Email Overload .....	38
Perceived Stress Scale 4 (PSS-4).....	39
Burnout .....	39
Anxiety and Depression.....	40
Poor Coping .....	40
Demographic Variables .....	41
Pilot Study.....	41
Quantitative Data Analysis .....	42
Qualitative Research Approach .....	43
Role of Researcher .....	43
Qualitative Sampling .....	44
Qualitative Data Collection.....	44



Qualitative Validation Strategies .....	45
Qualitative Data Analysis Plan .....	46
<b>Results .....</b>	<b>48</b>
Participants.....	48
Electronic Communication .....	49
Regression Results .....	51
Email Overload and Stress.....	52
Email Overload and Poor Coping.....	52
Email Overload and Anxiety and Depression.....	53
Email Overload and Burnout .....	53
Pew Generational Cohort on Stress .....	54
Strauss & Howe Generational Cohort on Stress and Burnout .....	55
Social Work Degree and Anxiety and Depression .....	56
Qualitative.....	57
Perceptions of Work and Personal Email Communication.....	59
Perceived Relationship between Email Overload, Stress and Burnout .....	63
Management of Email and Coping Strategies .....	66
<b>Discussion.....</b>	<b>71</b>
<b>Limitations and Implications.....</b>	<b>75</b>
Implications for Social Work.....	76
Conclusions and Suggestions for Future Research.....	78
<b>References .....</b>	<b>80</b>

Appendix A.....	91
Appendix B.....	99
Appendix C.....	100
Appendix D.....	103
Appendix E.....	104
Appendix F.....	105
Appendix G.....	108
Appendix H.....	109
Appendix I.....	110
Appendix J.....	111
Appendix K.....	112

## List of Tables

Table 1	Comparison of Pew and Strauss and Howe Cohorts
Table 2	Preferred means of Electronic Communication by Rank
Table 3	Generational Comparisons of Communication Preferences
Table 4	Generation Comparisons of Least Preferred Electronic Communication
Table 5	Means, standard deviation, and Pearson Correlation matrix
Table 6	Interview Participant Demographics

## List of Figures

- Figure 1      Diagram of the Transactional Theory of Stress
- Figure 2      Diagram of the Transactional Theory of Stress applied to dissertation
- Figure 3      Diagram of Email Overload and Three Factors
- Figure 4      Chart of Top 20 Coded Items

## Exploring the Relationships of Email Overload, Stress, and Burnout in Social Workers

### **Problem Statement**

The problem with technostress (the inability to cope with information and communication technology), and, specifically, email overload (email invasion, email volume, and email rapid response expectation), is its relationship to stress and burnout among social workers. Email overload is a phenomenon that may impact social worker wellbeing, as well as their retention in social and human service organizations.

There has been an increase in research regarding turnover rates due to stress and burnout within social services and human service agencies providing child welfare, mental health, and juvenile justice services. Turnover rates in child welfare have been reported between 14-22% nationally, while vacancy rates average 7 -10% (Edwards & Wildeman, 2018; Kim & Kao, 2014). It may take up to 13 weeks to find an applicant to hire (Kim & Kao, 2014). The workforce crisis is of concern in Pennsylvania as child welfare and human service providers report difficulty recruiting and retaining qualified staff. In an effort to address this issue, the Commonwealth of Pennsylvania issued a report on workforce crisis and the effects that retention has on the quality of services and the ability for consumers to access necessary services. The Pennsylvania report, *State of the Child*, cited work overload attributable to paperwork, difficult work conditions, low pay, and regulatory obligations as reasons for the high rate of turnover in Pennsylvania's child welfare system (DePasquale, 2017). The study showed turnover rates as low as 9.7% (Tioga) and as high as 50% (Dauphin) in some counties in 2014-2015 (DePasquale, 2017).

The challenges are numerous for workforce retention. One challenge that has not been explored fully is the impact of technostress, specifically email overload, on social workers within

the social service and human service workforce. Understanding the impact that email overload may have in the workplace may be of benefit to agencies. It may provide ways to employ quality workers, engage them in work, and retain them. It may also provide social workers insight into how email communication is perceived within their work environment.

The purpose of this mixed methods research project is to examine the impact of email overload on stress, anxiety and depression, poor coping, and burnout. A qualitative approach was used to capture an in-depth look at the perceptions, feelings, and thoughts surrounding email use. Organization culture and leadership qualities also impact the levels of stress and burnout within the workplace. Although this dissertation is focused on employee perspectives, it is important to note that individual reactions are influenced by their environment. Information and communication technology challenges traditional face-to-face communication within organizations (Chan & Holosko, 2015). Email increases the opportunity to communicate with leaders in an organizational setting, replacing paperwork with computer work (Tarafdar, Ragu-Nathan, & Ragu-Nathan, 2007).

Technology's role in supervision also impacts the supervisor-supervisee relationship (Harris, Marett, & Harris, 2013). Research conducted on organizations addressed abusive supervision using technology with supervisees and showed time pressure, pressure to produce, work overload, and decreased satisfaction as factors affecting the supervisor-supervisee relationship (Harris et al., 2013).

Generational attitudes may also impact the workforce, where at any given time, up to five generations may be employed within the organization, with the potential for each generation to have varying attitudes surrounding the use of email. Human service agencies place a heavy reliance on the Millennial cohort, which is estimated at 56 million workers (Fry, 2018). These

Millennial workers are becoming the largest generational workforce. To meet all workers' needs and to help retain them by reducing stress and burnout, gathering their ideas is necessary to aid in organizational change. Some ways in which agencies can be supportive of different generations working well together include consistent and attentive connectivity between staff, immediate information and data sharing capability, technology skill-level customization, and real-time, cross-generational collaboration and knowledge acquisition (Tulgan, 2009). When Millennials begin working in an agency, they must learn the communicative style and interactions within that environment (Myers & Sadaghiani, 2010). With their immersion into the digital world, Millennials have learned ways to communicate that may not be in line with the communicative patterns of other generations already working in the social and human services setting.

The most important aspect of worker retention is the relationship between supervisor and supervisee, with open communication being on top of the list (Myers & Sadaghiani, 2010). The use of email as an alternative means to face-to-face communication can change the dynamics of communication and may place workers at risk of negative psychological health through the loss of meaningful social exchanges (Hill, Kang, & Seo, 2014). Generations may have different attitudes regarding the effectiveness or importance of email and text messages. As the digital age continues to evolve, agencies will need to explore their reliance on email and the role it may play on stress, anxiety and depression, poor coping, and burnout.

Information and communication technology permeate every aspect of life. Technology impacts the ways in which individuals communicate in their private lives, professional and social networks, and within their workplace. Communication strategies have evolved from using paper to using computers, much like landlines progressed to cell phones. Eventually, computers and cell phones converged to form smartphones, enabling individuals to communicate rapidly at any

moment. This convergence significantly increased the speed at which an estimated 730 million users convey large amounts of information to anyone, anywhere, and at any time (Duxbury, 2016). Users have significantly increased the amount of data exchanged, sending over 281 billion emails every day (Radicati Group, 2018).

The significant increase in speed and the amount of data exchanged has also increased the harmful effects of technology. For example, email was shown to increase users' stress when individuals were unclear on response expectations (Brown, Duck, & Jimmieson, 2014). Nevertheless, if email communication is managed through a clear policy within the organization, individuals feel they have the skills necessary to manage that stress (Brown et al, 2014). When individuals feel their resources are not adequate enough to meet the demands associated with technology, they begin exhibiting signs of anxiety, mental exhaustion, and disengagement (Day, Paquet, Scott, & Hambley, 2012; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Estévez-Mujica & Quintane, 2018; Reinke & Chamorro-Premuzic, 2014). This is a significant concern for social and human services organizations that are dealing with staff retention issues.

### **Technostress**

First defined in 1984, technostress is the negative psychological link between people and their introduction to, and use of computers, resulting in fear and anxiety that affects physical and emotional well-being (Brod 1984). Technostress risk factors include invasion and overload as predictors of employee stress and burnout (Tarafdar, Tu, & Ragu-Nathan, 2007). Factors that protect employees from technostress within the work environment and allow them to cope include such resources as education and training (Tarafdar, Tu, Ragu-Nathan, & Ragu-Nathan, 2011; Tarafdar, Pullins, & Ragu, 2015). Turnover, absenteeism, and reduced productivity are



products of technostress, and impact both employee and organization wellbeing (Tarafdar et al., 2007).

Technostress has impacted certain populations (e.g., Millennials) significantly more than others (Dimock, 2018; Estévez-Mujica & Quintane, 2018). Males tend to have a lower risk of technostress. This demonstrates that gender and age may predict the impact of technostress on an individual (Quinn, 2000). The historical context of the technology revolution impacts age and gender; older generations report less comfort and familiarity with technology, increasing the stress associated with working with it. In addition, gender stereotypes consider men to be more competent using computer technology (Quinn, 2000). Females make up the majority of the social work profession (83%), the most significant age group being those under 35 holding a Bachelor's in Social Work (BSW) (Salsberg et al, 2017). Considering the demographics that make up the social work workforce, age and gender, as potential predictors of technostress, may be of particular interest to the social work field.

In Autumn 2017, the National Association of Social Workers (NASW), the Council on Social Work Education (CSWE), the Association of Social Work Boards (ASWB) and the Clinical Social Work Association (CSWA) released *Standards for Technology in Social Work Practice* as a guideline, not only for working in practice areas, but also for educational practices that enlist technology as the medium for communication (NASW, 2017). The guidelines include recommendations for ethics, confidentiality, designing and delivering services, and technology interruption preparedness. The length of the document alone suggests how important technology in social work practice and education has become. The *Standards* offers social workers, their employers, and those associated with the practice setting, including clients, information and education regarding social workers' use of technology (NASW, 2017). It offers instruction on

how to use technology ethically but fails to address the personal psychological risk and protective factors for social workers working with technology. The introduction of the *Standards* points out four themes surrounding the use of digital technology: how social workers (1) provide information to the public; (2) design and deliver services; (3) gather, manage, store, and access information about clients; and (4) educate and supervise social workers (NASW, 2017). In addition to the *Standards*, the NASW Code of Ethics (COE) has been revised, updating standards to reflect ethical use of technology. The COE describes the professional responsibilities related to technology and responsibilities to clients, colleagues, and organizations. For example, section 3.01(b) addresses supervisory boundaries related to potential harm of social networking and electronic media but does not define what the personal psychological risks or harm are to the social worker. Additionally, it does not include best-practice guidelines for self-care in alleviating personal stress. With this in mind, it is the intention of this study to address the impact of email overload as an additional factor of stress and burnout among social service agencies, child welfare, and universities that use email as a common form of communication.

Technostress impacts overall wellbeing, increasing the risk of workplace burnout and stress (Ayyagari, Grover, & Purvis, 2011; Estévez-Mujica & Quintane 2018; Lee, Lee, & Suh, 2016; Srivastava, Chandra, & Shirish, 2015). The impact of communication through technology on burnout and stress may be of significant importance for social workers due to the existing high rate of stress and burnout inherent to the field. Implications of workplace stress and burnout include performance issues, engagement issues, and absenteeism (Estévez-Mujica & Quintane 2018). However, the impact of technostress on the field of social work has not been investigated.

The objective of this dissertation is to measure the impact of email overload (invasion, volume, and rapid response expectations) on stress, anxiety, depression, poor coping, and

burnout in social workers in the social service and human service workforce, as well as among social work students.

## Literature Review

### Early History of Technostress

Technostress is an inability to cope with or adapt to the use of computers or new technology (Brod, 1984). Brod (1984) asserted that computers had a negative psychological impact on individuals (Arnetz & Wiholm, 1997; Brod, 1984; Hodson, 1985; Hudiburg, 1989; Mirvis, Sales, & Hackett, 1991; Rafaeli, 1986; Weil & Rosen, 1995). As the use of computers and technology skyrocketed, Brod became increasingly concerned about the shift to this technology and encouraged further research to explore the impact of technostress on the psychological health and wellbeing of individuals (Brod, 1984). The impact of computer phobia, anxiety, hassles, and technophobia was significant. Consequently, research on these concerns increased (Anderson, 1996; Arnetz & Wiholm, 1997; Weil & Rosen, 1995). Heightened stress levels associated with the use of computers increased both negative mental and physical health symptoms, including the inability to concentrate, headaches, anxiety, negative mood changes, and a decrease in self-esteem (Arnetz & Wilholm, 1997; Weil & Rosen, 1995). Technostress was later defined to include “stress” in relation to social and cognitive changes (Shu, Tu & Wang, 2011), as well as emotional or physical illness and adaptation issues (Tiemo & Ofua 2010).

The first measurement tool designed to assess technostress was the Computer Hassles Scale (CHS), which was inspired by the prior non-computer-related Daily Hassles Scale (DHS) (Hudiburg, 1989; Kanner, Coyne, Schaefer, & Lazarus, 1981). The original CHS measured technostress but also the (1) cause of stress (Independent Variable), the (2) reaction to the stress (Dependent Variable), and the (3) moderating or mediating variables (Hudiburg, 1989). Hudiburg continued to revise and improve the scale (Hudiburg, 1989, Hudiburg, 1991). The 1989 research reported that participants’ major sources of hassle included (1) receiving email, (2)

system failure or computers being slow, and (3) lack of user knowledge or technical support (Hudiburg, 1989). Participants who had a positive attitude towards computers used them for longer hours but also reported more hassles, while the participants with higher stress levels also reported more computer hassles. Accordingly, stress levels could be a significant mediator in determining perceived hassles related to computers. Only 17.7% of the research participants owned a computer (Hudiburg, 1989). Currently, 84% of American households include a desktop, notebook, laptop, or smartphone (Rainie et al., 2014).

In the late 1990s, the theory of technostress was expanded by Weil and Rosen in their book, *Technostress: Coping with Technology@WORK@HOME@PLAY*, to include the negative impact of technology on attitudes, thoughts, and behaviors, and some potential coping skills that may help alleviate those negative effects (Shu et al., 2011; Weil & Rosen, 1997). As technology evolved, technostress impacted home life, workplace, and social networks (Shu et al., 2011; Weil & Rosen, 1997). Although more focused on the psychological stress associated with technology, research also found negative physiological impacts that technology had on its users (Arnetz & Wiholm, 1997). The earliest themes of technostress highlight that the term itself can be very complex to define and understand (Ayyagari et al., 2011; Tarafdar et al., 2011). Additionally, the increase in technostress seems to parallel the rise of information and communication technology (ICT). As ownership of devices increases, so does technophobia or irrational fear or anxiety of the effects of advanced technology (Weil & Rosen 1995; Anthony, Clark, & Anderson, 2000, 2000).

### **Technostress - 2000 to Present**

During 2000-2010, a significant increase in the use of smartphones, tablets, and laptops enabled individuals to connect globally. In 2007, 41% of Americans accessed wireless networks

to use internet functions outside of work and home (Horrigan, 2008). Accessibility increased the volume of email and the information shared, while face-to-face interaction decreased (O’Kane & Hargie, 2000). Employees expressed that email, specifically as an alternate means of communication, was not the same as face-to-face or written communication, and increased their stress (O’Kane & Hargie, 2000).

Historical events in the United States increased the desire for personal security through phone accessibility. The Columbine school shootings in 1999 and the 9/11 terrorist attack in 2001 were personal security turning points, and associated with an increase in cell phone purchases, as well (Turkle, 2011). Owning a cell phone provided a feeling of safety that allowed immediate access and communication with family members (Turkle, 2011). Between 2004 and 2011, cell phone use among teens (12-17) increased from 45% to 77% (Lenhart, Ling, Campbell, & Purcell, 2010). Previously, parents were less accepting of their child’s access to a cell phone. However, as phones became symbols of safety, parents’ common practices changed as they began allowing their children access to cell phones. This was in contrast to the school movement to limit the disruption and invasiveness of student cell phone use (Turkle, 2011). In 2004, 89% of teens reported using computers to send or read email, with only 38% reporting cell phone use for messages (Lenhart et al., 2010). In 2010, 62% of students attended a school that allowed phones on grounds but not in class (Lenhart et al., 2010). Today, basic cell phones have been replaced with smartphones which allow instant messaging through such applications as text, snapchat, and Facebook, as alternatives to e-mail. Smartphone technology enables access to email anytime and anywhere (Duxbury & Lanctot, 2016). Information and communication technology (ICT) offers benefits, such as increased ability to share information globally, yet also creates disruption

through email overload. Email overload consists of three factors: volume, invasion, and the rapid response expectation (Purcell & Rainie, 2014).

In 2010, technology was increasingly seen as efficient, productive, and versatile, and, over time, those qualities have grown. Yet along with the positive applications, literature highlights that these same efficiencies may also create technostress and negatively impact employees (Ayyagari et al., 2011; Atanasoff & Venable, 2017; Brooks & Califf, 2017; Brown et al., 2014; Fuglseth & Sørenbø, 2014; Tarafdar et al., 2011), adding challenges for workforce retention, such as burnout as a leading factor in child welfare programs. This creates an additional layer of technostress in the form of email overload (invasion, volume, and rapid response expectations) which has been shown to lead to stress and burnout. While the studies may have decreased from 2000 to 2010, technology grew, as did the number of people using forms other than computers to communicate (Olmstead, 2017). Email, from use in both personal and work life, increases access to any place and any time as society is conjoined to their devices and their immediate means to communicate (Duxbury & Lanctot, 2016; McMurtry 2014). Over one-third of a person's work hours is spent reading and responding to email, increasing risk of technostress, and leading to absenteeism and burnout. The information was gathered by 1500 respondents, comprised of women (62%), the well-educated, Boomers (born between 1945 and 1964) and Gen-Xers (born between 1965-1980) (Duxbury & Lanctot, 2016).

As the introduction of new technology continues, researchers have begun to address email overload in relationship to personal characteristics. Using the criteria of the Big Five Personality Traits: conscientiousness, neuroticism, openness, extraversion, and agreeableness, personality has been found to be a determinant in technostress (Krishnan, 2017; Reinke & Chamorro-Premuzic, 2014; Srivastava et al., 2015). The application of the Big Five Personality

Traits offers a widely accepted and practical application in understanding how the factors influence degrees of technology-induced stress (Krishnan, 2017; Reinke & Chamorro-Premuzic, 2014; Srivastava et al., 2015). For example, neuroticism is defined as the “ease and frequency with which a person becomes upset or distressed” (Srivastava, et al., p. 5, 2015). Studies suggest that neuroticism in particular has been shown to influence technostress leading to burnout (Srivastava et al., 2015).

In several studies, researchers, employers, and employees addressed the interaction between technology, the users, and the kinds of support or training that individuals received in order to carry out information and communication technology (ICT) in the form of email to alleviate anxiety and stress (McMurtry, 2014). Necessary skills and support are helpful in preventing technostress (Day et al., 2012; McMurtry, 2014). Email overload factors without a collaborative relationship between co-workers, have been associated with decreased productivity (Lee, Lee, & Suh, 2016). Role ambiguity and job insecurity are also seen as factors with potential for creating technostress (Atanasoff & Venable, 2017). Determining how the population of social workers is affected by technostress is difficult to assess due to the lack of research specific to this population. Research suggests that people are able to manage invasion, volume, and rapid response expectations through stress-reducing practices and policy (McMurtry, 2014).

Technostress creators such as email overload are significant indicators of job burnout and job engagement, and personality traits such as neuroticism and agreeableness increase the significance (Krishnan, 2017; Srivastava et al., 2015). The connection between information and communication technology (ICT) and burnout has been further supported in a study in Norway regarding government administration workers (Fuglseth & Sørebo, 2014). This qualitative study



was performed using a field survey with 152 senior managers in Europe and non-Europe. The majority of those surveyed were male (77%) and the average age was 37.96 years. Investigation into the use of smartphones and their impact showed that the increase in use intrudes upon one's personal life through an inundation of messages and emails (Lee et al., 2016). Mobile smartphone use of technological communication affected relationships between co-workers' after-work hours through two unique areas of stress in relation to social and technical perceptions (Lee et al., 2016). Immediate response, or the expectation that the smartphone would be immediately answered, was the factor that most influenced stress reactions (Lee et al., 2016). Most of the focus on technostress, stress, and burnout has concentrated on the use of ICT and personality. Two other areas that may serve as predictors to burnout and stress are age and gender. Age has been shown to have an influence on the effect, whereas gender has been inconsistent.

