WALDEN UNIVERSITY
A higher degree. A higher purpose.

Walden University
ScholarWorks

Walden Dissertations and Doctoral Studies

2019

Social Media Effects on Millennials' Counterterrorism Type of Behaviors

Laura C. Domasneanu-Miulescu
Walden University

Follow this and additional works at: https://scholarworks.waldenu.edu/dissertations

⟳ Part of the Psychology Commons

Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Laura Cristiana Domasneanu-Miulescu

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Kristen Beyer, Committee Chairperson, Psychology Faculty
Dr. Wayne Wallace, Committee Member, Psychology Faculty
Dr. Jessica Hart, University Reviewer, Psychology Faculty

The Office of the Provost

Walden University
2019

Abstract

Social Media Effects on Millennials' Counterterrorism Type of Behaviors

by

Laura Cristiana Domasneanu-Miulescu

MS, University of Michigan, 2012

BA, Wayne State University, 2009

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Doctor of Philosophy in Forensic Psychology

Walden University

September 2019

Abstract

Social media is a critical and omnipresent component in Millennials' lives. Using social media can lead to significant social change for societies both online and offline. Social media can be used as a tool to combat domestic and foreign terrorism and to protect our society. Prosocial perceptions and behaviors exhibited on a social media platform can transcend online social culture and produce replicas of those behaviors in the real world. Research in social activism portrayed by Millennials via social media is limited, and research regarding social media use and counterterrorism behaviors of Millennials has not yet been attempted. The current quantitative study assessed social media and its potential use for counterterrorism behaviors by Millennials by establishing if there were correlations between Millennials' social media usage and the existence or potential of using social media for counterterrorism behaviors. Reliability, exploratory factor analyses, as well as linear and hierarchical regression analyses were performed on a sample of 178 participants to establish if social media usage is predictive for counterterrorism behaviors while assessing if any variance is attributed to moderating variables. Positive relationships were found between social media preferences, networking power, and preferences for social responsibilities and counterterrorism behaviors. The survey used a modified instrument to address counterterrorism type behaviors in connection to social media usage, due to the inexistence of such instrument insofar. The results of the study contribute to social change by providing information on how to detect and increase counterterrorism behaviors and attitudes through social learning via social media platforms.

Social Media Effects on Millennials' Counterterrorism Type of Behavior

by

Laura Cristiana Domasneanu-Miulescu

MS, University of Michigan, 2012

BA, Wayne State University, 2009

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Doctor of Philosophy in Forensic Psychology

Walden University

September 2019

Dedication

To my late grandfather, Ludovic Zaharia Domasneanu-Miulescu, who believed in me and instilled in me the importance of getting an education. To my parents, my heroes, Dan-Zaharia and Aurelia Domasneanu-Miulescu, who never stopped believing in me, and helped me become the person I am today. Without their help, support, and love, I would have never had the opportunity to successfully complete the dissertation journey.

Acknowledgments

I never imagined I would have the opportunity to complete a doctoral program and to successfully complete a dissertation. I was able to achieve this goal, because I had wonderful individuals who have supported me through this journey and who believed in me. I would like to thank my dissertation committee chair, Dr. Kristen Beyer, who gracefully accepted to be my chair and has guided me through this process through leadership, inspiration, knowledge, and constructive input. I would like to express gratitude to my second committee member, Dr. Wayne Wallace, who stepped in mid-stream and lead in me in the right direction through unique insights, humor, encouragement, and sanguinity. I would also like to thank Dr. Eric Hickey, the person who inspired and partook in the inception of this project, who offered his perspective and his suggestions. Thank you to Dr. Vasileios Margaritis, who was a wonderful mentor, and helped me through this process by donating his time and inimitable standpoint. To my fellow colleague and dear friend, Elizabeth Duemig, for her unwavering support and constructive feedback, as we journeyed together through this process. A special thank you to my best friend, Alexandru Vasilescu, for his unconditional support that made the completion of this dissertation possible. Finally, I would like to thank my friend, Monika Marko, for countless hours of trying to help and explain statistics, for being my own personal methodology expert.

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

Introduction

Social media has had an enormous impact on societies across the globe since its inception. Social media application appearances have increased exponentially in recent decades (Aggarwal, 2011); this requires new viewpoints on how to approach the intersection between society, social media, and behavioral contexts. Research shows that searching for information via social media is a positive prognosticator for an individual's choice to get involved and to assume social responsibility (Paulin, Ferguson, Schattke, & Nina, 2014). The importance and influence of social media sites have risen rapidly. Facebook, which is a social application, was ranked until 2018 second in popularity after Google (Gil de Zuniga, Jung, & Valenzuela, 2012), which is a search engine, not a social media application. This suggests that social media usage and status have amplified and have become a necessity for societies across the globe. As of 2018, Facebook has been ranked as second in usage after YouTube among social media applications (Smith & Anderson, 2018). This is because 94% of young adults between 18 and 24 use YouTube. Nonetheless, Facebook is still the leading platform for adults overall with 68% of people under the age of 65 using Facebook primarily.

Social media is crucial to today's society because it provides an information flow to people regardless of their geographical location, socioeconomic class, education, or age. It is accessible to people globally, with the caveat that individuals must have a way to log into the application such as a computer, mobile device, or smart phone. Individuals can participate in social, civic, political, and other activities and groups. They can provide

and share information, stay informed, and they can be influencers, all from the comfort of their home, office, or any location that provides them Internet access.

Among the generations, Millennials are the younger adults who widely embrace and accept social media. This generation finds social media and technology gratifying, and they accept as true that social media provides better relationships, online affirmation, and other benefits (Bobkowski & Smith, 2013). This mentality is referred to as the gratification perspective where personal motives and social connections motivate Millennials to use social media (Shao, 2009). Millennials influence social media and vice-versa. These young adults are active communicators who create interpersonal communication with one another. How they affect social media or how social media affects them fluctuates based on a multitude of variables such as personality, social context, culture, socioeconomic and political structure, attitudes, activities, expectations, and involvement (Rubin, 2008). These divergent variations lead to different outcomes, behaviors, and the ability to influence the media and/or the consumers of social media.

Research looking at prosocial behavior via social media is scarce (Ferguson, Gutberg, Schattke, & Paulin, 2015), and because social media is the primary source of communication for this generation (Paulin, Ferguson, Schattke, & Nina, 2014) it makes sense to investigate prosocial behaviors as well as subfields of prosocial behavior such as counterterrorism activities that Millennials may portray or be willing to engage in via social media. Millennials often participate in new social movements and initiatives, which increase constantly and vary across geographical locations and interests. These individuals believe that they can bring awareness by using social networks, and their

perception is that social media is a good avenue for exchanging information and raising consciousness for a particular need (Meyer & Workman Bray, 2013). However, the online presence and the participation in social media by Millennials can be used for more than just awareness and support for causes. Millennials can become influencers and active components by being prosocial and portraying counterterrorism behaviors; this means that followers trust them and would follow them or get involved. To establish whether this positive social change can be achieved, research must establish if Millennials engage in or perceive as important participation in counterterrorism behaviors.

In Chapter 1, I concentrate on this potential social change regarding terrorism that Millennials could provide or already bring to society. Chapter 1 provides an overview of this information that includes distinct sections such as background for research that demonstrates the gap in knowledge and why it is essential to conduct the study; the problem statement that shows the problem as current, applicable, and significant; and the purpose for the study, which provides my intent for the study. Other sections included in Chapter 1 are the research question and hypotheses, the theoretical foundation for the study, the nature of the study, which is the rationale for why a particular design was chosen, and the definitions of terms in the study. The last sections in Chapter 1 before the summary provide the assumptions critical to the meaningfulness of the study, the scope and delimitations of the study, the restrictions of the study related to design and/or methodological shortcomings, and the implications of the study, which identify possible contributions of the study.

Background

Social media, or microblogging, dominates as the leading avenue for communication among Millennials. This is because Millennials are the first generation that grew up being digitally connected and may have a more limited concept of privacy or what life was before computer-mediated communication was developed and became easily accessible (American Press Institute, 2015). Millennials control and use social media for various reasons, and they leave a digital footprint (Golder & Macy, 2014) that makes them both vulnerable and powerful simultaneously. Many studies have been conducted to establish percentages of Millennials who use social media, what platforms are more popular, differences based on age, type of information shared, and if usage pertains to social or civic purposes (Lenhart, Purcell, Smith, & Zickuhr, 2010; Richter, 2018; Media Insight Project, 2015). Many variables affect how Millennials use social media such as society, social issues, health, employment, socioeconomic and political status, personal values, and so forth (Bolton et al., 2013). Nevertheless, there is limited empirical research on this internet generation and its subgroups regarding social media use for counterterrorism behaviors (Kilian, Hennings, & Langner, 2012). Research regarding social activism and counterterrorism behaviors portrayed by Millennials via social media is limited, and it is unclear what impact social media has on the willingness to get involved and be engaged that intertwines across both online and offline arenas (Seeling, 2018).