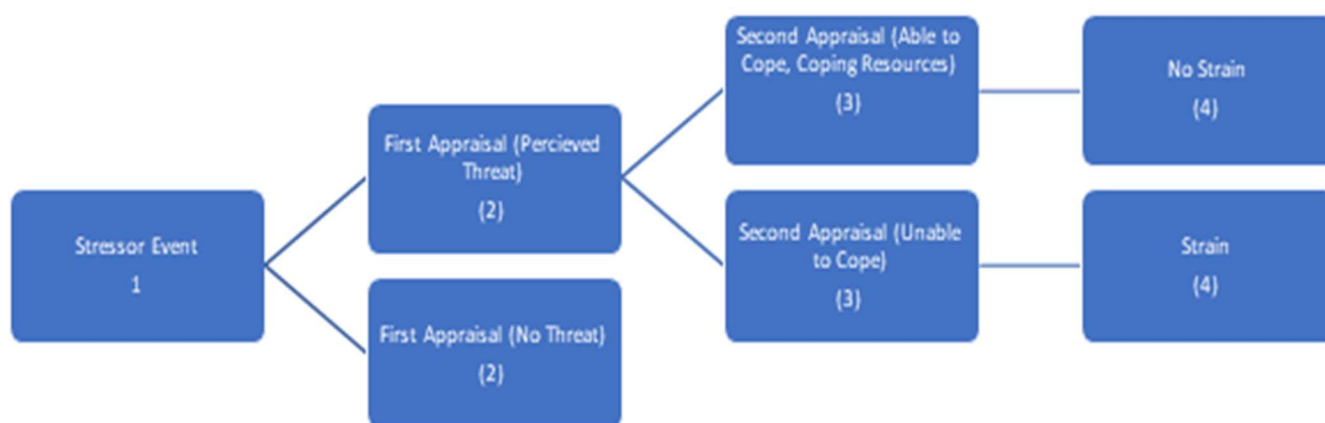
### **Transactional Theory of Stress (TTS)**

The transactional theory of stress (TTS) was initially developed by Lazarus in 1966 to explain psychological stress and the impact of major life stressors on individuals (i.e., how one perceives and reacts to those stressors) (Kanner, Coyne, Schaefer, & Lazarus, 1981; Lazarus & Folkman, 1987; Ragu-Nathan, Tarafdar, & Ragu-Nathan, 2008). The impact of stress on an individual is established when the demands of stressor events supersede any resources the individual has available with which to deal with those events (Lazarus, 1990).

TTS is heavily relied upon in research on stress and burnout related to ICT use in the workplace. One of the primary reasons for using TTS is its capacity to assess stressors, situational factors, and the outcomes related to individual reactions to the demands within their environment (Fuglseth & Sørebo, 2014). TTS will be the guiding theory used to address the relationship

between email overload and stress, anxiety, depression, poor coping skills, and burnout in the social work workforce.

The process that occurs during the transaction between environmental events and the participant's appraisal can be interpreted as either positive or negative, dependent on the resource supply available to the individual. As the appraisal process is completed, the individual then enlists either negative or positive coping mechanisms to manage the stressful events (Lazarus, 1990). The stressors themselves are categorized as events, demands, stimuli, or conditions (Ragu-Nathan et al., 2008). The theory has expanded over time to incorporate the frequency, duration, and unexpected nature of the stressors on individual stress reactions (Brown et al., 2014; Fuglseth & Sørøbø, 2014; Kanner, Coyne, Schaefer, & Lazarus, 1981; Lee et al., 2016; Ragu-Nathan et al., 2008; Srivastava et al., 2015). The theory has four major components: (1) stimuli or stress creators; (2) first appraisal or the individual's perception of a threat; (3) second appraisal or positive or negative coping strategies and resources; and, finally, (4) strain (Lazarus et al.;1987; Srivastava et al., 2015).



*Figure 1.* Diagram of the Transactional Theory of Stress.

Examples of (1) stressor events are major or minor life events, daily hassles, or other events (i.e., traffic). Stressor events cause the (2) first appraisal to occur which may be a

perception of a threat. Perception of a threat is an emotional or cognitive response to the stressor event. For example, if a person is driving in traffic (stressor event), the person may become angry at the daily hassle of traffic (primary appraisal, perception of threat). However, if the person has (3) effective coping skills (second appraisal), they may choose to listen to an audio book (coping resource) that decreases their anger. Coping is explained as the process by which an individual assesses and adapts to a harmful, challenging, or threatening stimulus and is influenced by the personal or environmental resources available to them (Lazarus et al., 1987). Coping can be viewed as a fight-or-flight reaction or as a continuum of healthy and unhealthy reactions (Lazarus et al., 1987). Negative coping may be experienced in forms of exhaustion, anxiety, depression, or physical symptoms such as headaches and upset stomach. Coping and coping resources, such as an organizational email management policy, may provide the individual an opportunity to cope positively. (4) Strain is the result of (a) stressor event, (b) perception of a threat, and (c) ineffective coping skills and/or resources. Examples of strain could be (d) road rage. The resources available to individuals can play important roles in eliminating strain. As we have shown in the example of traffic, the use of an audio book allows the individual to adapt to the emotions they feel in traffic with ways to control the appraisals of the stressor event.

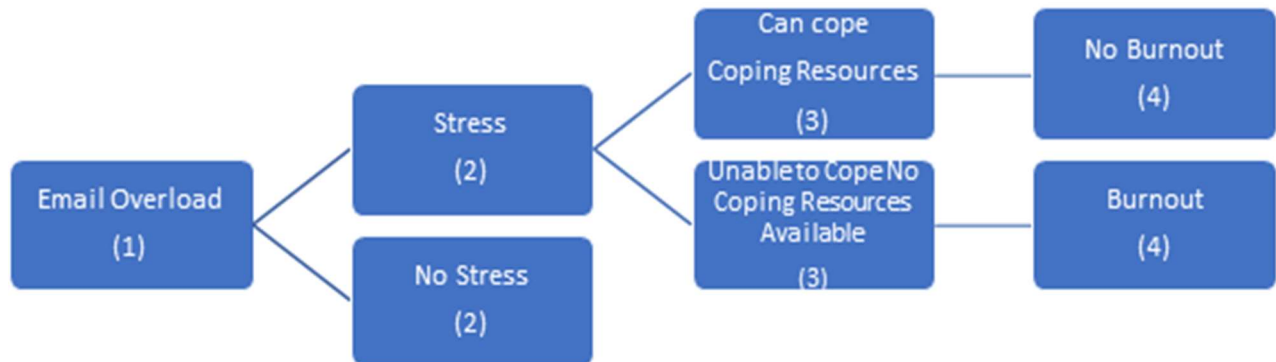
### **Theoretical Application**

For the purpose of this dissertation, the following variables will serve as proxies for theoretical variables: (1) email overload (stressor event); (2) threat (first appraisal) which will manifest as stress; and (3) the second appraisal, a self-reported inability to cope (anxiety and depression) and perception of coping resources which will lead to (4) burnout (strain).

The first variable in the transactional theory of stress (TTS) is a stressor event which will be operationalized as email overload. Email overload will be composed of three factors: (a) volume, (b) invasion, and (c) rapid response expectation. The second variable in the TTS is the first appraisal (perceived threat and stress reactions) to email overload. This first appraisal, if seen as a threat, will create stress; if there are no threats perceived with email overload, then there will be no stress. If seen as stressful, anxiety and depression may manifest and impact the second appraisal of poor coping. Those poor coping mechanisms, such as mental exhaustion and disengagement, lead to strain. Strain can be a form of burnout (Brown & Duck, 2014; Estévez-Mujica & Quintane, 2018). This may be of particular interest to organizations, especially if the stress and burnout reactions are avoidable through positive organizational coping mechanisms (Day et al., 2012; Ragu-Nathan, et al., 2008). If individuals are able to manage email overload, perhaps through email management techniques, stress and burnout should not occur. For example, email was shown to increase users' stress when there was a rapid response expectation to reply immediately. However, if email communication was managed through clear policy within the organization, individuals feel they have the skills necessary to manage the stress (Brown & Duck, 2014).

The stressor events, the first appraisal of threat, and secondary appraisal of coping are necessary for burnout to occur. Email overload increases the likelihood of stress, anxiety, depression, poor coping, and burnout. Email overload is the initial stress event setting off a chain of reactions affecting users' psychological and physical wellbeing. Conceptualizing email overload in this theoretical framework offers a connection between the email overload (independent variable) as a predictor of stress, anxiety, and depression, poor coping, and burnout (dependent variable) that may impact social workers. Once social workers perceive a threat

through the first appraisal, they then make the second appraisal (coping) which is negative and subsequently leads to strain in the form of burnout.



*Figure 2.* The Transactional Theory of Stress Applied to Dissertation.



*Figure 3.* Diagram of Email Overload with Three Factors (Rapid Response Expectation, Invasion, and Volume).

The transactional theory of stress provides a theoretical approach to understanding email overload and an individual's appraisals. The appraisals determine the levels of stress, anxiety, depression, poor coping, and burnout. There are other characteristics that may influence the perception of stress and burnout. Age and gender play a role in predicting the effects of email

overload for the individual, as earlier literature has reported that older workers may experience higher levels of technostress while males may experience less technostress (Anthony et al, 2000; Hudiburg, 1989). Generational cohort (age) and gender may influence the strength of the relationship between email overload and poor coping.

### **Generational Theory**

The generational theory is secondary to the transactional theory of stress (Strauss & Howe, 1991). First introduced by Karl Mannheim as the theory of generations, the generational theory has been called the “complex interactions between generational consciousness, identity, and historical location,” and requires every actor to observe how they participate “in common destiny” (Katz, 2017, p. 13; Mannheim, 1947). Building on Mannheim’s theory, William Strauss and Neil Howe conceptualized that history impacts our peer personality and our cohort outlook (Strauss & Howe, 1991). The generational theory is important as we embrace a world of digital communication. Currently, there are multiple generations working within human services. It is possible that five generations are employed within a human services organization on any given day, each with different outlooks, understanding, skills, and approaches to embracing technology. These five generations are: the Silent Generation (born between 1928 -1945), Boomers (1946-1964), Gen-Xers (1965-1980), Millennials (1981 to 1996), and Generation Z (post 1996) (Dimock, 2018). The generations have also been defined by Strauss and Howe with a variation in year-born range: Silent Generation (1925-1942), Boomers (1943-1960), Gen-Xers,(1961-1981), Millennials (1982-2004), and Generation Z or Homelanders (born 2005) (Howe & Strauss, 2007). Although there is research that supports generational theory, there is also controversy over whether research truly supports generational differences (Stanton, 2017). For purposes of this dissertation, generational theory is a key consideration, as it has been found

that age, defined through generational cohorts, may play a role in impacting email overload on stress, anxiety, depression, poor coping, and burnout, thus requiring human services to understand the differences in engagement and communication with email.

In summary, the purpose of this study is to examine the impact of email overload, which consists of three factors: volume, invasion, and rapid response expectation, on stress, anxiety, depression, poor coping, and burnout. The transactional theory of stress and generational theory provide the guiding or theoretical framework to understanding email overload and how individual appraisals and individual characteristics determine their levels of stress, anxiety, depression, poor coping, and burnout. Individual characteristics such as gender, generational cohort, and social work degree may strengthen the relationship. Measuring the stressor event (email overload) and the first appraisal (stress) and second appraisal (poor coping) can predict the potential antecedents to burnout (strain) experienced by the human services workforce.

## Variables

### Volume

Email volume has advanced from computer to cell phone to smartphone, making email more accessible from both work and the home-life environment (Purcell & Rainie, 2014). In 2017, 730 million individuals sent and received over 281 billion emails daily using a mobile device (e.g., phone or tablet) (Duxbury & Lanctot, 2016; Radicati Group, 2018). This number is expected to continue to rise (Radicati Group, 2018). Technostress created by the volume of email becomes more arduous as access to technology increases. In higher education professionals, the amount of email received (volume), the worry about email, and the perception of receiving too many emails (overload) significantly impacts their perception of email stress (Jerejian, Reid, & Reese, 2013)). Time management and clear boundaries regarding access to email are a necessary component of stress reduction. Jerejian et al. (2013), in a qualitative study with 114 academic staff, examined the relationship between worry, email volume, and management. Quality management did not create email-related stress (Jerejian et al., 2013).

### Invasion

Email invasion occurs in the workplace when an employee is expected to answer work-related email on their personal time, creating stress manifested through increased exhaustion (Tarafdar et al., 2011). Work overload and the pressure to complete computer-related tasks such as email have been shown to create burnout (Estévez-Mujica & Quintane, 2018). Invasion needs further investigation, as it has become associated with creating workplace stress and burnout. Techno-addiction and nomophobia may add another dimension to the invasion of email (Salanova, Llorens, & Cifre, 2013; Yildirim & Correia, 2015). Techno-addiction is manifested through fatigue and anxiety due to excessive and compulsive use of technologies (Salanova et



al., 2013). Nomophobia is the fear of being without a smartphone. Techno-addiction and nomophobia are much like all addictive behavior in that they cause intrusive thoughts and expectation for immediate response. The drug, which is technology in the form of email, brings about great highs and great lows. One begins to experience stress over their lack of control which, in turn, threatens self-esteem, social acceptance, and social respect (Tams, Legoux, & Leger, 2018).

### **Rapid Response Expectations**

Email rapid response expectations increase anxiety and stress (Brown & Duck, 2014). Workers identified emotional exhaustion when experiencing stress from the expectation to respond immediately to email. A rapid response pressure and high expectation from colleagues to respond immediately multiple times in a given day is associated with greater stress than a lower expectation to respond (Brown & Duck, 2014). Nearly half (48%) of surveyed middle and senior managers in Australia were shown to have stress related to email (Brown & Duck, 2014). These findings increased awareness of email stress and sparked a further study of full-time academic and administrative personnel in Australia. Twenty-eight percent of the study's participants identified negative aspects of their email use during a 10-year period. Email overload and ambiguous emails leading to mental exhaustion were prevalent in responses. The example used was "I feel emotionally drained from my work" (Brown & Duck, p. 335, 2014). Rapid response expectation, or the need to reply immediately to multiple but unrelated emails in the work setting, has also been associated with stress and burnout (Harris, Marett, & Harris, 2013).

### **Age/Generational Cohort**

Adult learners, or non-traditional student learners over the age of 25, (U.S. Department of Education, 2015) show increased technostress (Quinn, 2000). Increased rates of unease and discomfort are associated with lack of experience with computer technology in the formative years. Accordingly, age and early access to computers may also predict levels of technostress. Today, younger adults (18-29 years old) have significantly more devices than individuals over 64 years of age. Being a young adult with an income over \$75,000 significantly increases the number of household devices such as computers and tablets (Olmstead, 2017). Having grown up with daily use of technology and devices, younger generations may be less technophobic (Anthony et al., 2000). As more people are using technological devices, the technology gap is closing. It is estimated that approximately 90% of all households own a mobile device such as a smartphone, desktop/laptop, computer, tablet, or streaming device (Olmstead, 2017). The findings show 18% of those households are “hyper-connected” with more than 10 devices (Olmstead, 2017). Age and the number of devices may play a pivotal role in increased stress levels. Age is of particular interest as the Millennial generation (22-37) cohort is the largest workforce in the United States, reaching 56 million in 2017 (Fry, 2018).

### **Gender**

Gender as a determinant of technostress has not been conclusive (Estévez-Mujica & Quintane, 2018). Females are significantly more likely to have increased stress, increased hassles, and cynical attitudes about computers when compared to males, indicating that gender could be a significant predictor determining perceived hassles related to computers (Hudiburg, 1989). Early studies found that gender was a factor, and that males tended to be affected by technostress at higher rates than females (Tarafdar et al., 2011). Research varies in determining

which gender is impacted more by technostress. Female, white-collar workers in manufacturing administrative positions with two or fewer years of education but with more experience with computers were found to have more favorable attitudes working with computers than men (Rafaeli, 1986). The women's positive attitude in turn supported a more positive outlook toward job involvement. Men who had fewer opportunities to work with computers showed more negative attitudes (Rafaeli, 1986). This particular sample of non-managerial, white-collar workers suggests that, perhaps, comfort level and job function have a direct impact on attitudes toward computer use (Rafaeli, 1986). This contradicts earlier research findings that suggest women have a more negative attitude toward computers (Todman, 2000).

### **Stress**

Stress is associated with physical and mental health issues including, but not limited to, headaches, depression, irritability, and self-neglect. Social workers have identified job-related stress which affects their health and wellbeing (Griffiths, Rouse, & Walker, 2018), and includes stress produced by ICT, which can be directly related to the perceptions of rapid response expectation, invasion, and volume and a lack of clear guidelines or resources available to employees (Ayyagari et al., 2011). Stress reactions are created through email overload, creating a work-home balance inequity. The interruptive nature of email overload leads to more demands on an individual. These demands create stress and have been shown to create negative effects on organization and individual employee wellbeing (Ayyagari et al., 2011). Email stressors are positively associated with email communication. The relationship of those stressors such as the invasion, volume, and rapid response expectation manifest as stress or emotional exhaustion (Brown et al., 2014). Faculty may always be more susceptible to higher levels of stress because of expectations they be available to students. In addition, many at the university-level are often

engaged in research with others in the global network which may require odd work hours to collaborate with those in different time zones (Jerejian et al., 2013).

### **Anxiety and Depression**

Anxiety and depression are emotional responses to stress. Early research on technostress addressed the demands of technology and how those demands may exceed an individual's ability to positively cope with those demands (Hudiburg, Pashaj, & Wolfe, 1999). The individual experience with technology may manifest as worry, fear, frustration, or feeling overwhelmed (Day et al., 2012, Salanova et al., 2013). Literature addresses the influence anxiety has as a determinant of technostress but has been somewhat lacking regarding depression. In recent research, anxiety and depression have been closely identified with technology and smartphone use (Boulmosleh & Jaalouk, 2017; Elhai, Dvorak, Levine, & Hall, 2017). Anxiety and depression present as an interesting variable to the transactional theory of stress when applying it to email overload because anxiety and depression may be a stress reaction manifested as poor coping. For purposes of this study, it was determined to measure this variable independent of the stress and coping variables.

### **Coping**

Coping is an individual response to an appraised threat (Lazarus, 1990). For example, educators' identification of worry and anxiety have been found to be negative coping mechanisms related to the stress of email (Jerejian et al., 2013). Mental exhaustion and disengagement were also found to be forms of negative coping mechanisms. The negative impact of email on workforce performance has been shown to be mitigated by personality and competency and training programs, creating positive coping reactions to stress-related email (Srivastava et al., 2015; Tarafdar et al., 2015). Business environments were used to investigate

the impact of ICT on performance, suggesting steps employers could take to support or offer resources within the workforce, nurturing forms of positive coping. Key findings suggest that implementation of ICT training and confidence-enhancing training created positive coping mechanisms (Tarafdar et al., 2015). Individual coping thoughts or actions that included humor, self-blame, and behavioral disengagement also impacted wellbeing, both positively and negatively (Carver, 1997; Monzani et al., 2015). Coping strategies such as effective management of the volume and overload of email alleviates stress among educators who are increasingly involved with asynchronous classwork, creating an additional expectation to be available to accommodate online learners (Jerejian et al., 2013).

### **Burnout**

Burnout is associated with intended turnover from employment, physical and mental health issues, and a negative impact on wellbeing in general (Atanasoff & Venable 2017; Estévez-Mujica & Quitane, 2018; Maslach, 1998; Reinke & Chamorro-Premuzic 2014; Srivastava et al., 2015). Burnout can be defined as having three dimensions: emotional exhaustion, detachment, and decreased effectiveness (Demerouti et al., 2001; Maslach, 1998). The multi-dimensional theory of burnout addresses three factors of burnout, including stress, interpersonal assessment, and self-evaluation related to persistent experiences. These dimensions influence an individual's sense of self as well as the individual's sense of others within their environment (Maslach, 1998). Emotional exhaustion, the first dimension, is exhibited through a drain on emotional energy and is influenced by work overload and personal conflict in the work environment. The second dimension, detachment or depersonalization, may manifest in cynicism, negativity, and detachment. The last dimension, decreased effectiveness or reduced personal accomplishment, is linked to depression and ineffective coping (Maslach, 1998).

Email overload creates an opportunity for individuals to engage or disengage through the invasion of homelife, increasing risk of burnout (Estevez-Mujica & Quintane, 2018).

Additionally, there is a power dynamic found in email communication. A person who is included in email communication has more power because they have more knowledge. However, this is also dependent on communication behavior such as the effects one has over email patterns such as volume, invasiveness, and rapid response expectations and with whom the exchanges take place. Review of email use over a four-month period in an Italian Research and Development company (57 employees, 52,192 emails) found a link between employees' perception of email volume and risk of burnout (Estévez-Mujica & Quintane, 2018). Risk of burnout from misuse of email was also linked to employee perceptions.