Social media plays a significant role in how terrorists attacks are carried out worldwide, how it aids their operational strategies, and how it is used to produce fear,

publicity, and psychological effects (Howie, 2015). Bin Laden stated that social media is a great gift and a very important battlefield that is obscure, safe, controllable, free (Klausen, 2015), and social media has helped terrorists move their war into cyberspace, which helped eliminate geographical constraints. ISIS molded social media for their dogma and tactics and turned it into a deadly offensive strategy for psychological warfare (Greenberg, 2016). If social media has been used against different people and countries, it can be reversed and used as an effective weapon against terrorists. The principle of homophily can be used to induce behaviors via social media (Bakshy, Rosenn, Marlow, & Adamic, 2012) and enhance citizen engagement because social media cannot be controlled by money, power, or politics (Agostino, 2013; Haro-de-Rosario, Saez-Martin, & Caba-Perez, 2018; Skoric, Zhu, Goh, & Pang 2016). This infers that civilians can use social media prosocially without restrictions.

There are a plethora of studies and reports (Taylor, Fritsch, & Liederbach, 2014; Klausen, 2015) on the adverse effects of social media, especially pertaining to terrorism and how it is used by various terrorist organizations, but insufficient studies exist on the positive effects of social media. Additionally, no studies have addressed the positive social change that social media can bring when used for counterterrorism. People make a choice whether to engage in terrorism and use social media as a tactic of warfare (Kruglanski & Fishman, 2006; Post, 2010) and it provides them glory, a sense of purpose, and existential desires. Further, the individual risk factors for terrorism may be similar to the factors that drive Millennials to act against terrorism because there are many similarities between Millennials and terrorists such as age, gender, marital status, and

social class (Cottee & Hayward, 2011; Monahan, 2012). If engaging is a choice, Millennials can choose to use social media as a counterterrorism measure due to the intrinsic emotional satisfaction they may get from helping others, which would be considered a prosocial behavior, specifically counterterrorism behavior. If Millennials choose to use social media for counterterrorism it can have an impact that would be carried online and potentially offline. The potential online behaviors could take place because social media platforms alter the impact of offline prosocial behaviors, specifically after a terror attack due to information cascades and lack of cost for people to use social media (Enjolras, Steen-Johnsen, & Wollebaek, 2013).

The war against terrorism needs to change to include civilians, especially Millennials, by using social media. The success of stopping terrorism relies on being able to motivate and engage Millennials in this type of prosocial behavior, explicitly counterterrorism behaviors via social media (Paulin et al., 2014; Richardson, 2006). Agencies and societies must use millennial influencers to create ways to elicit these behaviors within the millennial generation. If terrorists use social media to shock and to communicate as a strategy (Gerhards & Schafer, 2014), Millennials can use social media to communicate to counter terrorism, which would increase the ability of societies across the globe to be resilient and cohesive against terrorism. It is also cost effective for both the Millennials and governments or agencies to collaborate, share intelligence, and keep people engaged, but more empirical research is needed (Zheng & Zheng, 2014). Social networks are important and useful for fighting terrorism. Unfortunately, combating terrorism is not a structured strategy due to the variations and uncertainties of terrorist

behavior and planning. Hereafter, establishments and civilians should use superior and ingenious data and information, such as available from social media and its analysis, to counter promulgation of fanatical philosophies (Ressler, 2006).

To establish whether society can use social media to counter terrorism, it must first be established if Millennials would be willing to engage in such behaviors and if there is any evidence that some Millennials have already behaved in such ways. It is imperative to establish how different groups of Millennials perceive and behave prosocially with emphasis on counterterrorism because Millennials are not a homogenous group. Consequently, using participants who are not in majority college students is vital. A previous study looked at the willingness of participants to use social media and how it influences audiences as a forum to communicate in real time, showed a 93% success rate (Efaw & Heidger, 2012). Efaw and Heidger's (2012) research was the first-time researchers looked at the willingness of Millennials to act prosocially online, which needs to be examined further to establish if counterterrorism behaviors via social media would be accepted and adopted by civilians from the millennial generation. It is critical to study these behaviors and elicit responses, especially because terrorist organizations target Millennials by using social media to recruit and radicalize youth on a large scale. Engaging in counterterrorism behaviors produces benefits for the individual and for society and protects Millennials from being recruited. This gap in the research is discussed by some researchers as involving deficiencies of agencies and governments due to the lack of using community involvement as part of the counterterrorism strategies (Aistrope, 2016; Cohen, 2016; Greenberg, 2016; Tianlu, Yang, Chan, & Hao, 2016).

Civilian Millennials can become both observers and active responders against terrorism via social media (Rasmussen, 2015). None of this will be possible until public opinion of Millennials is assessed pertaining to this topic, and prosocial behaviors such as counterterrorism are researched in depth (Bartlett & Reynolds, 2015; Wright & Li, 2011).

The balance between positive and negative use of social media and how it alters interpersonal communication is unstable and uneven (Gruzd, Jacobson, Wellman, & Mai, 2016); research also shows a long-term relationship between prosocial media use and behaviors that include or induce empathy and helping across cultures (Prot et al., 2013). This demonstrates that this can be used to cultivate the digital moral identity of Millennials about social media and its use for counterterrorism (Ferguson, Paulin, Jost, Fallu, & Schattke, 2013). This calls for research, which currently is limited, on the effects of using social media as an avenue for prosocial behaviors such as counterterrorism that could lead to social change implications for policy makers (Gil de Zuniga et al., 2012; Weinbaum, Girven, & Oberholtzer, 2016).

Problem Statement

The internet and social media can be a place where people can positively connect and create relationships, and social behavior via social media has been underexplored (Wright & Li, 2011). Currently, there is no research on counterterrorism behaviors displayed via social media (Golder & Macy, 2014). There is no current research on the relationship between Millennials' attitudes about social media and counterterrorism behaviors. Additionally, social media is viewed as a paramount phenomenon to social inequality and collective mobilization. Studies have concentrated on technology and

social media as producer of nefarious attitudes and behaviors, which create an optimal

platform for terrorist activity (Pauwels & Schils, 2016). Negative social media use has

been researched on diverse topics, but no research exists on the behaviors of Millennials

via social media platforms for actions that would be classified as prosocial behaviors

such as counterterrorism. This could be due to the assumption that people are reluctant to

engage in counterterrorism behaviors, and these efforts are impacted by various factors

(Hirschberger, 2010).

 Understanding the behavior of civilian Millennials regarding counterterrorism

strategies that emphasize social media platforms is important, especially the connection

between the moderating variables and behaviors Millennials hold. Research shows that

cultural identity affects online behaviors (Rui & Stefanone, 2013). Studies that include

culture as a moderator show that prosocial media use and altruism are positively

correlated with young adults (Prot et al., 2014). This would suggest that Millennials may

be using or willing to use social media and technology to exhibit behaviors that would be

classified as counterterrorism efforts.

 Counterterrorism is important in relation to social media, because of ISIS's

activity on a multitude of social media platforms and the dark web they use to recruit and

radicalize (Aistrope, 2016) and also due to social media being underestimated as a

counterterrorism tool. This suggests gaps in terrorism prevention (Howie, 2014) and the

potential in using Millennials in counterterrorism efforts because the intensity, frequency,

and proficiency for social media is highest among this cohort (Bolton et al., 2013).

Prosocial behaviors may lead to counterterrorism behaviors demonstrated via social

media platforms. These behaviors may be affected by culture and variations in social media usage and the comfort level with using technology. The National Defense Research Institute looked at research on United States and foreign Millennials and found that Generation Y, Millennials, are the most interconnected, educated, informed, sophisticated, and versatile cohort, and most of them want to make a difference (Weinbaum et al., 2016). Rand researchers inferred that partnering with this generation would help the intelligence community, and counterterrorism strategies would be more effective in the future by collecting and sharing information through various methods including technology (Weinbaum et al., 2016). Furthermore, the report stated that Millennials' outlook and behaviors vary by country, and as a rising generation, this should be researched because the intelligence community needs these Millennials; and such research currently does not exist.

Such studies regarding Millennials have not been attempted, and it is a gap in the research that needs to be explored. The use of technology for countering terrorism has been proposed by credible organizations, defense agencies, and groups such as the UN Counter-Terrorism Implementation Task Force. One way to address this problem is at the social level by using technology to increase counterterrorism efforts at the grassroots by supporting non-extremist voices (Shetret, 2011). Society (Weinbaum, Girven, & Oberholtzer, 2016) will be better equipped if Millennials become observers and active members in counterterrorism strategies that involve social media. This calls for research into Millennials' counterterrorism behaviors via social media.