In summary, the three factors of email overload (email volume, invasion, and rapid response expectation) create stress, anxiety and depression, and poor coping, and impact health and wellbeing. Email overload also influences individual engagement within the environment through the invasiveness and the volume and rapid response expectations of ICT, with indications that age strengthens the relationship (Estévez-Mujica & Quintane, 2018). Communication technology in the workplace and community places focus on technostress attributes and helps determine if technology will serve to “empower or deskill workers” (Hodson, 1985). Although all technostress attributes are very important aspects and show the complexity and variables involved when addressing the impact of ICT, it has been specifically noted that when looking at the effect ICT has on workplace retention and absenteeism, there was a potential link to drug abuse and mental health issues (Hodson, 1985). Two tensions related to working with computers include empowerment of the employee and the detachment that workers

may feel as their job duties require more communication through email. Email invasion, volume, and rapid response expectation may play an important role in predicting stress and burnout.

### **Social Workers and Technology**

There is no precise number of social workers that work directly in human services. In 2014, the Census Bureau provided estimates of 1.6 million social work-affiliated workers, in both formal and informal roles, employed in human services agencies, such as for-profit, tax-exempt, and nonprofit healthcare and social services institutions throughout the country. Pennsylvania was reported to employ approximately 108,000 social workers in formal and informal positions. The Profile of the Social Work Workforce estimated nationally that approximately 36.6% of the workforce was employed within family services, 11.4% employed in administrative positions, 10.6% in hospitals, and 8.3% in outpatient settings (Salsberg et al., 2017). With an estimated 642,000 social workers in the United States, and 40,000 licensed in Pennsylvania, this group makes up the largest group of mental health professionals (NASW-PA). Further, the cohort of licensed social workers older than 45 years of age is estimated at 62% with the remaining combined ages of licensed social workers under 45 (approximately 38% of the workforce) (Salsberg et al., 2017).

There are many information and communication technologies, such as email, cellphone/telephone, video-conferencing, secure telepsychiatry, electronic medical records, laptops, tablets, and training gamification used daily. Knowledge regarding the impact of technology or technostress, or specifically the use of email, among social workers is limited (Finn, 2006; Finn & Krysik, 2007). It has been found that social workers both in the field of education and in practice may resist the use of technology, perhaps because they rely on traditional skills that social workers obtain to build interactive and therapeutic relationships; or

perhaps because they lack technology training (Finn, 2006). The introduction of email as a form of communication in educational and practice settings changes how one is taught, how one is managed in the workplace, and how social workers communicate on a daily basis. Email has changed the way in which faculty communicate with one another, how they communicate with students, and how they communicate with others globally. In the practice setting, email has changed how the social worker interacts with co-workers and the individuals they serve.

Social work technology curricula in higher education, though rare, were found to prepare social workers for the workplace (Youn, 2007). However, the research did not observe the impact, if any, of email overload on social workers (Youn, 2007). Although social workers were shown to communicate through email, there was no study that investigated evidence of email overload and its relationship to stress and burnout in social work leadership or education. Age influenced the acceptance of email, both in non-therapeutic and therapeutic interactions with clients, with more reluctance to accept email as the age of the worker increased (Finn, 2006; Finn & Krysik, 2007). Agencies that employ social workers, such as social services, child welfare, mental health, and juvenile justice were found to be inconsistent in their policies related to email (Finn, 2006; Finn & Krysik, 2007). Social workers reported they had a basic knowledge of email use but were unsure if agencies had a policy. It was also found that social workers shared communication through email with co-workers to a larger degree than with consumers. When social workers were asked, "What is your opinion about social workers' use of email?" 60% responded that email is a time-saving tool replacing face-to-face and telephone interactions, while only 13% agreed that email adds to workloads. Interestingly, research suggests that human service agencies do not provide adequate training for email use. For example, one study reported that only 28% of all social workers indicated they had received email training (Finn, 2006; Finn & Krysik, 2007).



Heightened awareness of technostress and the growth of ICT, particularly related to email overload and the relationship to stress, anxiety and depression, poor coping and burnout requires further investigation for social work education and leadership. Email, texting, teletherapy, and social media have become regular forms of communication in an organizational setting and pose a number of opportunities as well as threats to social work practice (LaMendola, 2010). The invasion of email creates the opportunity to blur the lines between client and worker. Ethical and personal boundary issues coupled with email overload can increase stress and burnout for social workers who find themselves in already stressful roles (LaMendola, 2010). Personal boundary issues related to email may exist when clear expectations on email use are not set up between clients and worker. Boundaries may include response time to email and appropriate use of email. Email overload may create ethical and confidentiality concerns for social workers.

Email, texting, and social networking were highlighted as unclear forms of communication. Studies show that social workers are torn when using these methods with clients in practice settings (Mishna, Bogo, Root, Sawyer, & Khoury-Kassabri, 2012). Age and generational differences continue to be factors in the assessment and usage of ICT. Studies have shown that youth in treatment and younger social work professionals may have a more positive outlook on the use of ICT. Research does not address technostress or email overload directly but does lead one to consider the implications of ICT as a potential stressor and highlighted generational attitudes that may contribute to use of ICT in social work practice (Mishna et al., 2012). As stated earlier, technostress has a negative impact on the overall wellbeing of individuals. Research on technostress and specifically the factors of email overload, invasion, email volume, and rapid response expectation, as creators of stress and burnout for social work

education and leadership should be explored to determine the relationship, if any, between email overload and stress and burnout.

Research has found a possible link between age and email overload, yet the impact is still unclear on particular generational cohorts, social work degree, and gender. It has been reported that 83% of the social work workforce is female and holds a BSW, making the combination the largest proportion of the social work workforce (Salsberg, 2017). This research will help determine if there is a relationship between these particular predictors and email overload, stress, anxiety and depression, and burnout. Additionally, the findings will allow educators to better prepare social work students on the impact of email overload within a social work practice setting. Because there have been no recent studies on social work and email related to practice, and because communication through technology continues to increase, capturing today's perspective on email use will provide an evidence-informed approach in the creation of technostress intervention, prevention, and training models.

Information and communication technology (ICT), particularly email, is very much a part of a social worker's world. Research has shown that email overload can have a negative impact on individuals and is a predictor of stress and burnout. Yet little is known about the magnitude of email overload as a predictor of stress and burnout in social workers. Exploring this phenomenon may also better prepare social workers for their role in organizations. Because social workers, including social work students and social work faculty, consist of a diverse age group, it is important to note if there are generational differences when measuring email overload and its relationship to stress and burnout. This in itself could alter communication within educational setting and the workplace. In addition, email overload may also have implications for social work leaders. Depending on the findings, agency leaders may need to take a new approach to

communication patterns within their environment to help alleviate stress and burnout related to email overload, thereby enhancing work environments for both social workers and the individuals they serve (Finn, 2006).

### **Social Work Ethics**

In a digital world, and because of their role, use of communication, nature of that communication, and the vulnerable populations they serve, social workers find addressing ICT ethics can be exceptionally challenging. As email use becomes a common form of communication, attention to the potential effects of email on ethics, and the additional challenges this creates for the social work workforce is paramount. With all the advancements made to provide ethical guidelines for social workers on the use of technology in a practice setting, there is limited research that addresses the impact of email overload on the social worker. Emotional or physical email-related stress may be imposed on social workers in the workplace. Physical and verbal aggressions, and the identification of safety and risk management in social work field placement activities, demonstrate that updated policies are needed to protect social workers (Lyter, 2016). Consistent policies to protect social workers from these particular types of harm are still in developing stages. Technostress, and specifically email overload and its potential to impact the health and wellbeing of social workers, create a strong need for updated safety and risk management practices. It is essential that we begin to understand the impact of email overload on the social worker as ethical standards for technology in the practice setting and educational setting are expanded. The Council for Social Work Education (CSWE) supports educators in their quest to make a positive impact on human wellbeing and social and economic justice (CSWE, 2018). Yet, in an initial search for social work technostress courses within the Pennsylvania State System for Higher Education (PASSHE), none were found. The increase in

email use also requires social workers to establish boundaries. Boundaries help navigate the complexities associated with the demands of clients who now enjoy more immediate access to their service provider via email. There is a need to establish clearer boundaries, associated within the context of email, between client and worker as well as worker and employer.

## **Methodology**

This chapter describes the mixed-methods research that includes both quantitative and qualitative designs exploring email overload in the social work workforce. The quantitative study explored the relationship between email overload (independent) on stress, anxiety, depression, poor coping, and burnout (dependent) through statistical analysis and was supported by qualitative interviews that captured in-depth stories regarding emerging ideas.

### **Research Questions**

1. Is there a relationship between email overload, stress, anxiety and depression, poor coping and burnout in social workers? (Quantitative)
2. Do gender, generational cohort, and social work degree impact the level of email overload, stress, anxiety and depression, poor coping, and burnout? (Quantitative)
3. What are social workers' perceptions, thoughts, and feelings related to email? (Qualitative)

### **Hypotheses**

1. Hypothesis 1: Email overload will increase stress, anxiety and depression, poor coping, and burnout.
2. Hypothesis 2: Poor coping will increase burnout.
3. Hypothesis 3: Generational cohort, gender, and social work degree will increase perceptions of email overload.

## **Research Design**

The mixed-methods proposal utilized a quantitative, non-experimental, cross-sectional design and a qualitative, phenomenological approach to in-depth, individual interviews. This design allowed for a complementary integration of theory-driven data (Palinkas et al, 2011). It also captured deeper meaning and emerging themes related to email overload through the collection of thoughts, feelings, and perceptions social workers have of email in the workplace. This approach allowed data to be collected through both methods, with the dominant method of quantitative data supported through qualitative data (Gitlin & Czaja, 2016). This concurrent study collected data via an online questionnaire/survey (Appendix A) and interviews at one point in time. The qualitative research was approached phenomenologically to capture the perceptions, thoughts, and feelings as well as lived experiences of social workers (Creswell & Poth, 2018).

### **Institutional Review Board (IRB)**

**Ethical considerations.** The Kutztown University Institutional Review Board (IRB) approved the research protocol through an expedited review process (Appendix B). This study involved no more than minimal risk to human subjects. Sensitive questions included: (1) In the past month, how often have you felt difficulties were piling up so high that you could not overcome them? (2) How often do I feel burned out from my work? (3) When I think about reading or responding to email, am I anxious? Participants may have felt some distress at answering these questions and received an informed consent at the beginning of the survey listing the minimal risk to human subjects. The informed consent listed the national crisis number and directed them to their employee assistance program as additional resources should they find themselves in distress (Appendix C). In addition, participants were provided a debriefing flyer at completion of the survey and qualitative interviews (Appendix D). The

debriefing flyer included the phone number and text line to a national crisis organization, encouragement to access their employers' employee assistance program, and a weblink to the University of Buffalo's social work self-care resources. Kutztown University students and faculty were also provided the opportunity to participate in the study. Recruitment flyers (Appendix D) were distributed via email to the Department of Social Work at Kutztown University. The flyers provided information regarding the study, including the voluntary nature and the link to the SurveyMonkey survey (Appendix E).

**Reimbursement.** Two randomly selected participants received one of two \$25.00 Sheetz gas station gift cards. Participants who completed the quantitative survey were invited to provide their identifying information, phone number and/or email, through access to another weblink at the end of the survey. In addition, participants completing the quantitative survey had the opportunity to volunteer to participate in the qualitative research study and receive a Sheetz gas \$25.00 gift card as incentive for answering the questions in the qualitative portion of this study. Six participants received a \$25.00 Sheetz gas gift card.

**Anonymous and confidential.** No identifying information was collected, making all participants that completed the quantitative survey anonymous to the researcher. However, if the participants opted to participate in the qualitative interviews or the opportunity to receive one of two \$25 Sheetz gas gift cards, their names, email, and phone number were requested, making their identifying information confidential rather than anonymous. This identifying information, if provided, was kept separate from the response data and was not in any way associated with the survey responses. This assured that confidentiality protections of the participants were retained. Individuals who were randomly selected to receive the gift card were notified by phone in February 2019.

## **Study Setting**

The study setting was purposefully selected to capture social workers' responses. The social workers were employed or affiliated within the social service, human service, or university setting in order to answer questions related to email overload, stress, anxiety and depression, poor coping, and burnout (Etikan, Musa, & Alkassim, 2016). The social workers were employed or educated within three membership organizations and one university. The organizations selected were: Juvenile Detention Centers and Alternative Programs (JDCAP); the National Partnership for Juvenile Services (NPJS); and the Pennsylvania Council for Children, Youth, and Family Services (PCCYFS). Letters of support were obtained from the organizations (Appendix F). All organizations provide social services or human services to either children, youth or adults within Pennsylvania or the United States. Additionally, social workers enrolled at Kutztown University were invited to participate in the research study. These organizations have a wide and comprehensive membership base and were able to reach a diverse social work workforce in rural, suburban, or urban settings, allowing for greater generalizability and/or transferability of the findings.

## **Sampling and Recruitment**

The non-probability, purposive sampling was used because participants were not randomized, and the social work participants were selected purposively. Individuals who did not report a BSW, MSW, DSW or PhD in social work were excluded from the quantitative study. Social workers represent a homogenous sampling as they are all bound by the NASW Code of Ethics and share similar life experiences as social workers (Etikan et al., 2016). Only social workers were included in the study as they are required to abide by the NASW Code of Ethics and they share similar values. The organizations were selected because they represent social



service and human service providers that employ large numbers of social workers. Workforce retention issues related to stress and burnout are factors these organizations currently face. Exploring email overload, stress, anxiety and depression, poor coping and burnout may offer additional areas in which to improve efforts to retain social workers. The final sample size was 119 participants (n=119) for the quantitative survey who were recruited through email and newsletter articles distributed by the membership organizations. Students holding a Bachelor of Social Work, Master of Social Work, or a Doctor of Social Work degree, or who were enrolled in a Master of Social Work program at Kutztown University were also provided the opportunity to volunteer for this study. Individuals under the age of 18 were excluded from this study. Further information on the sampling demographics is provided in the results section.

## Measures

### Email Overload

Email Overload is a 14-item scale that has three factors: rapid response expectation, volume, and invasion (Appendix G). Examples of the questions are, “Email interferes with my personal life (invasion),” “Email increases my workload(volume),” and “I am expected to respond to work emails immediately (rapid response expectation).” Responses include a four-point Likert scale that ranges from strongly disagree (1), disagree (2), agree (3), and strongly agree (4). The minimum score is 14 and the maximum score is 56, with higher scores indicating higher email overload. Email overload overall had good internal consistency for this study ( $\alpha = .86$ ), which was determined when analyzed through SPSS 24. The invasion factor had good internal consistency ( $\alpha = .86$ ) and volume was adequate ( $\alpha = .76$ ). The rapid response expectation subscale had poor internal consistency, ( $\alpha = .29$ ). (Tavakol & Dennick, 2011). (Appendix H). Each of the factors were also analyzed using SPSS 24. Quartiles for email overload total, which included the subscales of invasion, volume, and rapid response expectation, had a cumulative score range of 14 to 56. Quartiles were completed to determine the assessment of severity and were assigned the following values based on scores: high degree of email overload (score of 47-56), moderate degree of email overload (score of 42-46), mild degree of email overload (score of 35-41), and low degree of email overload (score of 0-34). Quartiles were also completed on each subscale (invasion, volume, and rapid response expectation) to determine the severity values. The invasion total score was 24 with values: high degree of email invasion (16-24), moderate degree of email invasion (14-15), mild degree of email invasion (11-13), and low degree of email invasion (0-10). The rapid response expectation score ranged from 2 to 8. A high degree of rapid response expectation was assessed by a score of 5-8, mild and moderate severity was indicated

by scores of 4-5, and low degree of rapid response expectation was 0-3. Volume total score was 24 with values: high degree of email volume (13-24), moderate degree of email volume (12-13), mild degree of email volume (9-11), and low degree of email volume (0-8).

#### **Perceived Stress Scale 4 (PSS-4)**

Perceived Stress scale 4 (PSS-4) is a four-item validated measure of perceived stress (Cohen, Kamarck, & Mermelstein 1983). Responses are assessed through a five-point Likert scale, never (1), almost never (2), sometimes (3), fairly often (4), very often (5). The minimum score is 4 with a maximum of 20 with higher scores indicating more stress. Examples of the questions are “In the past month, how often have you felt confident about your ability to handle your personal problems?” and “In the last month, how often have you felt that things were going your way?” (Cohen et al. 1983) For this study, the PSS-4 had adequate internal consistency ( $\alpha = .74$ ) (Appendix H).

#### **Burnout**

Burnout was measured by asking participants to rate the statement “Based on your definition of burnout, I feel burned out from my work” never (0), once a month (1), a few times a month (2), once a week (3), a few times a week (4), every day (5) (Appendix I). The minimum score was 0 with a maximum of 5. Higher scores indicated higher levels of burnout and was developed with input from the single-item burnout scale (Dolan et al., 2015). Dolan’s single-item scale, “Overall, based on your definition of burnout, how would you rate your level of burnout?” is rated on a Likert Scale. Responses in his scale were, “I enjoy my work. I have no symptoms of burnout” (1); “Occasionally I am under stress, and I don’t always have as much energy as I once did, but I don’t feel burned out” (2); “I am definitely burning out and have one or more symptoms of burnout” (3); “The symptoms of burnout that I’m experiencing won’t go away. I

think about frustration at work a lot” (4); “I feel completely burned out and often wonder if I can go on. I am at a point where I may need some changes or may need to seek some sort of help” (5). The minimum score is 1 with a maximum 5. The single-item burnout measure has a high correlation (0.79) to other longer burnout measures like the Maslach Burnout inventory (Dolan et al., 2015) (Appendix J).

### **Anxiety and Depression**

Anxiety and Depression were measured by the validated Patient Health Questionnaire-4 (PHQ-4) (Appendix J). This questionnaire was developed as an alternative to lengthier measures (Kroenke, Spitzter, Williams, & Lowe, 2009). The PHQ-4 combines the PHQ-2 and the GAD-2 creating the four-item measure. The purpose of the scale is to quickly evaluate the existence of anxiety and depression. For example, respondents were asked, “Over the last 2 weeks, how often have you been bothered with the following problems?” Answers ranged from (1) feeling nervous, anxious, or on edge and (2) not being able to stop or control worrying. Likert scale responses are scored “not at all” (0), “several days” (1), “more than half the days” (2), “nearly every day” (3). The composite score ranges from 0 to 12 with higher scores indicating higher levels of anxiety and depression (Kroenke et al., 2009). The PHQ-4 had good internal consistency with the Cronbach’  $\alpha = .85$ . (Appendix K).

### **Poor Coping**

Poor Coping was measured with six questions. Responses were assessed through a four-point Likert scale, strongly disagree (1), disagree (2), agree (3), strongly agree (4) (Appendix K). Participants were asked to respond to statements, (1) “Managing email is difficult”; (2) “I can manage my email well”; (3), “Communication by email is stressful”; (4), “I like to communicate by email”; (5) “Email causes my work to be more than I can handle”; (6) “Email makes my work

easier.” The composite score ranged from 6– 24 with a minimum score of 6 and a maximum 24. The higher scores indicated higher levels of poor coping and the subscale questions had a good internal consistency with a Cronbach’s  $\alpha = .85$ , which was run on SPSS 24. Quartiles were completed to determine the severity of poor coping and were assigned the following values based on scores: high degree of poor coping (score of 14-24), moderate degree of poor coping (score of 12-13), mild degree of poor coping (score of 10-11), and low degree of poor coping (score of 0-9).

### **Demographic Variables**

Generational cohorts were measured through two measures, the Pew, and Strauss and Howe age defined cohort. Pew defined the cohorts as the silent Generation (born between 1928 - 1945), Boomers (1946-1964), Gen-Xers (1965-1980), Millennials (1981 to 1996), and Generation Z (post 1996) (Dimock, 2018); Strauss and Howe defined the cohorts as the Silent Generation (1925-1942), Boomers (1943-1960), Gen-Xers,(1961-1981), Millennials (1982-2004), and Generation Z (born 2005) (Howe & Strauss, 2007). Social work degree is defined by two categories: Bachelor of Social Work and graduate degree (Master of Social Work, Doctor of Social Work, or PhD). Gender is measured through three categories: female, male, or other. The other category in the gender measurement allowed participants to identify their gender identity.

### **Pilot Study**

A pilot study was emailed to three professionals working in the human services field and a paper copy was provided to three professionals. Participants were given instructions on how to complete the survey. The online pilot was used to ensure that the link that was made available was accessible and the survey could be easily completed. The paper copy was provided as a way to capture typographical and grammatical errors. Both pilot groups were asked to provide

feedback on the questions, the time needed to complete the survey, and the ease of use. One participant felt the survey was easy to complete but did suggest using the Maslach Burnout inventory which is a validated but lengthier scale for burnout. All other participants estimated the survey took on average seven minutes and was clear and easy to complete. There were a few typographical errors that were corrected after comment from the participants. The scales for email overload and poor coping were developed for this study after research literature did not yield adequate measurement tools. Measurement tools reviewed were related to technostress (Ragu-Nathan, Tarafdar, & Tu, 2008), information and communication demands and resources (Day, Paquet, Scott, & Hambley, 2012), and a time pressure scale (Harris, Marett & Harris, 2013). The author of the technology time pressure scale was contacted through email communication and granted permission to modify their scale and questions for purposes of this study (Harris, Marett, & Harris, 2013). Keeping in mind that a brief survey tool was designed to take participants five to seven minutes to complete, it was determined that the one-item burnout scale would remain. Two of the scales, PSS-4 and the PHQ-4, were valid scales. The email overload, poor coping, and burnout scale have yet to be validated and should be analyzed for reliability and validity in future studies.

### **Quantitative Data Analysis**

Multiple linear regressions were used to assess the impact of the continuous independent variables (email overload) on the continuous dependent variables (stress, anxiety and depression, poor coping, and burnout). Regression will answer the first research question, “Is there a relationship between email overload and stress, poor coping and burnout in social workers?” Multivariate Analysis of Variance (MANOVA) was used to examine the impact of three categorical variables (social work degree, gender, generational cohort), on five continuous

variables (overload, stress, anxiety and depression, coping, burnout). MANOVA answered the second research question, “Do gender, generational cohort, and social work degree impact the level of email overload, coping, stress, and burnout?” The data was analyzed using SPSS 24. The last research question was answered through the qualitative interviews and analysis, capturing social workers’ perceptions, thoughts, and feelings related to email. The qualitative interviews and analysis will be discussed further.

### **Qualitative Research Approach**

The phenomenological approach allowed the researcher to capture individual perceptions, thoughts, and feelings regarding email and the potential presence of stress and burnout in individual social workers (Padgett, 2017). Phenomenology implored a philosophical approach focusing on “how” and “why” the phenomenon of email overload related to stress and burnout in social workers. Collecting data in this manner helped formulate a meaning of words and contextual meanings of the individual social workers’ experiences. The essence of the phenomenological approach blended well with the topic related to email overload and allowed multiple participants to share deep and meaningful experiences (Creswell & Poth, 2014). Emotions, philosophies, and feelings captured additional insight into how the components of email overload (volume, invasion, and rapid response expectations) and the individual responses are created by not only their environment but their personal appraisal of the environmental influence (Padgett, 2017). The research question for this study was, “What are social workers’ perceptions, thoughts, and feelings related to email?”

### **Role of Researcher**

The researcher’s role in this study was participant as observer (Padgett, 2017). In order to eliminate or lessen the degree of bias, the researcher was required to self-reflect and recognize

her own views and her emerging expertise in qualitative research (Padgett, 2017). This researcher identified as a Gen-Xer, and also fits on the cusp of identifying as a Boomer. She is a social worker and has tele-commuted for the last 17 years of her career. This has required her to use email communication as her primary means of communication with her colleagues. She is concerned for our future human services workforce and tends to see technology as an intrusion into personal life. Recognizing her own views allowed her to enter into the interviews while keeping her own views in check. The researcher ensured that participants felt safe to share their thoughts freely with anonymity to lessen respondent bias. Researcher bias was lessened through triangulation of quantitative and qualitative methodologies (Padgett, 2017).

### **Qualitative Sampling**

The purposive sample included six (N=6) social workers, defined as holding a Bachelor of Social Work, Master of Social Work, or Doctor of Social Work/Doctor of Philosophy degree or a degree in a social work-related field. The social workers were employed in the human services or social services workforce. There were no limitations on gender or race and ethnicity for this study. Only social workers over the age of 18 were permitted to participate in the research study.

### **Qualitative Data Collection**

The recruitment process was provided through a request on the web-based surveys sent to employees. Each web-based survey submitted through SurveyMonkey allowed the participant to volunteer for the individual interview through a web-based link provided at the completion of the survey. SurveyMonkey provides anonymity and confidentiality for participants. However, those who volunteered for the interview were required to provide identifying contact information through a separate web-based link. This information was kept separate from the survey



responses. The following organizations acknowledged support: the Pennsylvania Council for Children, Youth and Family Services (PCCYFS), the Juvenile Detention Centers and Alternative Programs (JDCAP), and the National Partnership for Juvenile Services (NPJS). The data collection instrument to be used was participant as observer through a face-to-face interview which was conducted either in person or through Skype (Padgett, 2017). Interviews averaged 30 minutes in length and were recorded using an audio recorder or Skype recorder. The interviews were transcribed and then coded and analyzed through NVivo.

Examples of the open-ended questions that were asked during the interview:

1. What form of communication do you prefer?
2. What are some of the tasks that you use email for during the workday?
3. What are your thoughts and feelings when you think about email?
4. How does email impact your work and personal life?
5. Is there anything else related to email that you would like to share with me?

### **Qualitative Validation Strategies**

As this is a mixed-methods design, the data from both the quantitative study and the qualitative study were complementary with the quantitative data dominant (Creswell & Poth, 2018). Using this approach measured the theoretical components and responses and captured emerging themes. The responses were coded line by line and paragraph by paragraph, capturing the essence of the phenomenon of email through responses and significant statements.

Participants were emailed a copy of the verbatim transcription in January 2019 and were provided the opportunity to validate their interview through member checking “writ large” (Creswell & Poth, 2018). Three participants (50%) responded that the transcription was accurate. In addition, norming sessions and peer review were enlisted, with review of the memos,

comments on the memos, and review of the code book and themes increasing the validity as the additional reviewer was able to question “methods, meanings, and interpretations,” creating an additional layer of oversight of the researcher (Creswell & Poth, p. 263, 2018). Reliability was also gained through detailed notes, memos, and transcription of digital recordings of the interviews. (Creswell & Poth, 2018).

### **Qualitative Data Analysis Plan**

NVivo software was used to analyze the qualitative data. Initial coding was done by hand, paragraph by paragraph and then line by line. This allowed the interview to be categorized into something that could be measured and captured the emerging themes and contextual content (Padgett, 2017). This was designed to capture social worker’ perceptions, thoughts, and feelings surrounding email and to identify words and themes that supported the quantitative data. Human service and social service agencies place a heavy reliance on this group to meet the needs of the individuals and communities they serve. To ensure that we best meet those workers’ needs, exploration of the potential relationship between email overload and stress and burnout is necessary to educate and advocate for organizational change. The purposive typical sampling for this proposal is specific to the social workers working within the field by drawing on their collective experiences (Creswell & Poth, 2018; Padgett, 2017).

An initial codebook was developed based on the theoretical framework of the Transactional Model of Stress. Once the interviews were conducted, additional codes were added to the code book. The initial coding captured through the theoretical framework included: (1) generational cohort, based on age, (2) gender, (3) email overload, (4) stress, (5) burnout, and (6) poor coping. The code book included detailed definitions of the initial codes. For example, email overload was defined as email volume, email rapid response expectation, and email invasion.

Additional phases of coding completed line by line, as well as by paragraph captured the meanings to dialogue (Creswell, & Poth, 2018; Saldana, 2016). During the interviews, the researcher took notes and added those notes in the form of memos into the NVivo software.

## Results

The purpose of this study was to explore the relationship between independent variable email overload and dependent variables stress, anxiety, depression, poor coping, and burnout in the social work workforce. Email overload has three factors: volume, rapid response expectation, and invasion. It was expected email overload would increase the dependent variables.

Generational cohort, gender, and social work degree were also examined to determine if they had an impact on the dependent variables. It was expected there would be significant group differences in email overload. In order to triangulate the data that was analyzed using SPSS 24, qualitative interviews were conducted with social workers to assess their perceptions, thoughts and feelings related to email.

### Participants

The majority of participants (n=119) recruited through email who completed the quantitative questionnaire were female (88.2%, n=105), employed in a social work-related job (97%, n=116) for more than 11 years (62%, n=74), and were licensed social workers (49%, n=58). Positions included direct service (40%, n=47), administration (33%, n=39), clinical (25%, n=30), supervisors (21%, n=25), and other (12%, n=14). The majority of participants were white/Caucasian (80%, n=95), while the minority were Black/African American (13%, n=16), Hispanic (3%, n=4), and biracial (3%, n=4). A few participants made less than \$30,000 (6%, n=7), while 1 out of 3 made between \$30,000 to \$49,999 (35%, n=42), and \$50,000 to \$74,999 (35%, n=42), with the remaining 1 out of 5 making over \$75,000 (23%, n=25). The majority held graduate degrees (65%, n=77) such as MSW, DSW or PhD while a minority (31%, n=37) held a Bachelor of Social Work degree (BSW). All numbers in the demographic statistics do not add up to 100% (N=119) due to missing data among those who reported their social work degree

(n=114), approximate income (n=118), employed in a social work-related job (n=118), and licensed as a social worker (n=118). Participants reported on the number of email accounts, with the majority owning three accounts (39.9%, n=47), followed by two accounts (36.1%, n=43), four accounts, (16.8%, n=20), five accounts (5%, n=6), one account (1.7%, n=2). Only one participant reported having six email accounts (.8%, n=1). Generational cohort varied slightly depending on the defined age grouping by Pew or Strauss and Howe (See table 1). Based on Pew, approximately 2 out of 5 participants were Millennials (40%, n=48) while 1 out of 5 were Boomers (21%, n=25). However, when Strauss and Howe years were used, half of the participants were Gen-Xers (49.5%, n=59). There were no respondents from the Silent Generation or Generation Z for either cohort.

Table 1

*Comparison of Pew and Strauss and Howe Generational Cohort*

	PEW	N	Strauss and Howe	N
Millennials	40%	48	38.70%	46
Gen-Xer	38%	46	49.50%	59
Boomers	21%	25	11.80%	14

Note: Pew and Strauss and Howe (SH) define generations by year born. Pew/Millennials born in 1981; SH/Millennials born in 1982; Pew/Gen-Xers born in 1965; SH/Gen-Xers born in 1961; Pew/Boomers born in 1946; SH/Boomers born in 1943).

**Electronic Communication**

All participants were asked to rank their preferred means of electronic communication (see table 2). Options included email, text, video chat, phone, and social media. Approximately half of participants ranked email (47.1%, n=56) as their preferred means of communication; 1 out of 4 people preferred text (22%, n=27); slightly less than 1 out of 5 preferred video chat (16.8%, n=20); and 1 out of 10 preferred phone (10.9%, n=13). No participants listed social

media as their most preferred means of electronic communication. Participants reported that social media was the least preferred form of electronic communication (61.3%, n=73).

Table 2  
*Preferred Means of Electronic Communication by Rank*

Ranking	Email		Text		Video		Phone		Social Media	
	%	n	%	n	%	n	%	n	%	n
1 <sup>st</sup>	47.10%	56	22.70%	27	16.80%	20	10.90%	13	0.00%	0
2 <sup>nd</sup>	24.40%	29	23.50%	28	8.40%	10	37.00%	44	1.70%	2
3 <sup>rd</sup>	16.00%	19	26.10%	31	16.80%	20	29.40%	35	8.40%	10
4 <sup>th</sup>	8.40%	10	23.50%	28	26.90%	32	15.10%	18	21.80%	26
Least Preferred	0.00%	0	0.80%	1	28.60%	34	5.00%	6	61.30%	73
Missing	4.20%	5	3.40%	4	2.50%	3	2.50%	3	6.70%	8

Note: Email was reported as the preferred means of communication (47.1%) and Social Media was reported as the least preferred (61.3%).

There were differences in the ranking of preferred means of communication by generational cohort (see table 3). According to the Strauss and Howe defined groups, the Gen-X cohort (n=30) reported they preferred email over other forms of communication and social media as their least preferred (n=32). Table 3 shows the most preferred and least preferred means of communication when compared between Pew and Strauss and Howe age definitions of cohorts.

Table 3  
*Generational Comparisons of Communication Preferences*  
First Preferred Method of Electronic Communication

	Pew			Strauss & Howe		
	Boomer	Gen-Xer	Millennial	Boomer	Gen-Xer	Millennial
Email	16	22	18	9	30	17
Text	0	14	13	0	14	13
Video	4	6	10	3	8	9
Phone	5	3	5	2	6	5
Social Media	0	0	0	0	0	0

Note: Pew and SH preferred email response had notable differences between the Boomer cohort (Pew, n=16; SH, n=9) and Gen-Xer cohort responses (Pew, n=22; SH, n=30).

Table 4  
*Generational Comparisons of Communication Preferences*  
 Least Preferred Method of Electronic Communication

	Pew			Strauss & Howe		
	Boomer	Gen-Xer	Millennial	Boomer	Gen-Xer	Millennial
Email	0	0	0	0	0	0
Text	0	0	1	0	0	1
Video	7	15	12	2	20	12
Phone	1	3	2	0	5	1
Social Media	17	26	30	12	32	29

Note: Social Media was the least preferred method of communication between all cohorts.

### Regression Results

This section describes the analyses that were conducted to answer the research questions. The first research question was, “Is there a relationship between Email Overload (EO) and burnout, stress, anxiety and depression, poor coping, and burnout in social workers?” Several linear regressions were performed to assess the relationship between independent variable email overload (volume, rapid response expectation, and invasion) and dependent variables stress, anxiety, depression, poor coping, and burnout in the social work workforce. It was expected that email overload would increase the dependent variables. Correlations were determined prior to other data analyses to determine if there were significant connections between the variables (see Table 5).

This model was examined for multicollinearity in which correlations higher than .75 are considered to be of concern and should be evaluated for multicollinearity (Flora, 2017). However, none of the variables (stress, anxiety & depression, poor coping, burn out, invasion, volume, and rapid response expectation) had a correlation higher than .75 (Flora, 2017).

Table 5

*Means, standard deviation and Pearson correlation matrix for continuous variables (N=119)*

Variable	M	SD	1	2	3	4	5	6	7
1. Stress	10.59	2.66							
2. A&D	3.19	2.76	.715**						
3. PCope	11.78	2.98	.343**	.312**					
4. Burned Out	2.14	1.24	.438**	.543**	.137				
5. Invasion	13.47	3.98	.356**	.345**	.701**	.158			
6. Volume	11.17	2.50	.312**	.252**	.719**	.069	.539**		
7. RRE	4.55	1.44	.266**	.253**	.443*	.161	.295**	.325**	

Note. A&D=Anxiety and Depression; PCope=Poor Coping; RRE= Rapid Response Expectation;  
\*\* p<. 01

### **Email Overload and Stress**

Email overload total predicted stress [F (1, 114) =21.65, p<.001]. Email overload explained 16% of the variation of stress ( $R^2=.160$ ,  $\beta=.121$ , p<.001). The three predictor (independent) variables, invasion, volume, and rapid response expectation, and the dependent variable of stress were entered into the model separately through hierarchical regression with the result that email invasion [F (1, 114)=16.42, p<.001], email volume [F (1, 113)=9.60, p<.001], and rapid response expectation [F (1, 112)=7.40, p<.001] significantly predicted stress. Email invasion had the most significant contribution to stress with 13% ( $R^2=12.6$ ) of the variation in stress due to invasion. However, the R square change was not significant when volume or rapid response were added to the model.

### **Email Overload and Poor Coping**

Email overload total predicted poor coping [F (1, 114) =591.22, p<.001]. Email overload explained 84% of the variation of poor coping ( $R^2=.838$ ,  $\beta=.309$ , p<.001). The three predictors (independent variables) invasion, volume, and rapid response expectation and the dependent variable of poor coping were entered into the model separately through hierarchical regression, resulting in email invasion [F (1, 114)=110.42, p<.001] email volume [F (1, 113)=109.28, p<.001], and rapid response expectation [F (3, 112) 82.14, p<.001] significantly predicting poor



coping. Email invasion had the most significant contribution to poor coping with 50% ( $R^2=.492$ ,  $\beta = .524$ ,  $p < .001$ ) of the variation in poor coping skills due to the email invasion. There was a significant change in the model when both volume ( $p < .001$ ) and rapid response ( $p < .01$ ) were added. Model 2, which included invasion and volume, contributed to 66% of the variation in poor coping skills ( $R^2=.659$ ) while Model 3 which included invasion, volume, and rapid response contributed to 69% ( $R^2=.688$ ) of the variation in poor coping skills.

### **Email Overload and Anxiety and Depression**

Email overload total predicted anxiety and depression [ $F(1, 113) = 17.81$ ,  $p < .001$ ]. Email overload explained 14% of the variation of anxiety and depression ( $R^2 = .136$ ,  $\beta = .115$ ,  $p < .001$ ). The three predictors (independent variables), invasion, volume, and rapid response expectation were entered into the model separately through hierarchical regression, resulting in email invasion [ $F(1, 113) = 15.22$ ,  $p < .001$ ], email volume [ $F(1, 112) = 8.03$ ,  $p < .001$ ], and rapid response expectation [ $F(1, 111) = 6.35$ ,  $p < .001$ ] significantly predicting anxiety and depression. Email invasion had the most significant contribution to anxiety and depression with 12% ( $R^2 = .121$ ) of the variation in anxiety and depression due to invasion. However, the R square change was not a significant change when volume or rapid response were added to the model.

### **Email Overload and Burnout**

Email invasion, volume, and rapid response expectation were entered separately into the model through hierarchical regression. Email overload total did not predict burnout ( $p = ns$ ). There were no significant associations found between email overload as a predictor to burnout.

The first hypothesis theorized that email overload (EO) would increase stress, anxiety and depression, poor coping, and burnout, and was partially confirmed in that a significant association was found between EO total and stress, anxiety, and depression and poor coping. The

predictor variable, email invasion, accounted for the highest percentage of variability in stress, anxiety and depression, and poor coping. There were no significant associations found when testing EO as a predictor to burnout. A linear regression was run to test Hypothesis 2 to determine if there was a significant relationship between poor coping and burnout. It was expected that poor coping would increase burnout, but no significance was found.

Pew generational cohorts, Strauss and Howe generational cohorts, gender, and social work degree were examined through multivariate analysis of variance (MANOVA) to determine if they had an impact on the dependent variables (stress, anxiety and depression, poor coping, and burnout). Pew and Strauss and Howe cohorts were analyzed separately due to variations in the defined age cohorts. Pew/Boomers (1946-1964), Strauss and Howe/Boomers (1943-1960), Pew/Gen-Xers (1965-1980), Strauss and Howe/Gen-Xers (1961-1981), Pew/Millennials (1981 to 1996), and Strauss and Howe/Millennials (1982-200?), (Dimock, 2018; Howe & Strauss, 2007). It was expected there would be significant group differences in stress, anxiety and depression, poor coping, and burnout. After MANOVA was completed, post hoc univariate ANOVAs were completed to determine the specific group significances. Power was calculated and effect sizes were calculated. Power over .8 is satisfactory and effect sizes  $\eta^2$  with .01 small, .06 medium, and .14 large show the strength of effect sizes (Stevens, 1996).

### **Pew Generational Cohort on Stress**

The MANOVA revealed a significant difference in stress scores across Pew generational cohorts [ $F(2, 212) = 5.63, p = .005, \eta^2 = .091, \text{power} = .852$ ]. The effect size strength is medium ( $\eta^2 = .091$ ) for Pew generational cohorts. Univariate ANOVAs with multiple comparisons indicated that there was a significant difference ( $p = .004$ ) between Boomers ( $M = 8.95, SD = 2.94$ ) and Gen-Xers ( $M = 11.13, \text{and } SD = 2.62$ ), and between Boomers and Millennials ( $M = 10.79,$

SD=2.32;  $p=.017$ ) on stress. There was no significant difference between Millennials and Gen-Xers on stress ( $p=ns$ ). Boomers had significantly lower stress than Gen-Xers and Millennials, but Gen-Xers and Millennials are similar in the levels of stress. The dependent variables, gender and social work degree, were non-significant, regarding stress.