Purpose of the Study

The purpose of this quantitative study was to examine how Millennials exhibit counterterrorism behaviors via social media platforms. I explored attitudes and behaviors towards counterterrorism using social media as a tool. I investigated Millennials' use of technology and social networks in relation to combating terrorism by looking at their online counterterrorism behaviors and attitudes. This was achieved via a self-reported questionnaire that required prospective participants to give informed consent electronically. Social media is a powerful instrument used reprehensibly by organizations such as ISIS, but it can be used constructively to counter terrorism, and the group of individual social media users easiest to be reached is Millennials (Kilian et al., 2012). Millennials are the individuals most prone to exhibit social responsibility and community-related helpful behaviors via social media (Golder & Macy, 2014) and therefore could be more open to counterterrorism behaviors via online platforms and applications.

There are factors that can influence the use of social media as well as counterterrorism behaviors of Millennials. I assessed these via a questionnaire I created (Appendix B) from questions included in the APS (Altruistic Personality Scale), SRS (Social Responsibility Scale), MTUAS (Media and Technology Usage and Attitudes Scale), and SMUIS (Social Media Use Integration Scale). MTUAS measures usage of social media (Rosen, Whaling, Carrier, Cheever, & Rokkum, 2013), while SMUIS measures integration of social media behavior and daily practices of users (Jenkins-Guarnieri, Wright, & Johnson, 2013). The APS measures altruism (Rushton, Chrisjohn,

& Fekken, 1981). SRS describes socially responsible behavior as altruistic acts not dependent on social or material rewards that vary based on situational factors such as culture, negative attitudes towards people who need help, psychological cost to the helper, and prior experiences (Berkowitz & Daniels, 1964). Items from all four scales were modified to assess culturally sensitive counterterrorism behaviors of Millennials and the level of prosocial behavior of Millennials.

The dependent variable was counterterrorism behavior and the independent variable was social media usage. Moderators may affect both the dependent and independent variables. Possible moderating variables that could influence the usage of social media as well as counterterrorism behaviors are geographical location, country of origin/residency, cultural background/religion, and demographics such as age, gender, ethnicity, education level, marital status, and employment status. Understanding Millennials' usage of social media and behavior towards counterterrorism could facilitate social change and introduce social media as a tool in counterterrorism strategies in the public and private sector.

Research Question and Hypotheses

The research question emerged from the lack of research connected to social media usage and counterterrorism behaviors of Millennials, a gap discussed in detail in the literature review. The study examined the following research question:

RQ: Does Millennials' social media usage predict counterterrorism behaviors?

H_0: Social media usage portrayed by Millennials does not suggest a significant relationship with counterterrorism behaviors of Millennials.

*H*a: Social media usage portrayed by Millennials does suggest a significant

relationship with counterterrorism behaviors of Millennials.

Theoretical Framework

The theoretical framework for this study was based on Walther's (1996)

hyperpersonal model of interpersonal communication that proposes computer-media

communication (CMC) is hyperpersonal because it surpasses live face-to-face

interactions and communications. This was derived from Walther's (2015) social

information processing theory (SIPT) developed in 1992. Walther (2007) stated that

individuals who use CMC and more advanced versions such as social media platforms

are cognitively aware of their behavior. The theory suggests that CMC changes

relationships and behaviors; hence it can be assumed that social media will function as

CMC. This suggests social interaction and behavior is affected by any type of CMC such

as social media.

The communicators have numerous advantages when they interconnect via

technology and social media. Walther (2007) suggested that this model gives users the

opportunity to exploit technological aspects to augment messages, create impressions

about themselves and edit behaviors, o empower relationships, and change their behavior

and message according to the target audience/receiver of the message. Users of social

media have the option to make changes as they use these platforms on a case by case

basis. The idea is that the persons using the CMC model to communicate on social media

platforms and online via technology have cognitive awareness of their behavior and how

they use social media (Walther, 2007).

Since CMC and SIPT were presented to academia, computers evolved to laptops, and mobile devices such as tablets and smartphones were introduced that enable CMC to take place in a more fluid, frequent, constant, and synchronous fashion, and with the ability to provide abundant material among users. The hyperpersonal computer-mediated communication model is a sound theoretical framework because social media applications and networks are advanced CMC systems. More empirical research into theoretical frameworks is needed due to CMCs that now take place via multimedia platforms (Soukup, 2000). This theoretical framework provided details on cognitive and social processes Millennials use and differences that offered guidance on how to detect and increase counterterrorism behaviors and attitudes through social responsibility via social media platforms.

Nature of the Study

The nature of the study was quantitative, a survey design that provided a quantitative explanation of Millennials' counterterrorism behaviors. I chose this research design because it was an appropriate means of testing an objective concept through the assessment of the relationships between variables, and because it results in data that can be evaluated through statistical methods (see Creswell, 2014). I used aa cross-sectional, online survey research methodology through a respected vendor that provided the online platform to construct and execute the survey with the ability to export data for quantitative analysis in SPSS.