### **Strauss & Howe Generational Cohort on Stress and Burnout**

The MANOVA revealed a significant difference in stress scores across Strauss & Howe generational cohorts [ $F(2, 212) = 5.77, p=.004, \eta^2=.093, power=.860$ ]. The effect size strength is medium ( $\eta^2=.093$ ) for Strauss and Howe generational cohorts. Univariate ANOVAs with multiple comparisons indicated that there was a significant difference ( $p=.006$ ) between Boomers ( $M=8.31, SD=2.81$ ) and Gen-Xers ( $M=10.80, SD=2.73$ ), and between Boomers and Millennials ( $p=.004, M=10.93, SD=2.30$ ), regarding stress. There was no significant difference between Millennials and Gen-Xers ( $p=ns$ ) regarding stress. Boomers had significantly lower stress than Gen-Xers and Millennials, but Gen-Xers and Millennials were similar in levels of stress. There was no difference regarding stress between Pew or Strauss & Howe cohorts, each found that Boomers had lower stress than the Gen-Xers or Millennial cohort.

The MANOVA revealed a significant difference in the burnout scores across Strauss & Howe generational cohorts [ $F(2, 212) = 3.14, p=.047, \eta^2=.053, power=.593$ ]. The effect size strength is small ( $\eta^2=.053$ ) for Strauss and Howe generational cohorts and burnout score. Univariate ANOVAs with multiple comparisons indicated that there was a significant difference between Boomers ( $M=1.38, SD=1.04$ ) and Gen-Xers ( $M=2.32, SD=1.31, p=.037$ ) but there was no significance between Boomers and Millennials ( $M=3.39, SD=2.81, p=ns$ ) or Gen-Xers and Millennials on burnout ( $p=ns$ ). Boomers had a significantly lower burnout score than Gen-Xers. Pew cohorts did not indicate a significance in burnout, whereas Strauss and Howe found that

Gen-Xers had higher rates of burnout than Boomers. This suggests that age is a factor influencing burnout scores, particularly between the Boomer and Gen-Xer cohorts. The number of Boomers according to Pew was (n=22) and Gen-Xers (n=45) and Strauss and Howe cohorts and according to SH was (n=13) Boomers and (n=56) Gen-Xers. Those born between 1943 and 1964 could be a new category of Boomer and those born between 1961 and 1981 would make up a new age-defined cohort by combining Pew and Strauss and Howe cohort definitions.

### **Social Work Degree and Anxiety and Depression**

The MANOVA revealed a significant difference in anxiety and depression scores across social degrees [F (1, 102) =7.98, p=.006,  $\eta^2$ =.069, power=.800]. The effect size strength is medium ( $\eta^2$ =.069) for social workers. Univariate ANOVAs with multiple comparisons indicated that there was a significant difference between those with a Bachelor of Social Work degree (M=4.29, SD=2.86) and those with graduate degrees (M=2.72, SD=2.64). Those holding a bachelor's degree indicated higher levels of anxiety and depression.

The results of MANOVA partially supported Hypothesis 3. Generational cohort and social work degree did impact the relationship of email overload, on stress, anxiety and depression, poor coping, and burnout. Both Pew and Strauss and Howe found similar results between Boomers and Gen-Xers and Boomers and Millennials. Boomers had the lowest stress, anxiety and depression, poor coping and burnout. Millennials and Gen-Xers showed higher levels but were comparable to each other. There was no statistical finding on the impact of gender on stress, anxiety and depression, poor coping, and burnout.

In summary, Hypothesis 1 was partially supported finding statistical significance in the relationship between email overload and stress, anxiety and depression, poor coping. There were variations to the significance with associations found, most notably when invasion was added as

a single factor to stress, anxiety, depression, and poor coping. The relationship between poor coping and increased burnout were not statistically significant, thereby not supporting Hypothesis 2. The findings for Hypothesis 3 were also partially supported with differences in perception of email overload and stress and anxiety and depression, poor coping, and burnout, notably between the generational cohorts and social work degrees. Boomers had the lowest levels of stress, anxiety and depression, poor coping, and burnout compared to Gen-Xers and Millennials. Those with a bachelor's degree in social work reported higher levels of anxiety and depression than those with a graduate degree. Exploration of the anxiety and depression in social workers is something to consider for future research. There was no significant difference between gender and email overload.

### **Qualitative**

The purpose of the qualitative research was to answer the research question, "What are social workers' perceptions, thoughts, and feelings related to email?" Though there is a wealth of research and information related to email overload, there is little that can be found that discusses email in relation to the social work workforce. This research set out to explore email and social workers through a phenomenological framework. This mixed-methods framework utilizes the qualitative study as an addition to the quantitative data collection to provide another means of capturing nuances that cannot be captured in numbers. The phenomenological approach helped to triangulate quantitative findings and captured emerging themes through the lived experiences of social workers (Padgett, 2017).

A purposive sample of six females (N=6) working in a social work-related role participated in this study. Participants all held a degree in a social work-related field. Three participants held an MSW, two participants held a BSW, and one participant held a bachelor's in

criminal justice. Three of the six participants are MSW students, with two planning to graduate from an accredited MSW program in May 2019. Two participants were born in 1978, aligning with the definition of “Gen-Xer” (n=2). The remaining four were born between 1980 and 1996, aligning with the definition of Millennial (n=4). All participants live and work in Pennsylvania. Participants’ backgrounds and work experiences varied and included one vice-president of a human services agency, an MSW Intern-Outpatient Therapist, a Direct Service Worker, Therapeutic Staff Support, a Stakeholder Advocate for child welfare and human service agencies, a school social worker, and a child welfare supervisor (see table 6).

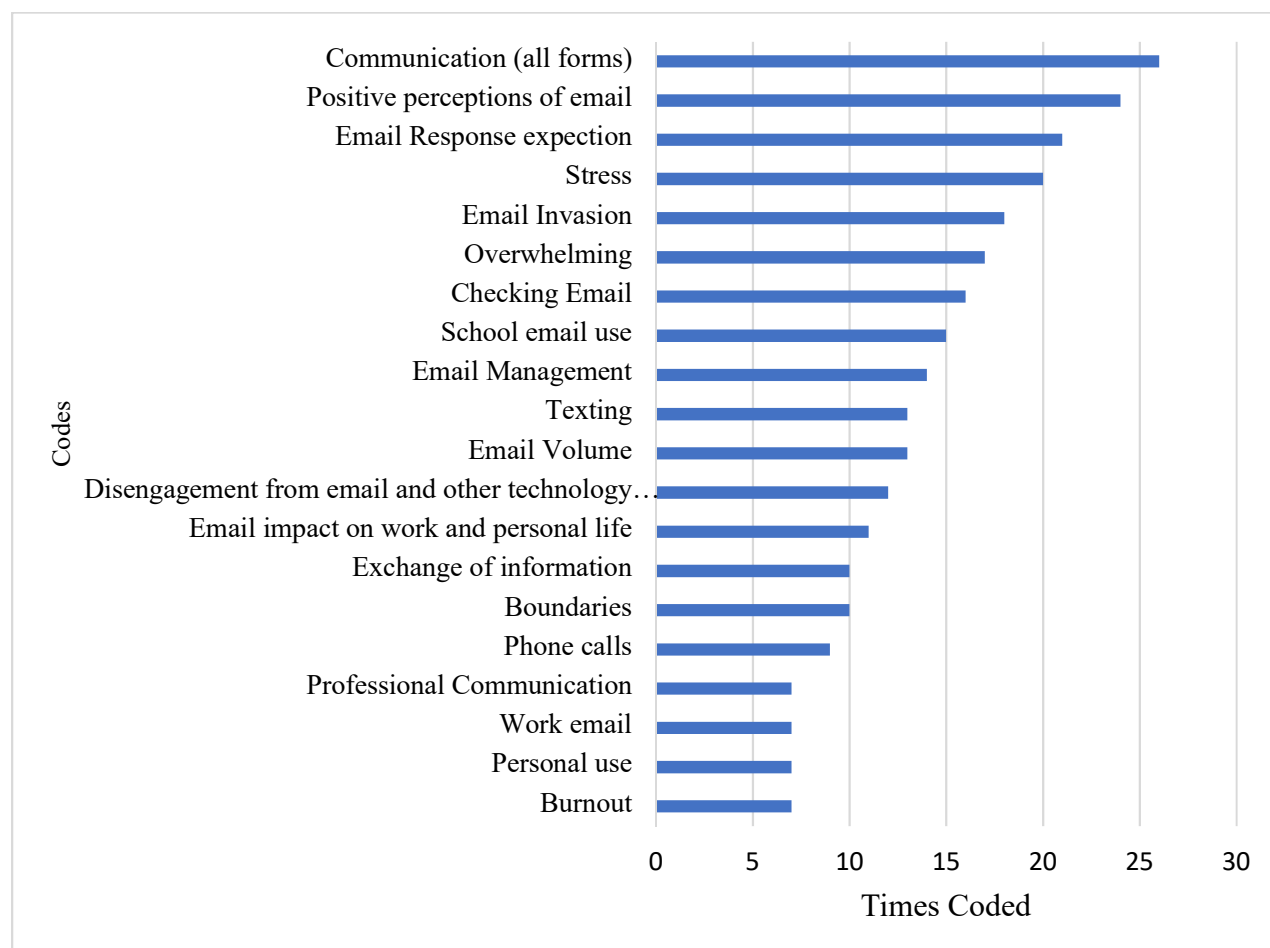
Table 6  
*Interview Participant Demographics*

Social Work Role	Year Born	Social Work Degree	Gender	Generational Cohort
Vice-president	1978	Master’s in social work	Female	Gen-Xer
School Social Worker Supervisor	1978	Master’s in social work	Female	Gen-Xer
MSW Student	1990	Bachelor’s in criminal justice	Female	Millennial
Direct Service Worker	1987	Bachelor’s in Social Work	Female	Millennial
MSW Student				
MSW Intern-Outpatient Counseling	1992	Bachelor’s in social work	Female	Millennial
MSW Student				
Stakeholder Advocate	1992	Master’s in social work	Female	Millennial

Note: Participants fell within both the Pew and SH cohort definitions.

Interviews were conducted face to face (3) and through video conferencing via Skype (3) and took place over a span of two months (November through December 2018). All interviews were recorded with either a voice recorder or Skype recording technology and lasted on average of 30 minutes. Verbatim transcriptions were initially coded paragraph by paragraph, then line by line, using a method of inductive and deductive coding using NVivo (Saldana, 2016). Validation

and reliability of the findings was completed through member checking, norming sessions, and peer review. Through the coding process, a total of 46 codes were identified and developed into three themes: Perceptions of Work and Personal Email Communication; Perceived Relationship Between Email Overload, Stress and Burnout; and Management of Email and Coping Strategies.



*Figure 4. Top 20 Codes*

Note: Codes were derived through all participant interviews. Email Overload Total was excluded from the chart but was the highest coded (n=62) item when Email Response, Volume, and invasion were added to the code.

### **Perceptions of Work and Personal Email Communication**

Perceptions of Work and Personal Email Communication refers to any means of sharing, exchanging, or conveying information such as communication by text, phone call, email, and face-to-face interaction. When the question was asked “What form of communication do you

prefer?” half the participants, one Gen-Xer and two Millennials, thoughtfully responded by asking for clarification on the setting – work or personal? After they were instructed that this could be either setting, they answered by clarifying their communication preferences in their work and personal environments. Each cited a specific instance in which they would use different methods of communication such as face to face, phone call, email, and text messaging. The communication preferences for work-related tasks varied. For instance, the participant who was a vice president and of the Gen-Xer cohort and the participant who was a child welfare supervisor and part of the Millennial cohort cited email as their sole preferred means of communication during the workday. The participant who was a direct service worker and in the Millennial cohort cited text as her preferred means of communication during the workday. Three other participants comprised of a Gen-Xer and Millennials, and not in supervisory or leadership positions, provided a combination of preferred means. They elaborated on when those combinations may be used, which included the nature of the exchange of information, the immediacy of the information, and with whom they were communicating. The combinations of communication during their workday included: face to face, phone call and email, phone call and text, and email and phone call. Communication by way of email was rarely used for personal exchanges, except for obtaining coupons or shopping, and, on occasion, communication with family members. Email was perceived as a more formal means of communication within the work setting with the Millennial supervisor stating, “Uh, for personal reasons I would prefer probably texting or calling the best. Um, which then I guess, kind of is similar to texting for professional would be email.” The participant later described communication by way of email as a “love -hate” relationship. The Gen-Xer/School Social Worker participant reported that though email is not her preferred means of communication, it the easiest and most efficient way to



communicate in her role. She describes email as “being right at your fingertips, um, can be a blessing and a curse.”

When discussing personal uses of email as a form of communication, the Gen-Xer/Administrator described how email is less impactful on her personal life:

It really does not impact my personal life. I don't really communicate with people via email outside of work, except for maybe my mother, um, so, I...I mean I have it on my phone to scroll through but again a lot of times it's just junk mail. You know where you get a hold of a company that you want a coupon for and then they have your email address and so it doesn't really have nearly as much of an impact as it does at work.

Discussion surrounding communication in the work environment elicited a number of responses. For instance, one Millennial said she preferred phone or text messaging but explained that it is dependent upon what is being communicated and with whom the communication takes place:

Um, depends on the conversation. So, if it's something short or related to like work or like just a location related, I prefer text, but if it's a longer conversation discussing some sort of something, issue, phone is usually better for that, a phone-call.

When Millennial/Participant 4 was asked how email impacts both her personal and work life, she touched on the volume component of email overload. She described the personal impact of the stress related to the volume of personal email as:

Um, emails impact...my personal life, I'm a be completely honest, I have like close to 30,000 unread emails in my personal email. It started out, maybe like 500, and it just got, like I don't know if I had a lot of Spam or whatever, it just, and like I couldn't ever go back and just like delete all those emails.

Gen-Xer/Administrator described email overload, although when she was speaking, it was matter of fact; there was no stress in her voice, and she was comfortable with how work email was also a part of her personal life and vacation time. She related checking work email on her personal time as her self-care. She reported on the email volume waiting in her “inbox” and described how,

you can just kind of click through emails at your own pace and be able to get the information that you need, um, I think sometimes it can be a bit overwhelming, especially when you are out for a while, um, if I am out for a week, I generally come back to about a thousand emails.

The Millennial employed as a direct service worker described email communication volume and the expectations to respond to work email can trigger some anxiety. Her preference for other means of communication, such as texting, has more to do with volume and her ability to quickly decide if the message requires a response:

So, with text messaging you don't have to actually stop what you're doing, you can kind of see if it's important or not, um, and then I feel like with text messages sometimes they send out “blast” texts so then you are informed and it's like multiple people in one text thread. Um, I won't say email just because I feel like emails, at a workplace you get so many emails, and some are relevant to you and some are just like informative, or what's going on in the company, and you have so many emails to like filter through that it's hard to like, decipher which is important, or what do you need to answer right this second. A lot of times, even if there's an email, there's a follow up text message that you get, “Did you get the email? Did you check your email?”

There were also responses related to the volume of school communication by way of email. Participants 4 and 5 (students in the Millennial cohort) discussed their perceptions of the volume and invasion of the email. Participant 4 described the conversation she and other students had regarding email sent out by their university:

. . . I like how we have access to emails, but, I know, even in the classroom, when I'm talking to my peers, they're like, "We get a lot of emails about absolutely nothing from [University Name Withheld]. So, I think that everybody seems to feel that it's hard to filter in those emails that are just super like, irrelevant, to anything and everything.

She went on to describe her perception of invasion of work email:

. . . and I just feel like that's everywhere you go. Even with the work emails, with emails that were like, I have, you know, I have no interest in this, especially at work when they're sending out the emails about what's going on around the company and stuff like that. It's nice, but I'm expected to do certain things and expected to be here and there, so you don't really have any time to really ever look at the emails unless you're going to do it on your own personal time. And nobody wants to look at work emails on their personal time.

### **Perceived Relationship between Email Overload, Stress and Burnout**

Perceived Relationship between Email Overload, Stress and Burnout elicited a number of responses. There were common thoughts and feelings that participants used when answering the question, "What are your thoughts and feelings when you think about email?" Email invasion, email volume, and email response expectations were identified through the interview process. Four participants identified the word 'overwhelming.' For instance, The Gen-Xer/Administrator, used the word 'overwhelming' to describe the volume of emails that await her after a period

away from work, and keeping up with those emails that tend to invade her thoughts during vacation time and home life, “I think sometimes it can be a bit overwhelming, especially when you are out for a while, um, if I am out for a week, I generally come back to about a thousand emails.” Other words that were reported by participants included: “anxiety, stress, worry, annoyed, frustrated, blessing and a curse, and a love-hate relationship.” For instance, participant Millennial/Supervisor provided perspective on the positive aspects of email as well as the volume and response expectations:

It’s a love-hate relationship. Um, for all the reasons why I just said, I think email can be effective. At the same time, I can find myself being inundated with emails because people might CC me on an email that is just like an FYI, not anything necessarily I need to respond to and it’s kind of frustrating because that floods my email box. Um, a lot of the times I notice other people kind of making sure they are covering all of their bases, but it’s not something that necessarily should be meant for me, so, it can be very frustrating. Or, also too, it’s frustrating when you send an email, and somebody doesn’t respond in a timely manner, or at all, um, so, then I find myself having to track people down so we can have that face-to-face thing, like, ‘Hey, did you get my email?’ Um, but, overall, it definitely is a love-hate relationship.

Participants shared that invasion of email has created an additional dimension of overload through mobile technology. The ability to access email from both work-owned devices and personal devices anytime and anywhere creates an environment of frustration. Yet accessing email during personal time was not perceived to have an impact on personal life. There is a paradox in the response, where Millennial/Supervisor discussed the frustration yet did not see it as an invasion and response expectation on personal time:

Um, ever since we got mobile technology, and we had the means to access email from home, now I find myself checking my email sporadically, and a lot of the times, the types of emails that are sent can be frustrating because people are communicating, you know, issues or concerns or they have questions, and you're like, 'I already answered that.' So, I find myself, if I'm checking email at home, I'm the one probably getting more frustrated, because well, like you know, there's another thing and then I have to respond to that. Um, so, it doesn't impact me greatly because I do well with separating work from home, other than just checking my emails to make sure that what I'm walking in to the next day isn't going to be horrendous. Um, but typically it doesn't like, I'm not doing it all the time. I might do it like one time if I'm like, looking for something over the weekend, but, um, it doesn't play too much of a role because I'm pretty good at shutting work off when I leave.

Participants 3, 4, 5, and 6, who were identified as part of the Millennial cohort, reported they perceive management of email as stressful. Millennial/Stakeholder advocate provided information on how she uses email for work. Though her preference for communication is a phone call, she states that she uses email to gather and convey information. But when asked to describe her perceptions, thoughts, and feelings related to email, she used words such as "worry" and "anxious." Her response illustrates how the use of email is differentiated between work and home life:

I don't know. I think of it for work, but I also think of it like for personal as well. I don't use my personal email often, other than like for shopping. So, I guess like I think of work

when I think of email. Um, and I always worry that I'm going to miss something if I'm not in the office. So, I put it on my phone, but then, like, that's not always, I don't always check it as well. So, when I think of email, it makes me anxious.

There was no mention of the word "burnout" by any participants, however, dimensions of burnout were touched upon. Millennial/Direct Service Worker shared that she resigned from work at an agency where she was employed as a case worker because it was overwhelming:

So that job was very stressful in the sense of knowing that you had all of that responsibility on top of like the notes, on top of the crisis, and everything else. So, um, you had to email, even though you're not supposed to be in a session emailing or anything like that, but you would still get emails about things that need to be done in the office or paperwork that needed to be done, and, you know. It was overwhelming.

Millennial/MSW Intern/Outpatient Counselor touched upon the disengagement dimension of burnout as she described "giving up" managing her email:

Um, well, I have my school account, my internship account, and 2 different personal accounts. One is basically, well the 2 personal accounts are just filled with spam at this point. And, um, the, every time I look at my [phone] it has a little red dot in the corner that says you know, one thousand unread messages and that's definitely cause for, like, stress. And I've tried to address it, and at this point I've kind of like just given up.

### **Management of Email and Coping Strategies**

Management of email and coping strategies addresses how one finds mechanisms to cope with their email. Management included the management of schedules, the management of email by way of checking email, filing email, reviewing email subject line to determine relevance, and deleting email. Participants also shared their perceptions on self-care and establishment of

boundaries when discussing management of email. There were many strategies employed by participants. The type of software program, the electronic device used, and the participants' own perception of the need to manage email were all mentioned in their responses. Participants 1 and 2, identified as Gen-Xers, appeared to be more simplistic in their approach to communication in general and management of their email. They did not seem to perceive email as stressful, although Gen-Xer/Administrator did mention that the sheer volume could be overwhelming. She mentioned her management of email, for example, checking email while on vacation time as more of self-care - a way of managing/mitigating the volume of emails that would potentially await her upon her return to the office. When asked to discuss the management of work email while on vacation, she responded:

Yes, so I think it's not a requirement at all for my job, and we actually encourage our staff, when they are off, to be off, but knowing again the amount of work that I do and how fast-paced our work is, I don't really have time when I go back in that next day to sit there and read a thousand emails, so it's beneficial for me, and actually part of my own self-care, oddly, to get through the emails as the days go on so that I'm not bombarded by a whole slew of them, and it also allows me to stay connected . . . because there are people that are handling my responsibilities when I'm not there, and so I'm making sure that the right decisions are being made or, I think, part of my responsibility in my job is you're just always kind of available via text, via email if something's going on.