I used a questionnaire that reflected questions from two scales that assess altruism and prosocial behavior and from two scales that measure social media usage and social

media behavior integration that also looks at daily practices. For the research question, the dependent variable was counterterrorism behavior and the independent variable was social media. Prosocial behaviors (counterterrorism behaviors) were assessed via modified questions from APS and RSR, and the relationships to social media usage were assessed via modified MTUAS and SMUIS questions. Moderating variables investigated were geographical location, country of origin/residency, cultural background/religion, and demographics such as age, gender, ethnicity, education level, marital status, and employment status.

The population for this study comprised Millennials age 22 through 37 in various geographical areas, not specific to college students, and not restricted to U.S. residents to account for cultural differences or similarities. The study used frequency statistics, exploratory factor analyses, and multivariate linear and hierarchical regressions. I performed moderation analyses to obtain information regarding the associations and strengths among variables and moderating factors. Details of these investigations are delivered in Chapter 3. Findings could not be compared with past findings for generalization due to lack of research on this issue.

Definitions

The independent and dependent variables, the covariates, and specific terms used in the study are complex and at times have multiple definitions or a generalized meaning that academia has not agreed upon. These terms are defined below.

Altruistic (helpful) behaviors: Behaviors people engage in such as volunteering, helping strangers, giving money to organizations, donating blood, and joining rescue task

forces that sometime lead to negative consequences and even death to the people

behaving in an altruistic way (Bénabou & Tirole, 2004).

Civil engagement: A proactive stance characterized by free participation and self-responsibility; it is an active citizenship where people proactively participate, contribute, and collaborate with other citizens (Diaz, Aedo, Arias, & Diaz, 2012).

Community-led counterterrorism: "[N]onstate actors embedded in geographically and religiously defined communities have a distinctive role to play in responding to growing terrorist recruitment efforts in Europe and North America" (Huq, 2017).

Computer-mediated-communication (CMC): When two or more individuals communicate via technology by using two or more devices. This could include communication via e-mail, messaging, social media, and text. CMC can occur in real time or asynchronously (Walther, 1996).

Counterterrorism: An effort to diffuse terrorism by gathering and sharing information, conducting analyses on terrorism and terrorist groups, and understanding and reporting terrorist threats. Counterterrorism is acting in such a fashion and engaging in activities that aid in the neutralization of terrorists, their organizations, and their networks by removing origins and causes (Joint Chiefs of Staff, 2014). On a macro level, counterterrorism is the collaboration and coordination of national and international agencies and authorities, organizations, the private sector, civilians, and media to address the social, political, economic, and other factors that would promote terror recruitment and attacks (Organization for Security and Co-operation in Europe, 2018). Counterterrorism, just as its counterpart, terrorism, has no agreed upon definition that has

been accepted by the international community. Globally, counterterrorism initiatives involve the neutralization of terrorism, terrorist organizations, networks, and propaganda, so that terrorists will be unable to plan and carry out attacks and use violence to instill fear in people with the goal to conquer, control, and coerce (Federal Bureau of Investigation, 2018).

Counterterrorism behavior: A behavioral response when a disaster occurs such as a terrorist attack; it is described as an altruistic behavior where the people in trouble must be helped, where people affected directly or indirectly share, collaborate, and disseminate information, time, money, or resources despite how their involvement may affect their own safety or personal needs (Fisher, 2002).

Culture (norms): Attitudes and behaviors of a certain group based on cultural beliefs that are normal for that specific society. Culture is the foundation for human interaction and communication that includes beliefs, traditions, values, and language (Swartz, 1997). Culture includes codes, meanings, and assumptions that encompass exercises and norms of a civilization.

Digital native: A child, teenager, or young person who is confident and an expert in computers (Selwyn, 2009), who has been immersed in technology for their entire life, sometimes from birth, which provided them with sophisticated tech skills (Bennett, Maton, & Kervin, 2008).

Hyperpersonal interpersonal communication perspective: The idea that sometimes the interpersonal interaction and communication between people using CMC surpasses face-to-face (FtF) communication (Walther, 1996).

Millennials: People born between 1981 and 1996, also known as Generation Y. Millennials are a generational cohort with a fluid cutoff point mainly for being able to establish postmillennial differences in the next generation (Dimock, 2018), who have confidence, positive self-awareness, optimism, and tolerance and who are less judgmental (Twenge, 2014).