Millennial/MSW Intern also mentioned the term self-care, although her perception was the opposite of that of Gen-Xer/Administrator. She saw email and the accessibility of technology in general as a "stress" related to invasion of her personal time. When asked to elaborate on the stress, she responded:

Um, well, gone are the days when you just had one desktop computer at your house that you can't move and take with you. And when that was the case, you just generally don't even leave... you don't bring work home with you. And so now because we have technology everywhere and we have access to email everywhere, you're almost expected to be working or responding at all times. And I think that that definitely decreases your ability to have down time. So, because I have my work email and my school email on my phone, I, if I have down time, I'm reading through my emails instead or maybe reading through an article that would interest me about the current politics or playing a game or talking to someone else. So, it definitely, because it is a responsibility it draws my attention from things that are more pleasure-oriented and self-care oriented to work.

Another dimension of this theme is boundary setting, including boundaries when working within organizations, boundaries within educational programs, and personal boundaries.

Participants discussed their perceptions and how expectations to read and respond to email can create issues with confidentiality, personal time, and professionalism. One MSW student described the uneasiness of how an email can be shared with anyone, creating privacy concerns.

When asked to describe the training they received on the management of email, participants described how there were verbal discussions within the workplace, but none could identify any formal training, policy or practice that helped them navigate the management of email.

Millennial/MSW intern provided this perspective:

I mean, I think it's a great tool. Um, but I think that establishing boundaries for myself is important but also having understood boundaries within wherever you are working or functioning professionally is important so that everybody's on the same page, because if I send out an email at 10:30 at night, I don't expect my supervisor to respond until the



work day, but some people do have those expectations, so managing those expectations I think is really important in our technology era where we constantly have access to that sort of thing.

Participants were asked at the closing of the interview if there was anything else they would like to add related to email. This question captured more emerging themes such as tone and messaging, as (Millennial/Supervisor) reported:

I mean the other one thing that I would say is, I've had issues where people have, um, misconstrued what I've said in an email. I mean, as much as I'd like to think it's black and white, like "here are the words, here are the answers, here are the questions." Um, but apparently sometimes I might be perceived to send certain types of what we call "Nasty Grams" at the office, which I don't think are necessarily true, because I'm just thinking 'Well, I'm just kind of not beating around the bush' and getting to the point of it, but I feel like with emails there is a certain level of communication that like needs to happen in order for emails to not come across a certain way, being like negative or, uh, snarky. Um, and I'm not one for always putting in those thousand pleasantries within an email, so, um, I think that your messages can really...even though it's in writing, be misconstrued easily when you are sending emails. People perceive things differently.

The response was followed up with the question, "Do you receive any training on how to use email?" The response was, "No. No, unfortunately we don't," and, after a pause, she continued:

We're told when we start work that you can't use your email to um, I guess to what would be the word? to bash other clients, or employees. Um, that it's for professional

...you know, means. But, uh, they don't say, like, appropriately send an email so it's not perceived in a negative way. There is not training for that.

Gen-Xer/School Social Worker shared her thoughts on technology in general, “. . . um, yeah, just the whole technology thing and things just being at your fingertips is fantastic and wonderful, except that I think it kind of overwhelms us and consumes us sometimes.”

Overall, there were three established themes developed after 123 codes were reviewed for frequency. After review, the top 46 coded items were categorized into the three themes. The top 20 codes are provided to give the perspective of responses across all participant interviews. Email overload total was coded most frequently (n=62) across interviews and included four factors: email volume (n=13), email invasion(n=18), email response expectation (n=13), and email rapid response expectation (n=9). Stress was defined in the coding as associated with physical and mental health issues including headaches, depression, irritability, and self-neglect and was coded for a total of (n=20) times. It should be noted that there was no mention of any physical health issue and no mention of depression from any of the participants. Those in leadership positions reported email as their primary means of communication during the workday, while those in non-leadership roles reported variations of preferred communication which did not include email as the preferred medium. Review of coding identified more Millennials than Gen-Xers reporting on feelings of stress, anxiety, and frustration. However, the term “overwhelmed/overwhelming” was reported across all generational cohorts.

## Discussion

Technostress has evolved from simply measuring the impact of computers on health and wellbeing, to measuring specific factors such as email overload (invasion, volume, and rapid response expectations) that create stress, anxiety and depression, poor coping, and burnout in individuals, thus presenting opportunities and challenges to the workplace environment. The instant connectivity through emails, cell/smartphones, video-conferencing, and social media expose social workers to additional stressors in an already challenging environment. This exploratory study utilized the theoretical framework of the Transactional Model of Stress to explore the relationship between email overload and stress, anxiety, depression, poor coping, and burnout in social workers. The findings of this study were similar to findings in the literature that focused on technostress and, in particular, email overload as a contributor to stress, anxiety, depression, and poor coping as a potential antecedent to burnout (Carlson, Carlson, Zivnuska, Harris & Harris, 2017).

Generational cohorts and social work degree were found in this study to influence the effects of email overload on stress, anxiety and depression, and poor coping, and burnout. Based on research in other professions, email overload may lead to emotional exhaustion, detachment, and decreases in the overall sense of well-being and effectiveness in jobs for social workers. Social workers are bound by the ethics provided by the Standards for Technology in Social Work Practice (NASW, 2017) which can act as a resource to help navigate email. However, participants reported that there was no formal training, either in the workplace or the educational setting, that taught them email management, boundary setting, or self-care related to technology. Email overload is perceived as stressful and personal characteristics and personality traits may be associated with email overload (Reinke & Chamarro-Premuzic, 2014). Data analysis identified

generational cohorts as a predictor of stress, anxiety and depression, poor coping and burnout. Findings suggested that email overload was higher for Gen-Xers and Millennials. There were also differences found when comparing data from Strauss and Howe-defined generational cohorts and Pew, suggesting that age may influence stress and burnout. Gen-Xers and Millennial perceptions of stress, anxiety and depression, poor coping, and burnout were found to be similar in the quantitative research. However, individual interviews found that Millennials reported more stress, anxiety, and burnout dimensions compared to the Gen-Xer cohort. In addition, there were significant differences between those that hold a Bachelor of Social Work degree and those that hold a graduate degree. The bachelor's level social workers experienced more anxiety and depression. The differences in perceptions between those holding graduate or bachelor degrees were captured in the qualitative interviews, supporting email overload as a stressor, with those holding a bachelor's degree reporting feeling stressed, overwhelmed, anxious, worried, and frustrated.

Previous literature that focused on email overload in the workplace described email overload as an overwhelming feeling that workers may experience particularly if they have a high volume of emails and feel the pressure to continuously check their email for fear of missing an important message (McMurtry, 2014). The qualitative interviews confirmed that participants felt overwhelmed, not only by volume of email but also by the invasion of email and email response expectations. They also reported anxiety, frustration, and, to an extent, email addiction or compulsion. The concept of addiction or compulsion as a factor in email overload was an emerging theme captured in the qualitative interview but was not analyzed in the quantitative research. Though focus was on email, there were other forms of electronic communication and

communication in general that were mentioned during the interviews. With texting and phone calls seen as preferred means of communication.

It appears there is a complexity and tension in how participants assess email as beneficial. Though it is seen as a more efficient and easier means of communication in the workplace, there is less of a stance on email as beneficial in personal use of email. This was supported in the response in the quantitative survey, with 47.1% of participants reporting email as their preferred means of communication in the workplace. In addition, interview participants reported that use of email in the workplace elicits negative feelings of worry, anxiety, annoyance, and participants were “overwhelmed” by email. Qualitative findings from this study suggest that a technostress protective factor within both home and work environment that allows an employee to positively cope includes resources such as education and training on boundary setting (Tarafdar, Tu, Ragu-Nathan, & Ragu-Nathan, 2011; Tarafdar, Pullins, & Ragu-Nathan, 2015). To this researcher’s knowledge, exploring the relationship between email overload, stress, and burnout in the social work workforce has not been previously studied.

Quantitative data analysis informed the research on statistical significances in relationships and correlations between email overload, stress, anxiety and depression, poor coping, and burnout in social workers. The statistical analysis drew conclusions based on participants’ survey responses, while qualitative analysis provided more in-depth insight into the findings by contributing additional insight and emerging themes to email overload, stress, anxiety and depression, poor coping, and burnout. The purpose of this study was to examine the impact of email overload (email invasion, email volume, and rapid response expectations) on stress, anxiety and depression, coping, and burnout in social workers in human services. The use of data, when merged, formulated a better understanding of the relationship between email

overload, stress, anxiety and depression, poor coping, and burnout, and the extent to which gender, generation cohort and social work degree moderated the impact. It also gathered social workers' perceptions, thoughts, and feelings related to email.

### **Limitations and Implications**

This mixed-methods study was exploratory in nature and had several limitations. First, the distribution of the survey instrument and recruitment for the qualitative interviews was web-based. Reporting bias may have limited the sample, meaning those that managed and utilized email may have been more likely to participate in the survey. A paper survey may have shown different results. Second, the sample size and demographics of the sample may have played a role in the findings. Small sample sizes were another limitation. Gender was not found to be significant, but this may be due to the fact that the majority of those responding to the survey were female (88.2%) and (100%) of the participants in the interviews were female. Had the survey been completed by more participants, and saturation of interviewees been met, the results may have been influenced. Generation X and Millennials were the most prominent responders in the survey and interviews. The actual number depended on the years in which the definitions were defined. Females made up the largest percentage of responders in the survey and were the only participants in the interviews. Those with a bachelor's or master's degree in social work responded, but only one Doctor of Social Work/PhD responded. This may be attributable to the small number of social workers with a DSW or PhD. The use of unvalidated scales such as the email overload scale, the burnout scale and the poor coping scale is a limitation. One reason these scales were utilized was to cut down on the length of the survey. Validated scales were more closely related to technostress or cell phone use and did not focus on email overload and would have created more questions that may not have captured the intent of this study. This study chose to focus on email invasion, volume, and rapid response expectation in the social work field.

The fact that this survey was limited to only social workers is another limitation. Though this study explored the effects of email overload on social workers working in human or social services, the sample for this group was small. There was nothing by which to compare social work to other disciplines in the social and human service field. Having another population through which to compare social workers may have provided more insight into whether social workers, or social work degrees made a difference, or if the differences were just the level of degree itself.

### **Implications for Social Work**

Email overload has implications at the micro, macro, and mezzo levels of social work practice. Email overload (invasion, volume, and rapid response expectations), may impede the basic assumption that social workers' social presence is a meaningful interaction between two or more people (LaMendola, 2010). The role of email on stress and as a potential antecedent to burnout may create an environment in which the social worker is unable to interact in a more meaningful exchange. Email overload also has implications for social work faculty working in higher education settings. The research has shown that email overload is a predictor of stress, anxiety and depression, poor coping and burnout. Social Work leadership within organizations will be better able to assess email overload and its impact of stress and burnout on their social work workforce. As literature suggests, email overload can negatively impact satisfaction, performance, and retention and, in turn, may impact financial viability of the workplace (Estévez-Mujica & Quintane, 2018; Reinke & Chamorro-Premuzic, 2014). A positive leader-member exchange can improve retention and performance issues (Lam, Xu, & Loi, 2018; Northouse, 2016). The leader-member exchange theory (LMX) explores the interdependent relationship between a leader and workforce and may be of interest to social work leaders as they



navigate the world of technology. Research showed that LMX supported staff retention, performance, and greater commitment to the organization (Northouse, 2016). The interaction is built upon trust and mutual respect and supports psychological safety within the workplace (Binyamin, Carmeli & Friedman, 2016; Binyamin, Friedman, & Carmeli, 2018). Different generational attitudes related to communication by email may play a role in the safety one feels in the leader-member relationship, which could be of additional interest to social workers. With respect to email overload, the culture of the organizational leadership, including supervisory roles, may provide insight into how the worker perceives resources made available to them regarding email usage.

Social work education presents unique opportunities. Exploring the meaning of social presence in a digitalized world, social work curricula has the opportunity to include the meaning of sociality, a term that supports social presence in the world of email technology and other forms of social applications (LaMendola, 2010). In an effort to support self-care, development and incorporation of technology self-care would be well served in social work education programs. Such self-care might include helping social work students develop appropriate boundaries related to email within their personal and work life. In addition, The Standards of Technology in Social Work Practice may be a vehicle in which to include guidelines for technology self-care. Faculty within the educational setting would benefit from establishing email guidelines at the beginning of a course. The guidelines might be established just as clearly as office hours are established. For example, when email will be sent, for what purpose, and a time frame for email response by both professor and student. This may also be helpful to educators themselves, as research has shown that there is email stress due to the volume of email that educators receive and, to which are expected to reply (Jerejian et al, 2013). In addition, it

may be of great benefit to the student-faculty relationship to provide more opportunity for more interpersonal exchanges (Jerejian, et al. 2013). With respect to field placement activities, it might be helpful to determine how email is utilized within the organization in which a student is placed. Does the organization have policies related to email use in the workplace and how will the supervisor in the organization use email as a supervisory tool? Not only will determining the use of email within the organization help the student for that role, it will also offer ways to the student to develop administrative skills for future agency work (Watson & Hoefler, 2014).

### **Conclusions and Suggestions for Future Research**

Considering the sparse amount of research available on technology and wellbeing of social workers, there are many areas to be explored with future research. Exploration into the use of email and its effects on supervisory relationships may be of interest to organizations. Expanding the research from social workers to those that work in human, social, juvenile justice, and social services would provide more information on the effects of digital communication within the social and human services workplace.

Research in the area of generational cohorts, and in particular, assessing the differences in the defined years and why there are variations in responses to research questions, is of particular interest. Larger sample sizes and a more diverse sample, such as all those working within human services regardless of degree, may allow for a comparison between the impact email overload has on those with social work degrees and those who do not possess a social work degree. Additionally, a number of emerging themes were discovered through the qualitative interviews and should be considered. Those themes include technology overload, compulsion, and addictive tendencies with email. Of particular interest for university settings may be development of technology and technostress courses in the social work curricula to

include self-care and boundary setting. Universities may also want to explore the effectiveness of email as their primary means of communication with students.

For leadership, the development of email communication training, policy, and procedures may serve as resources to help alleviate stress, anxiety and depression, and poor coping related to email overload for social and human service workers. One other area that may be of particular interest for social work leadership would be the development of technology self-care models that would help to mitigate stress, anxiety, depression, poor coping, and burnout.

The objective of this study was to explore email overload and examine its impact on social workers. There were statistical findings that supported the relationship between email overload and stress, anxiety and depression, poor coping, and burnout for those holding a social work degree. The instant connectivity through email exposed social workers to additional stressors in the workplace, and social work students reported feeling overwhelmed with email communication within their university setting. Technology presents opportunities and challenges for the social work profession, with special attention needed on the impact on generational cohorts and those holding a Bachelor of Social Work degree. As we continue to add more seasoned technology users into our human and social work workforce, we will need to continue to evaluate the impact of email, as well as other means of electronic communication, on our environment.

## References

- Anderson, A. A. (1996). Predictors of computer anxiety and performance in information systems. *Computers in Human Behavior, 12*(1), 61–77.
- Anthony, L. M., Clarke, M. C., & Anderson, S. J. (2000). Technophobia and personality subtypes in a sample of South African university students. *Computers in Human Behavior, 16*, 31–44.
- Arnetz, B. B., & Wiholm, C. (1997). Technological stress: Psychophysiological symptoms in modern offices. *Journal of Psychosomatic Research, 43*(1), 35–42.
- Atanasoff, L., & Venable, M. A. (2017). Technostress: Implications for adults in the workforce. *The Career Development Quarterly, 65*(4), 326–338.
- Ayyagari, R., Grover, V., & Purvis, R. (2011). Technostress: Technological antecedents and implications. *The Mississippi Quarterly, 35*(4), 831–858.
- Binyamin, G., Carmeli, A., & Friedman, A. (2016). Caring relationships and innovative behaviors at work. *Academy of Management Proceedings, 2016*(1), 14060.
- Binyamin, G., Friedman, A., & Carmeli, A. (2018). Reciprocal care in hierarchical exchange: Implications for psychological safety and innovative behaviors at work. *Psychology of the Aesthetics, Creativity, and the Arts, 12*(1), 79–88.
- Brod, C. (1984). *Technostress: The human cost of the computer revolution*. Reading, MA: Addison Wesley Publishing Company.
- Brooks, S., & Califf, C. (2017). Social media-induced technostress: Its impact on the job performance of its professionals and the moderating role of job characteristics. *Computer Networks, 114*, 143–153.

- Brown, R., Duck, J., & Jimmieson, N. (2014). E-mail in the workplace: The role of stress appraisals and normative response pressure in the relationship between e-mail stressors and employee strain. *International Journal of Stress Management*, 21(4), 325.
- Chan, C., & Holosko, M. J. (2015). A review of information and communication technology enhanced social work interventions. *Research on Social Work Practice*, 26(1), 88–100.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24(4), 385–396.
- Council on Social Work Education. Profile of the Social Work Workforce (2017). Retrieved from <https://www.cswe.org/Centers-Initiatives/Initiatives/National-Workforce-Initiative/SW-Workforce-Book-FINAL-11-08-2017.aspx>
- Council on Social Work Education (CSWE) - About CSWE. (n.d.). Retrieved May 6, 2018, from <https://www.cswe.org/About-CSWE>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches*. Thousand Oaks, CA: SAGE Publications.
- Day, A., Paquet, S., Scott, N., & Hambley, L. (2012). Perceived information and communication technology (ICT) demands on employee outcomes: The moderating effect of organizational ICT support. *Journal of Occupational Health Psychology*, 17(4), 473–491.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *The Journal of Applied Psychology*, 86(3), 499–512.
- DePasquale, E. (2017). State of the child: A look at the strengths and challenges of Pennsylvania's child-welfare system and the safety of at-risk children. Retrieved from Pennsylvania Department of the Auditor General. <http://www.paauditor.gov>

- Dimock, M. (2018, March 1). Defining generations: Where Millennials end and post-Millennials begin. Retrieved April 4, 2018, from <http://www.Pewresearch.org/fact-tank/2018/03/01/defining-generations-where-Millennials-end-and-post-Millennials-begin/>
- Dolan, E., Mohr, D., Lempa, M., Joos, S., Nelson, F., & Helfrich, K. (2015). Using a single item to measure burnout in primary care staff: A psychometric evaluation. *Journal of General Internal Medicine*, 30(5) 582-587.
- Duxbury, A. & Lanctot, A. (2016). Carleton Study Finds People Spending a Third of Job Time on email. (n.d.). Retrieved April 5, 2018, from <https://newsroom.carleton.ca/2017/04/20/carleton-study-finds-people-spending-third-job-time-email/>
- Edwards, F., & Wildeman, C. (2018). Characteristics of the front-line child welfare workforce. *Children and Youth Services Review*, 89, 13–26.
- Elhai, J. D., Dvorak, R. D., Levine, J. C., & Hall, B. J. (2017). Problematic smartphone use: A conceptual overview and systematic review of relations with anxiety and depression psychopathology. *Journal of Affective Disorders*, 207, 251–259.
- Estévez-Mujica, C. P., & Quintane, E. (2018). E-mail communication patterns and job burnout. *PloS One*, 13(3), e0193966.
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4.
- Finn, J. (2006). An exploratory study of email use by direct service social workers. *Journal of Technology in Human Services*, 24(4), 1–20.

- Finn, J., & Krysik, J. (2007). Agency-based social workers' attitudes and behaviors regarding service-related unsolicited E-mail. *Journal of Technology in Human Services, 25*(3), 21–38.
- Flora, D. B. (2017). *Statistical methods for the social and behavioural sciences: A model-based approach*. Thousand Oaks, CA: SAGE.
- Fry, R. (2018, March 1). Millennials overtake baby Boomers as America's largest generation. Retrieved January 31, 2019, from <http://www.Pewresearch.org/fact-tank/2016/04/25/Millennials-overtake-baby-Boomers/>
- Fry, R. (2018, April 11). Millennials are the largest generation in the U.S. labor force. Retrieved April 19, 2018, from <http://www.Pewresearch.org/fact-tank/2018/04/11/Millennials-largest-generation-us-labor-force/>
- Fuglseth, A. M., & Sørebo, Ø. (2014). The effects of technostress within the context of employee use of ICT. *Computers in Human Behavior, 40*, 161–170.
- Gitlin, L., & Czaja, S. (2016). *Behavioral intervention research: Designing, evaluating, and implementing*. New York, NY: Springer Publishing Company.
- Griffiths, A., Royse, D., & Walker, R. (2018). Stress among child protective service workers: Self-reported health consequences. *Children and Youth Services Review, 90*, 46–53.
- Harris, K. J., Marett, K., & Harris, R. B. (2013). Time Pressure Scale [Database record] Retrieved from PsycTESTS. doi: <http://dx.doi.org/10.1037/t26833-000>
- Harris, K. J., Marett, K., & Harris, R. B. (2013). An investigation of the impact of abusive supervision on technology end-users. *Computers in Human Behavior, 29*(6), 2480–2489.
- Hill, N. S., Kang, J. H., & Seo, M.-G. (2014). The interactive effect of leader–member exchange and electronic communication on employee psychological empowerment and work outcomes. *The Leadership Quarterly, 25*(4), 772–783.

- Hodson, R. (1985). Working in “high-tech”: Research issues and opportunities for the industrial sociologist. *The Sociological Quarterly*, 26(3), 351–364.
- Horrigan, J. B. (2008, March 5). Mobile access to data and information. Retrieved April 16, 2018, from <http://www.Pewinternet.org/2008/03/05/mobile-access-to-data-and-information-2/>
- Howe, N., & Strauss, W. (2007). *Millennials go to college (2nd ed.)*. Great Falls, VA: LifeCourse Associates.
- Hudiburg, R. A. (1989). Psychology of computer use: VII. Measuring Technostress: Computer related stress. *Psychological Reports*, 64, 767-772.
- Hudiburg, R. A. (1991). Relationship of computer hassles, somatic complaints, and daily hassles. *Psychological Reports*, 69, 1119–1122.
- Hudiburg, R. A., Pashaj, I., & Wolfe, R. (1999). Preliminary investigation of computer stress and the big five personality factors. *Psychological Reports*, 85, 473–480.
- Jerejian, A. C. M., Reid, C., & Rees, C. S. (2013). The contribution of email volume, email management strategies and propensity to worry in predicting email stress among academics. *Computers in Human Behavior*, 29(3), 991–996.
- Kanner, A. D., Coyne, J. C., Schaefer, C., & Lazarus, R. S. (1981). Comparison of two modes of stress measurement: Daily hassles and uplifts versus major life events. *Journal of Behavioral Medicine*, 4(1), 1–39.
- Katz, S. (2017). Generation X: A Critical Sociological Perspective. *Generations*, 4(3), 12–19.
- Kim, H., & Kao, D. (2014). A Meta-Analysis of turnover intention predictors among U.S. child welfare workers. *Children and Youth Services Review*, 47, 214-223.



- Krishnan, S. (2017). Personality and espoused cultural differences in technostress creators. *Computers in Human Behavior*, 66, 154–167.
- Kroenke, K., Spitzer, R. L., Williams, J. B. W., & Löwe, B. (2009). An Ultra-Brief screening scale for anxiety and depression: The PHQ–4. *Psychosomatics*, 50(6), 613–621.
- Lam, L. W., Xu, A. J., & Loi, R. (2018). Is emotional engagement possible in emotionally demanding jobs? *Journal of Personnel Psychology*, 17(1), 42–52.
- LaMendola, W. (2010). Social work and social presence in an online world. *Journal of Technology in Human Services*, 28(1-2), 108–119.
- Lazarus, R. S. (1984). Puzzles in the study of daily hassles. *Journal of Behavioral Medicine*, 7(4), 375–389.
- Lazarus, R. S. (1990). Theory-Based Stress Measurement. *Psychological Inquiry*, 1(1), 3–13.
- Lazarus, R., & Folkman, S. (1987). Transactional theory and research on emotions and coping. *European Journal of Personality*, 1, 141–169.
- Lee, S. B., Lee, S. C., & Suh, Y. H. (2016). Technostress from mobile communication and its impact on quality of life and productivity. *Total Quality Management & Business Excellence*, 27(7-8), 775–790.
- Lenhart, A., Ling, R., Campbell, S., & Purcell, K. (2010, December 1). *Is the age at which kids get cell phones getting younger?* Washington, DC: Pew Research Center's Internet & American Life Project, Teens and Mobile Phones Survey. Retrieved April 4, 2018, from <http://www.Pewinternet.org/2010/12/01/is-the-age-at-which-kids-get-cell-phones-gettingyounger/>
- Lyter, S. (2016). Safety and risk management. In C.A. Hunter, J. K. Moen, & M. Raskin (Eds.), *Social work field directors: Foundations for excellence*. Chicago, IL, Lyceum.

- Mannheim, K., Manheim, E. (1947) *American Journal of Sociology*, 52(6), 471-474. Retrieved from <http://www.jstor.org/stable/2770524>
- Maslach, C. (1998). A multidimensional theory of burnout. In Cooper, C. L. (Ed.), *Theories of organizational stress* (pp. 68-87). New York, NY: Oxford University Press.
- McMurtry, K. (2014). Managing email overload in the workplace. *Performance Improvement*, 53(7), 31–37.
- Mirvis, P. H., Sales, A. L., & Hackett, E. J. (1991). The implementation and adoption of new technology in organizations: The impact on work, people, and culture. *Human Resource Management*, 30(1), 113–139.
- Mishna, F., Bogo, M., Root, J., Sawyer, J.-L., & Khoury-Kassabri, M. (2012). “It just crept in”: The digital age and implications for social work practice. *Clinical Social Work Journal*, 40(3), 277–286.
- Monzani, D., Steca, P., Greco, A., D’Addario, M., Cappelletti, E., & Pancani, L. (2015). The situational version of the brief COPE: Dimensionality and relationships with goal-related variables. *European Journal of Psychological Assessment: Official Organ of the European Association of Psychological Assessment*, 11(2), 295–310. DOI: 10.5964/ejop.v11i2.935
- Myers, K. K., & Sadaghiani, K. (2010). Millennials in the workplace: A communication perspective on Millennials’ organizational relationships and performance. *Journal of Business and Psychology*, 25(2), 225–238.
- National Association of Social Work -PA. (n.d.). New Professional’s Guide to Social Work in Pennsylvania. Retrieved from [http://c.ymcdn.com/sites/www.nasw-pa.org/resource/resmgr/new\\_professional\\_guidebook.pdf](http://c.ymcdn.com/sites/www.nasw-pa.org/resource/resmgr/new_professional_guidebook.pdf) 4/21/18

National Association of Social Workers (NASW). (2017). Code of ethics. Retrieved from <http://www.socialworkers.org/pubs/code/code.asp>

National Association of Social Workers (NASW). (2017). Standards for technology in social work practice. Developed in conjunction with Council on Social Work Education, Association of Social Work Boards, and Clinical Social Work Association. Retrieved from <http://www.socialworkblog.org/wp-content/uploads/TechnologyStandards.png>

Olmstead, K., (2017, May 25). A third of Americans live in a household with three or more smartphones. Retrieved March 28, 2018, from <http://www.Pewresearch.org/fact-tank/2017/05/25/a-third-of-americans-live-in-a-household-with-three-or-more-smartphones/>

Padgett, D. K. (2017). *Qualitative methods in social work research*. New York, NY: SAGE Publications.

Palinkas, L. A., Aarons, G. A., Horwitz, S., Chamberlain, P., Hurlburt, M., & Landsverk, J. (2011). Mixed method designs in implementation research. *Administration and Policy in Mental Health*, 38(1), 44–53.

Purcell, K., & Rainie, L. (2014, December 30). Technology's impact on workers. *Pew Research Center, Internet and Technology*. Retrieved April 5, 2018, from <http://www.Pewinternet.org/2014/12/30/technologys-impact-on-workers/>

Quinn, B. (2000). Overcoming technostress in reference services to adult learners. *The Reference Librarian*, 33(69-70), 49–62.

Radicati Group, Inc. Email-Statistics-Report-2018-2022-Executive-Summary.pdf. (2018)

Retrieved from [https://www.radicati.com/wp/wpcontent/uploads/2018/01/Email\\_Statistics\\_Report\\_2018-2022\\_Executive\\_Summary.pdf](https://www.radicati.com/wp/wpcontent/uploads/2018/01/Email_Statistics_Report_2018-2022_Executive_Summary.pdf)

Rafaeli, A. (1986). Employee attitudes toward working with computers. *Journal of Occupational Behaviour*, 7, 89-106.

Ragu-Nathan, T. S., Tarafdar, M., Ragu-Nathan, B. S., & Tu, Q. (2008). The consequences of Technostress for end users in organizations: Conceptual development and empirical validation. *Information Systems Research*, 19(4), 417–433.

Reinke, K., & Chamorro-Premuzic, T. (2014). When email use gets out of control: Understanding the relationship between personality and email overload and their impact on burnout and work engagement. *Computers in Human Behavior*, 36, 502–509.

Salanova, M., Llorens, S., & Cifre, E. (2013). The dark side of technologies: technostress among users of information and communication technologies. *International Journal of Psychology: Journal International de Psychologie*, 48(3), 422–436.

Saldana, J. (2016). *The coding manual for qualitative researchers (3rd ed.)*. Thousand Oaks, CA: SAGE.

Salsberg, E., Quigley, L., Mehfoud, N., Acquaviva, K. D., Wyche, K., & Silwa, S. (2017). Profile of the Social Work Workforce. Retrieved from [https://hsrc.himmelfarb.gwu.edu/sphhs\\_policy\\_workforce\\_facpubs/16](https://hsrc.himmelfarb.gwu.edu/sphhs_policy_workforce_facpubs/16)

Shu, Q., Tu, Q., & Wang, K. (2011). The impact of computer self-efficacy and technology dependence on computer-related Technostress: A social cognitive theory perspective. *International Journal of Human–Computer Interaction*, 27(10), 923–939.

- Srivastava, S. C., Chandra, S., & Shirish, A. (2015). Technostress creators and job outcomes: theorizing the moderating influence of personality traits. *Information Systems Journal*, 25(4), 355–401.
- Stanton, R. (2017). Communicating with employees: Resisting the stereotypes of generational cohorts in the workplace. *IEEE Transactions on Professional Communication*, 60(3), 256–272.
- Strauss, W., & Howe, N. (1991). *Generations: The history of America's future, 1584 to 2069*. New York, NY: William Morrow and Co.
- Stevens, J. (1996). *Applied multivariate statistics for the social sciences*. Mahwah, NJ: Erlbaum.
- Tams, S., Legoux, R., & Léger, P.-M. (2018). Smartphone withdrawal creates stress: A moderated mediation model of nomophobia, social threat, and phone withdrawal context. *Computers in Human Behavior*, 81, 1–9.
- Tarafdar, M., Pullins, E. B., & Ragu-Nathan, T. S. (2015). Technostress: negative effect on performance and possible mitigations. *Information Systems Journal*, 25(2), 103–132.
- Tarafdar, M., Tu, Q., Ragu-Nathan, B. S., & Ragu-Nathan, T. S. (2007). The impact of technostress on role stress and productivity. *Journal of Management Information Systems*, 24(1), 301–328.
- Tarafdar, M., Tu, Q., Ragu-Nathan, T. S., & Ragu-Nathan, B. S. (2011). Crossing to the dark side: examining creators, outcomes, and inhibitors of technostress. *Communications of the ACM*, 54(9), 113–120.
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *The Journal of the International Association of Medical Science Educators: JIAMESE*, 2, 53–55.
- Tiemo, P. A., & Ofua, J.O. (2010) Technostress: causes, symptoms and coping strategies among librarians in university libraries. *Educational Research*. 1(12), 713-720

- Tulgan, B. (2009). *Not everyone gets a trophy: How to manage Generation Y*. San Francisco, CA: John Wiley & Sons.
- Turkle, S. (2011). *Alone together*. New York, NY: Basic Books. Retrieved from [http://www.academia.edu/download/31043071/Sherry\\_Turkle\\_book.pdf](http://www.academia.edu/download/31043071/Sherry_Turkle_book.pdf)
- U.S. Department of Education (2015). Undergraduates, N. (n.d.). RELATED NCES REPORTS. Retrieved from <https://nces.ed.gov/pubs2015/2015025.pdf>
- Watson, L. D., & Hoefler, R. (2014). Social Work Values in Human Services Administration: Implications for Social Work Education. *Journal of Social Work Education, 50*(4), 623–629.
- Weil, M. M., & Rosen, L. D. (1995). The psychological impact of technology from a global perspective: A study of technological sophistication and technophobia in university students from twenty-three countries. *Computers in Human Behavior, 11*(1), 95–133.
- Weil, M. M., & Rosen, L. D. (1997). *Technostress: Coping with technology@work@home@play*. New York, NY: Wiley.
- Yildirim, C., & Correia, A.-P. (2015). Exploring the dimensions of nomophobia: Development and validation of a self-reported questionnaire. *Computers in Human Behavior, 49*, 130–137.
- Youn, E. (2007). The Relationship between technology content in a Master of Social Work curriculum and technology use in social work practice: A qualitative research study. *Journal of Technology in Human Services, 25*(1-2), 45–58.

## Appendix A Monkey Survey

### Informed Consent

Thank you for participating in this survey. Your feedback is important.

The purpose of this research project is to explore the relationship of email overload, stress, and burnout in social workers. This is a research project being conducted by Lisa Lowrie at Kutztown University under the supervision of Dr. Lyter, Kutztown University, and Dr. Redcay, Millersville University. You are invited to participate in this research project because you are a social worker.

Your participation in this research study is voluntary. You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time. If you decide not to participate in this study or if you withdraw from participating at any time, you will not be penalized. You are not required to answer a question you do not feel comfortable in answering. Once the survey is submitted, participants will be provided an opportunity through another survey to be randomly selected for one of two \$25.00 Sheetz gas gift cards and/or volunteer to participate in a face-to-face or video interview .

The procedure involves filling out an online survey that will take approximately 5 minutes. Your research survey responses will be confidential and do not identify information such as your name, email address or IP address. The survey questions will be about you, and ask you questions related to email overload, stress, burnout, coping, anxiety, and depression. Though there is minimal risk, should you experience distress, you may contact the National Crisis Number at 1-800-273-8255 or contact your employers' Employee Assistance Program (EAP).

Your responses will remain confidential. All data is stored in a password protected electronic format. To help protect your confidentiality, the surveys will not contain information that will personally identify you. The results of this study will be used for scholarly purposes only and may be shared with Kutztown University representatives and may be used for purposes of presentations and publishing.

If you have any questions about the research study, please contact me, Lisa Lowrie at llowr054@live.kutztown.edu or by phone at 717-468-3673. You may also contact my dissertation chair, Dr. Redcay, 717-480-0585 or by email at Alex.Redcay@millersville.edu. This research has been reviewed according to Kutztown University Institutional Review Board (IRB) procedures for research involving human subjects. If you have any questions or concerns about the rights of research participants, please contact the Kutztown University IRB committee at 484-646-4167 and reference IRB30102018.

Please print a copy of this consent for your records.

**ELECTRONIC CONSENT:** Please select your choice below.

Clicking on the "agree" button indicates that:

- you have read the above information
- you voluntarily agree to participate
- you are a social worker
- you are at least 18 years of age

**\*If you do not wish to participate in the research study, please decline participation by clicking on the "disagree" button.**

1. Electronic Consent- Please select your option below.

- Agree
- Disagree

2. What is the highest social work degree that you currently hold?

- Bachelor of Social Work (BSW)
- Master of Social Work (MSW)
- Doctor of Social Work (DSW)
- Doctor of Philosophy (PhD)

3. Are you currently working in a social work related job?

- Yes
- No

4. If you are currently working in a social work-related job, approximately how many years have you worked in the social work field?

- |  |  |
|--|--|
| <input type="radio"/> Less than one year | <input type="radio"/> 11 to 20 years   |
| <input type="radio"/> 1 to 2 years       | <input type="radio"/> 21 to 30 years   |
| <input type="radio"/> 2 to 5 years       | <input type="radio"/> Over 31 years  |
| <input type="radio"/> 6 to 10 years      | <input type="radio"/> I am not currently working in a social work related job. |



5. How do you rank your preferred methods of electronic communication with 1 being your preferred method and 5 being your least preferred?

<input type="text"/>	Text Message
<input type="text"/>	Phone Call
<input type="text"/>	Email
<input type="text"/>	Social Media (i.e. Facebook, LinkedIn, etc)
<input type="text"/>	Face to face (i.e. Skype, Snapchat, etc)

6. If you are working in a social work-related job, do you most describe your job as (please check all that apply):

- Administrative ( i.e Chief Executive Officer, President, Chief Operating Officer, Program Manager, Program Director)
  Teaching/Faculty  
 Direct Service (i.e. front line staff)
  Supervisory role  
 Clinical  
 Other (please specify)

7. Are you currently teaching social work courses at a college or university?

- Yes  
 No

8. Do you currently have any social work license (for example, Licensed Social Worker (LSW), Licensed Clinical Social Worker (LCSW) or other state equivalent)?

- Yes
  No  
 Other (please specify)

9. In what year were you born? (enter 4-digit birth year; for example, 1976)

10. How many email accounts do you have? (both personal and professional email addresses)

- 1  5  
 2  6  
 3  More than 6 email accounts  
 4

11. How many work emails do you typically receive in a 24-hour period?

12. How many work emails do you have pending in your inbox (unread)?

13. What is the gender in which you identify?

- Female  Male  
 Other - Please describe your gender identity.

14. Which race/ethnicity best describes you? (please check all that apply)

- American Indian or Alaskan Native  Hispanic  
 Asian / Pacific Islander  White / Caucasian  
 Black or African American  
 Other (please specify)

15. What is your approximate annual income?

- Under \$15,000  Between \$75,000 and \$99,999  
 Between \$15,000 and \$29,999  Between \$100,000 and \$150,000  
 Between \$30,000 and \$49,999  Over \$150,000  
 Between \$50,000 and \$74,999

16. For each statement please answer if you strongly disagree, disagree, agree, or strongly agree

Strongly Disagree

Disagree

Agree

Strongly Agree

Email increases my workload.

	Strongly Disagree	Disagree	Agree	Strongly Agree
Email increases communication with co-workers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Email is a waste of time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Email is useful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Email makes my work more efficient.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Email makes my work less efficient.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am expected to respond to my work email immediately.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am able to respond to my email daily.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have thought about work at home because of unwanted emails.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Email interferes with my personal life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am responsible for work "after hours" because of unwanted email.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I think about reading or responding to email I am anxious.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I think about reading or responding to email I am angry.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I think about reading or responding to email I am stressed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Managing email is difficult.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can manage my email well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communication by email is stressful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to communicate by email.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Email causes my work to be more than I can handle.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Disagree	Disagree	Agree	Strongly Agree	
Email makes my work easier.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<b>17. (Please answer the following question based on your personal definition of burnout. You can only submit one answer.)</b>					
I feel burned out from my work.					
<input type="radio"/> Never				<input type="radio"/> Once a week	
<input type="radio"/> Once a month or less				<input type="radio"/> A few times a week	
<input type="radio"/> A few times a month				<input type="radio"/> Everyday	
<b>18. For each statement, please respond never, almost never, sometimes, fairly often, or very often.</b>					
	Never	Almost never	Sometimes	Fairly often	Very often
In the last month, how often have you felt that you were unable to control the important things in your life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last month, how often have you felt confident about your ability to handle your personal problems?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last month, how often have you felt that things were going your way?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last month, how often have you felt difficulties piling up so high that you could not overcome them?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. For each statement, please respond not at all, several days, more than half the days, or nearly everyday.

Not at all                      Several days                      More than half the days                      Nearly everyday

Over the last two weeks, how often have you felt bothered by the following problems?  
Feeling nervous, anxious, or on edge.

Over the last two weeks, how often have you been bothered by the following problems? Not being able to stop or control worrying.

Over the last two weeks, how often have you been bothered by the following problems?  
Little interest or pleasure in doing things.

Over the last two weeks, how often have you been bothered by the following problems?  
Feeling down, depressed, or hopeless.

Thank you for agreeing to participate in this study! The general purpose of this research is to explore email overload and the relationship it may have on stress and burnout in the social work workforce. The data that is collected and analyzed may help to inform future practice, policy, and education related to email overload.

I invited social workers that are currently working or teaching in the social work field to take part in this study and do not know what your specific results were due to the confidential nature of the study. In this study, you were asked to complete a survey that asked questions related to email overload, stress, coping, burnout, anxiety and depression. The results from this study will help to inform organizations, academia, and individual social workers on the role that email may play in stress and burnout in the social work workforce.