Mobile device: A device such as a mobile phone, laptop, or a tablet that is connected to the Internet and social media platforms through a variety of wireless procedures and networks operated by a licensed network operator.

Online activism: Prosocial behavior where a person participates in online petitions, hosting campaigns, and protests; specific online participation regarding important societal issues such as public health, political unrest, disaster relief, and other powerful issues (Rotman et al., 2011).

Prosocial behavior: A positive form of social behavior (Bar-Tal, 1976) when the needs of others are placed above self-needs. It is described as caring for others, being generous, kind, and sympathetic, and it can be influenced by culture, parents, peers, media, personal characteristics, and situations (Nancy & Mussen, 1989).

Social acceptance: "[P]eer acceptance, the ability to make and maintain friendships, and their participation in larger peer networks" (Gifford-Smith & Brownell, 2003).

Social information processing theory (SIPT): The idea that humans are prone to interact socially and to form relationships regardless of the style of communication, computer vis-à-vis FtF (Walther, 2008).

Social media: Any site that has user-generated content such as blogs, microblogs, forums, message boards, social networks such as Facebook, or media sharing platforms such as YouTube (Miller, 2009).

Social media influencer: A person who has an established social media profile that has been or is influential and who has numerous followers (Bakshy, Hofman, Winter, & Watts, 2011) who believe and trust the information the person is sharing including opinions and behaviors. Such a person's influence can be measured based on past influence through a social graph that can assess the person's communication in a specific area based on the total number of users reached in a certain period of time (Booth & Matic, 2012).

Terrorism: A tactic or strategy that is fluid and similar to insurgency (Rosenau, 2007). It is violence or the threat of violence pursued by one in service of political goals or the targeting of civilians in a violent way deliberately seeking to achieve goals through terror. It is difficult to define terrorism that would encompass a moral, idiosyncratic, political, and narrow defining of objectives and specifics. The international community has not accepted yet an inclusive definition. Terrorism is "the premeditated, deliberate, systematic murder, mayhem, and threatening of the innocent to create fear and intimidation in order to gain a political or tactical advantage, usually to influence an audience" (Poland, 1988). Terrorism is classified as acts committed by individuals and/or groups associated with domestic and/or international terror organizations or nations who have extremist ideologies that range from political, religious, social, racial, or environmental. Terrorism is meant to intimidate or pressure civilians and/or a

government in order to achieve and implement a specific political or social ideology by using illegal force and violence against people and property (Federal Bureau of Investigation, 2018).

Assumptions

This study was based on a survey; therefore, an important assumption was that participants who responded to the survey were truthful in their responses. Secondly, because the study did not use a convenient sample, it was assumed that the sample was representative of the population studied. Another meaningful assumption was that the study would be replicable and generalizable. Furthermore, it was assumed that the instruments used are valid and reliable, which measured concepts significant to the study. The measures used have good validity and reliability, but they were also good measures of counterterrorism behaviors.

Scope and Delimitations

The scope of this study was to establish if the use of social media, as the independent variable, and its potential relationship to the dependent variable, counterterrorism behaviors, is significant for millennials, the population studied. Social media was assessed based on type of social media and frequency, while counterterrorism behaviors was assessed based on level of counterterrorism behaviors and level of intention/behavior. Moderating variables were considered, that could affect the relationship if one exists, such as geographical location, country of origin/residency, cultural background/religion, and demographics such as age, gender, ethnicity, education level, marital status, and employment status. The current study used a sample of

millennials, young adults between the age of 22 and 37. The sample was comprised from participants from different geographical areas not confined to the United States territories. Participants were diverse in country of origin and/or residence, cultural norms, ethnicity, religion, education level, employment, and socioeconomic class. The ideal number of participants was 111 based on the G*Power3 calculations, but to reach an effect size of 60%, I would have needed 200 participants to complete the survey. The responses were assessed by using a questionnaire created from the Media and Technology Usage and Attitudes Scale, Social Media Use Integration Scale, Altruistic Personality Scale, and Social Responsibility Scale.

The primary theory used in this study is the hyperpersonal interpersonal communication perspective developed by Walther based on his SIPT, which uses computer-mediated-communication presented in Chapter 2.

Limitations

One of the limitations of this study was the proficiency in English participants must possess, which excluded a large number of potential participants. This was established via question number 10 on the survey that was part of the demographics section, which assessed English proficiency. Another limitation was the age range of the population studied. The methodology was another limitation due to the lack of an existing instrument that would assess counterterrorism behaviors, which may have threatened validity, reliability, application, and interpretation of results; this could have affected the inferences and generalization regarding this specific population. To try to avoid such issues pilot questions were tested on volunteers to establish inclusion criteria.