If you feel especially concerned about stress, anxiety, or depression please contact your employers' Employee Assistance Program (EAP) about options for counseling. Alternatively, you could also phone the National Crisis Hotline at 1-800-273-8255 or you can Text HOME to 741741.

If you have further questions about the study or would like a copy of the results sent to you, please contact Lisa Lowrie, at [llovr054@live.kutztown.edu](mailto:llovr054@live.kutztown.edu). In addition, if you have any concerns about any aspect of the study, you may contact the Institutional Review Board Committee at Kutztown University, 484-646-4167.

Additional Self-Care tips can be found at: The University of Buffalo, School of Social Work website <https://socialwork.buffalo.edu/resources/self-care-starter-kit/developing-your-self-care-plan.html>


## Appendix B Institutional Review Board Approval



**INSTITUTIONAL REVIEW BOARD**  
262 Old Main, PO Box 730, Kutztown, PA 19530  
(484)-646-4167

DATE: October 23, 2018

TO: Dr. Sharon Lyter, Social Work Department  
Dr. Alex Redcay, Millersville University  
Ms. Lisa Lowrie

FROM:  Jeffrey Werner, Chairperson  
Institutional Review Board

STUDY TITLE: Exploring the Relationship of Email Overload, Stress, and Burnout in Social Workers

IRB NUMBER: IRB30102018

SUBMISSION TYPE: Initial Application

REVIEW TYPE: Expedited

EXPEDITED CATEGORY: 2 g

ACTION: Approved

APPROVAL DATE: October 23, 2018

EXPIRATION DATE: October 23, 2019

The Kutztown University IRB has approved the initial application for your research study. Approval is for the period of one year. Your research study has been assigned the IRB Number IRB30102018. This number must be referred to in any future communications with the IRB.

Research must be conducted in accordance with this approved submission. You must seek approval from the IRB for changes and ensure that such changes will not be initiated without IRB review and approval, except when necessary to eliminate apparent immediate hazards to the subjects. You must submit the Application for Revisions / Changes form to the IRB, prior to making changes.

15200 Kutztown Road  
P.O. Box 730, Kutztown, PA 19530-0730

www.kutztown.edu  
Phone: 610-683-4000 / TDD: 610-683-4499

A MEMBER OF PENNSYLVANIA'S STATE SYSTEM OF HIGHER EDUCATION



AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER AND EDUCATION PROVIDER

It is your responsibility to report all adverse events / unanticipated problems to the IRB. You must report adverse events that are unanticipated, regardless of seriousness, or report events that are more serious or more frequent than expected.

Your research study requires a continuing review by the IRB on a yearly basis. One month before your approval ends, you must submit the Yearly / Continuing Review Form to the IRB. If your research ends (data collection and analysis are complete and no further use of the data is planned) prior to one year, you must notify the IRB at that time by completing the Yearly / Continuing Review Form. If the IRB does not hear from you by the time approval ends, it will be assumed that the study has ended. Research conducted after expiration of approval or termination of any kind will not be considered approved by the IRB and will be in violation of University policy and federal regulations.

Records relating to the approved research (e.g., consent forms), must be retained for at least (3) three years after completion of the research. Refer to the IRB procedures regarding records.

Please go the IRB's website to review procedures and to obtain forms as needed. If you have any questions, please contact the IRB at 484-646-4167.

## Appendix C

### Informed Consent - Interviews

You are invited to participate in a research study being conducted through Kutztown University, Department of Social Work Please read this form and ask any questions you may have before you decide whether you want to participate in the study. The University requires that you give your signed agreement if you choose to participate. This study is being conducted by Lisa M. Lowrie.

#### TITLE OF THE STUDY

*Exploring the relationship between email overload, stress, and burnout in the social work workforce.*

#### PURPOSE OF THE STUDY

The purpose of this study is to gather feedback from social workers, particularly on their perceptions, thoughts, and feelings related to the use of email in the workplace. The research question is: What are social workers' perceptions, thoughts, and feelings related to email.

#### PROCEDURES

If you agree to participate in this study, we would ask you to do the following things: Read and sign the consent form prior to the in-depth, individual interview which explains the limits to confidentiality and your rights as a participant. You will be provided the opportunity to ask questions and clarification about the research prior to the start of the interview. You can withdrawal from the interview at any time without any penalty. You will be asked to sign two identical consent forms. One will be for your records and one will be kept by the researcher. If the interviews are conducted through Skype, you will be emailed the consent form prior to the interview and asked to read it, sign it, scan or photocopy the signed consent form and email it back to Lisa Lowrie. Once consent is obtained the interview will begin. The interview is expected to take no longer than 30 minutes. It will consist of five questions related to your perceptions, thoughts, and feelings related to email. You will also be asked to provide the basic demographic information (year born, social work degree, and gender) by completing a questionnaire after you have signed the consent and prior to the interview. You are not required to answer the demographic questionnaire to participate in the interview. If at any time you wish to stop the interview, you may do so. The interview will be digitally recorded to ensure that your responses are accurately captured, and notes will be taken during the interview. Once the interview is over, you will be given a \$25 Sheetz gas gift card and a debriefing form, In addition, a copy of your transcript will be emailed to you for your review to ensure that the



## **RISKS AND BENEFITS OF BEING IN THE STUDY**

It is not anticipated that there will be any financial, social/economic, or legal risks or harm. There is minimal risk in this research. However, if you do find yourself in distress, there are resources available to you. If you feel especially concerned about stress, anxiety, or depression please contact your employers' Employee Assistance Program (EAP) about options for counseling. Alternatively, you could also phone the National Crisis Hotline at 1-800-273-8255 or you can Text HOME to 741741 ([www.crisistextline.org](http://www.crisistextline.org)) from anywhere in the United States.

The benefits to participation are indirect to social workers and will increase awareness of the issue of email overload. The awareness may increase advocacy, policy, and best practices related to email.

## **COMPENSATION**

Participants will be given a \$25 gift card *as* an incentive. The gift card will be handed out at the end of their interview.

## **CONFIDENTIALITY**

All information will remain confidential. Materials, including demographic information, digital recording, and any notes of the interviews will be kept in Lisa Lowrie's home office, in a locked file cabinet. The digital recording will be transcribed through a private transcription service, and no identifying information will be provided to the transcriber. The information will be entered into NVivo and protected by a password protected computer and file. All information will be handled in a confidential manner to the extent provided by law, so that no one will be able to identify you when results are recorded. The records of this study will be kept private. In any report or presentation, I will not include any information that will make it possible to identify a research study participant.

## **VOLUNTARY PARTICIPATION**

Your participation in this study is completely voluntary. There is no penalty for not taking part. You may discontinue your participation and withdraw from the study at any time without penalty.

## **CONTACTS AND**

The researcher conducting this study is:

Lisa M. Lowrie, LSW, Kutztown University DSW Candidate,  
[llowr054a@live.kutztown.edu](mailto:llowr054a@live.kutztown.edu), Department of Social Work, 15200 Kutztown Road,  
Kutztown, PA 19530, 610-683-4235,

Advisor, Dr. Sharon Lyter, Kutztown University Department of Social Work, 15200  
Kutztown Road, Kutztown, PA 19530, 610-683-4235,

[Alex.Redcay@millersville.edu](mailto:Alex.Redcay@millersville.edu), Chair of doctoral committee, Dissertation Chair,  
Dr. Alex Redcay, Assistant Professor, Millersville University,  
(717) 480-0585.

### QUESTIONS

You may ask any questions you have now. If you have questions later regarding the research study, you may contact the researcher listed above. If you have any questions or concerns about the rights of research participants, please contact the IRB committee at Kutztown University at 484-646-4167.

### STATEMENT OF CONSENT

I have read the information described above and have received a copy of this information. I have asked questions I had regarding the research study and have received answers to my satisfaction. I am 18 years of age or older and voluntarily consent to participate in this study.

---

Signature of Participant

Date

## Appendix D

### Debriefing Form

Debriefing Form: **Exploring the relationship of email overload, stress, and burnout in social workers.**

Thank you for agreeing to participate in this study! The general purpose of this research is to explore email overload and the relationship it may have on stress and burnout in the social work workforce. The data that is collected and analyzed may help to inform future practice, policy, and education related to email overload.

I invited social workers that are currently working or teaching in the social work field to take part in this study and do not know what your specific results were due to the confidential nature of the study. In this study, you were asked to complete a survey that asked questions related to email overload, stress, coping, burnout, anxiety and depression. The results from this study will help to inform organizations, the Academe, and individual social workers on the role that email may play in stress and burnout in the social work workforce.

If you feel especially concerned about stress, anxiety, or depression please contact your employers' Employee Assistance Program (EAP) about options for counseling. Alternatively, you could also phone the National Crisis Hotline at 1-800-273-8255 or you can Text HOME to 741741 ([www.crisistextline.org](http://www.crisistextline.org)) from anywhere in the United States.

Thank you for your participation in this study. If you have further questions about the study, please contact Lisa Lowrie, at [llowr054@live.kutztown.edu](mailto:llowr054@live.kutztown.edu). In addition, if you have any concerns about any aspect of the study, you may contact the Institutional Review Board Committee at Kutztown University, 484-646-4167.

Additional Self-Care tips can be found at:

The University of Buffalo, School of Social Work website  
<https://socialwork.buffalo.edu/resources/self-care-starter-kit/developing-your-self-care-plan.html>

## Appendix E Recruitment Flyer

### Research Study Kutztown University, Department of Social Work SOCIAL WORKERS INVITED...

Exploring the relationship of email overload, stress, and burnout in social workers.



To access the survey, click on the link or copy and paste the URL to your browser.

<https://www.surveymonkey.com/r/LK5F36F>

Or

Scan the QR code below from your phone.



This research study has been approved by the Kutztown University IRB Committee (IRB30102018).

The purpose of this voluntary study is to explore email overload, stress and burnout in social workers. The research will take place from October through December 2018. The survey takes approximately 5 to 10 minutes.

Who is eligible:

- Degreed Social Workers
- Age 18 or older
- Employed

Compensation:

- Two survey participants will be randomly selected for one of two \$150.00 Sheetz gas gift cards.
- Six to eight participants that participate in a face-to-face or video interview will receive a \$25.00 Sheetz gas gift Card.

**Benefits:** Participation in this study will further advocacy, education, and best practice related to email use in the social work workforce.

For more information or questions contact: Lisa Lowrie at [llovr054@live.kutztown.edu](mailto:llovr054@live.kutztown.edu) or by phone at 717-468-3673.

## Appendix F Support Letters

# THE PARTNERSHIP

## National Partnership for Juvenile Services

*Supporting the Transformation  
of Youth, Families, Staff, Agencies, and the  
Juvenile Justice System toward a Safer  
and More Productive Future*

### PARTNERS

*Council for Educators of At-Risk and  
Delinquent Youth*

*Juvenile Justice Trainers Association*

*National Association of Juvenile Correctional  
Agencies*

*National Juvenile Detention Association*

### EXECUTIVE OFFICE

2220 Nicholasville Road  
Suite 110-333  
Lexington, KY 40503  
t ~ 859.333.4209  
f ~ 888-282-8549  
www.npjs.org

### LEADERSHIP

**Wayne R. Bear, MSW (PA)**  
*Chief Executive Officer*

**Rhea Bowman (AK)**  
*Appointed Representative - CEA*

**Dipesh Chauhan (PA)**  
*At-Large Representative*

**Leonard Dixon (IL)**  
*Detention Council*

**Randall Farmer (NE)**  
*Education Council*

**Charles Parkins (AZ)**  
*Corrections Council*

**Mykel Selph (IL)**  
*Training Council*

**Earl L. Dunlap (IL)**  
*Senior Advisor*

**Michael A. Jones (KY)**  
*Managing Director*

July 29, 2018

Lisa Lowrie  
19 School Lane  
Stevens, PA 17578

Regarding: Dissertation Project

Dear Lisa,

This letter is written in support of Lisa Lowrie's dissertation research. I am writing to you on behalf of the National Partnership for Juvenile Services (NPJS), a membership organization that provides professional development and technical assistance and promotes best practices and standards to the field of juvenile justice and delinquency prevention to positively impact youth, families and communities. Our current membership includes 300+ individuals representing 40 states across the nation.

The Partnership members have increasingly expressed concerns related to the recruitment and retention of professionals within the field. Increasingly, we experience barriers associated with identifying and retaining individuals willing to work with this challenging population. Given this growing area of concern, our association offers our commitment to support your dissertation research in the area of *email overload and the potential relationship that this may have on stress and burnout in the social work workforce*. As mentioned above, our members have experienced significant workforce issues which we believe are associated with numerous factors but which current research indicates is directly connected to perceptions that workers are overwhelmed with communications and documentation processes that limit their ability to directly connect with their consumers. We believe this research will offer insights that clarify the specific problem areas and will provide direction for how to relieve some of these barriers to retention.

Our organization, will market and provide access to individual member organizations through our newsletter, website and social media communication. As a side note, our communications are distributed and available to the wider field of juvenile justice and will reach beyond our current membership. NPJS also produces the Journal of Applied Juvenile Justice Services, an online professional journal, which may be an outlet for manuscripts that you develop during the course of your research.

If you have any questions, please contact my office. Thank you.

Best Regards, \_\_\_\_\_



Wayne R. Bear, MSW  
Chief Executive Officer  
National Partnership for Juvenile Services (NPJS)



July 27, 2018

Lisa Lowrie  
19 School Lane  
Stevens, PA 17578

Dear Lisa:

I am writing this letter to offer support for your dissertation project, on behalf of the Pennsylvania Council of Children, Youth and Family Services (PCCYFS).

PCCYFS is a statewide membership organization representing the interests of more than 90 (currently 91) private human service agencies in Pennsylvania, which provide a wide range of child welfare, juvenile justice, and children's behavioral health services. These services include residential, therapeutic and supportive services, ranging from prevention-focused, in-home services to foster and campus-based residential, to independent and transitional living. Member agencies also provide a variety of behavioral health services, drug and alcohol, and educational programs.

We understand that your topic is 'email overload and the potential relationship that it may have on stress and burnout in the social work workforce.' We are happy to assist in data collection on this topic, as workforce development is an important issue for our members and within the human services field more generally. We participate in several workgroups on the topic and are very interested in the collection of data, sharing of best practices, and the identification of possible solutions to workforce-related issues. We regularly communicate with our members in a number of ways, including a Monday Morning Update and other targeted email communications. We intend to share your survey(s) through our email distribution platform to member (and, if requested, non-member) executives at human service agencies across the state.

Please let me know if you have any questions or need any additional information. Thank you.

Sincerely,

Teri L. Henning  
Executive Director

Pennsylvania Council of Children, Youth and Family Services • 2040 Linglestown Road, Suite 109  
Harrisburg, PA 17110 • (717) 651-1725 • hbgofficc@pccyfs.org





PO Box 60769 • Harrisburg, PA 17106-0769  
717-526-1010 • Fax: 717-526-1010 • [www.jdcap.org](http://www.jdcap.org)

Lisa Lowrie  
19 School Lane  
Stevens, PA 17578

Dear Lisa,

I am writing this letter to offer support to Lisa Lowrie for her dissertation project, on behalf of the Juvenile Detention Centers and Alternative Programs (JDCAP). We understand that she will be asking questions related to burnout, stress, anxiety, technology, and email. Our association represents service providers committed to providing treatment, rehabilitation balanced with supervision needed to assure community protection for justice-involved youth. The Juvenile Detention Centers and Alternative Programs is a professional organization dedicated to supporting its members by: promoting sound policies, advancing best practice standards, and maintaining a continuous learning environment within the juvenile justice system. Our current membership includes 24 agencies with a large number of social workers in the workforce. Additionally, as an affiliate of the National Partnership of Juvenile Services (NPJS) our communications can be shared nationally.

Within the past year, our association included staff recruitment and retention as a platform item given growing concerns with our ability to address workforce issues within the field. Given this new interest, our association offers our commitment to support Lisa's dissertation research in the area of email overload and the potential relationship that this may have on stress and burnout in the social work workforce. Our members, as well as those throughout the field of social welfare, have experienced significant workforce issues which we believe are associated with numerous factors but which current research indicates is directly connected to perceptions that workers are overwhelmed with communications and documentation processes that limit their ability to directly connect with their consumers. We believe this research will offer insights that clarify the specific problem areas and will provide direction for how to relieve some of these barriers to retention.

Our membership organization, will market and provide access to individual member organizations through our newsletter, website and web-based communication, including email. As a side note, our communications are distributed and available to the wider field of juvenile justice and will reach beyond our current membership.

Wayne R. Bear, MSW  
Executive Director  
Juvenile Detention Centers and Alternative Programs (JDCAP)  
CEO  
National Partnership for Juvenile Services (NPJS)

*An Affiliate of the County Commissioners Association of Pennsylvania*

## Appendix G

### Email Overload

Four Point Likert Scale: Strongly disagree (1), Disagree (2), Agree (3), Strongly Agree (4)

#### Volume

1. Email increases my workload
2. Email increases communication with co-workers
3. Email is a waste of time
4. Email is useful
5. Email makes my work more efficient
6. Email makes my work less efficient

#### Rapid Response Expectation

1. I am expected to respond to my work email immediately
2. I am able to respond to my email daily

#### Invasion

1. I have thought about work at home because of unwanted emails
2. Email interferes with my personal life
3. I am responsible for email because of unwanted emails
4. When I think about reading or responding to email, I am anxious
5. When I think I think about reading or responding to email I am angry
6. When I think about reading or responding to email, I am stressed



## Appendix H Perceived Stress Tool



### Perceived Stress Scale 4 (PSS-4)

#### INSTRUCTIONS

The questions in this scale ask you about your feelings and thoughts during THE LAST MONTH. In each case, please indicate your response by placing an "X" over the square representing HOW OFTEN you felt or thought a certain way.

	Never 0	Almost Never 1	Sometimes 2	Fairly Often 3	Very Often 4
1. In the last month, how often have you felt that you were unable to control the important things in your life?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. In the last month, how often have you felt confident about your ability to handle your personal problems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. In the last month, how often have you felt that things were going your way?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### Scoring for the Perceived Stress Scale 4:

##### Questions 1 and 4

0 = Never  
1 = Almost Never  
2 = Sometimes  
3 = Fairly Often  
4 = Very Often

##### Questions 2 and 3

4 = Never  
3 = Almost Never  
2 = Sometimes  
1 = Fairly Often  
0 = Very Often

Lowest score: 0  
Highest score: 16

Higher scores are correlated to more stress.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24, 385-396.

## Appendix I

### Burnout

Respondent was asked to answer the following question based on their personal definition of burnout.

I feel burned out from my work.

Five-point Likert Scale: Never (0), Once a month or less (1), A few times a week (2), Once a week (3), A few times a week (4), Everyday (5)

## Appendix J

### Patient Health Questionnaire-4

Version Attached: Full Test

PsycTESTS Citation:

Kroenke, K., Spitzer, R. L., Williams, J. B. W., & Löwe, B. (2009). Patient Health Questionnaire-4 [Database record]. Retrieved from PsycTESTS. doi: <http://dx.doi.org/10.1037/t06168-000>

Instrument Type:

Inventory/Questionnaire

Test Format:

Responses on the Patient Health Questionnaire-4 are scored as 0 ("not at all"), 1 ("several days"), 2 ("more than half the days"), or 3 ("nearly every day"). Therefore, the total score on this composite measure ranges from 0 to 12.

Source:

Supplied by author.

Permissions:

Test content may be reproduced and used for non-commercial research and educational purposes without seeking written permission. Distribution must be controlled, meaning only to the participants engaged in the research or enrolled in the educational activity. Any other type of reproduction or distribution of test content is not authorized without written permission from the author and publisher. Always include a credit line that contains the source citation and copyright owner when writing about or using any test.

<b>PHQ-4</b>				
<b>Over the last 2 weeks, how often have you been bothered by the following problems? (Use "✓" to indicate your answer)</b>	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Little interest or pleasure in doing things	0	1	2	3
4. Feeling down, depressed, or hopeless	0	1	2	3

**(For office coding: Total Score T \_\_\_\_\_ = \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ )**

Developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke and colleagues, with an educational grant from Pfizer Inc. No permission required to reproduce, translate, display or distribute

## Appendix K

### Coping

Four Point Likert Scale: Strongly disagree (1), Disagree (2), Agree (3), Strongly Agree (4)

1. Managing my email is difficult
2. I can manage my email well
3. Communication by email is stressful
4. I like to communicate by email
5. Email causes my work to be more than I can handle
6. Email makes my work easier