Another limitation pertains to the possible lack of truthfulness in the responses participants provided due to fear, privacy, or lack of understanding of questions. Sometimes participants answered questions based on their perceptions of the researcher's wants, coupled with fluidity and divergence in definitions and concepts, interpretations, which could have produced errors. Subjectivity and current world events regarding terrorism and counterterrorism may have affected responses, as well as the political and safety level of the geographical areas where participants reside. Furthermore, since the questionnaire was an online survey it may have produced deviation due to the participants' experience, expertise and use of social media and technology for both personal and professional versus individuals who do not use social media and technology. No causal relationship was established based on the type of methodology and design used. Additionally, moderating variables may have influenced the relationship between use of social media and counterterrorism behaviors portrayed by Millennials.

Significance

This research filled a gap in understanding the perceptions and behaviors of Millennials on counterterrorism displayed via technology and social media platforms. This project was unique because it addressed an unresearched area on positive social media usage and counterterrorism type of attitudes and behaviors (Weinbaum et al., 2016). The results of this study provided valuable insight about the millennials' past participation or willingness to participate in counterterrorism efforts. It was important to uncover if they were more, or less likely, as a specific cohort to participate in these types of behaviors based on their beliefs. Insights from this study should help future studies in

obtaining information on the willingness of average civilian Millennials to use social media for counterterrorism efforts. Furthermore, this study should aid researchers and agencies in using social media platforms for prosocial behaviors and social responsibility in relation to safety and counterterrorism, which could bring forth real world social changes on a global scale.

As with similar areas such as human trafficking or missing persons, civilians are an important part of prevention and postvention of terrorism threats and attacks by providing useful information, pictures, relevant data, and they should be engaged in participating in the neutralization of potential threats and counter radicalization. By using social media, Millennials can provide governments, agencies, and other groups information that could be crucial before, during, and after a terrorist attack. Using social media can allow information to travel faster and may provide the civilian with a higher degree of safety and anonymity. Potential findings could lead to behaviors exhibited by Millennials on social media platforms that can pave a path to prevention and postvention of terrorist attacks. Victims of terrorism include organizations, communities, public officials, specific groups, and the private sector. Secondary and collateral victims include regular citizens (Wallace, personal communication, 2018); hence, why the need to use millennials, which can help the intelligence communities as well as protect civilians from becoming collateral and secondary victims.

Summary

Millennials are a specific cohort. Nonetheless, they are not a homogenous group and the moderating variables should have provided a snapshot of what may influence this

generation and its subgroups. Millennials are a group motivated by choice and technology, and this increases their desire to help and get involved in a variety of causes. Online communities are great resources for people who share common interests (Wang & Chen, 2012). These communities are affected by social norms, type and frequency of social media use, interactions and relationships with other users, connectedness to their cohort as well as the society where they live. It is important to remember that personal preferences affect the use of social media. Regardless, social media and networks influence individuals and pushes them to become active participants (Mano, 2014).

The social media phenomenon took the world by storm, and the generation that was affected the most, the fastest, and who gained from using it, were Millennials. Hence, research using this population was vital to establish how social media affects their offline behaviors that may be affected or shaped by their online behaviors. An important issue that has plagued the world is terrorism; consequently, research into the willingness and/or existence of counterterrorism behaviors among Millennials via social media is significant to counterterrorism strategies and initiatives that may include the use of civilians as apparatuses.

This chapter provided an overview of the use of social media by Millennials and how it may intersect with counterterrorism exhibited by this cohort. The study concentrated on the prosocial and positive use of social media by Millennials from a global perspective to be able to account for geographical location, ethnicity, culture, and other variables that may be of importance. Data was collected via online questionnaire survey from millennials who volunteered to complete the survey. Walther's

hyperpersonal interpersonal communication perspective derived from SIPT, which uses

computer-mediated-communication was used as a theoretical framework. The results

could assist agencies, governments, the private sector in developing more efficient and

successful counterterrorism initiatives that could potentially use civilian as a central

resource to prevent terrorism and attacks, which would be inexpensive and easy to

develop (Heighington, 2011).

 Chapter 2 will provide the literature review and more in-depth information on the

theoretical framework, and specific information on social media usage and prosocial

behaviors such as counterterrorism behavior as it pertains to Millennials.

Chapter 2: Literature Review

Introduction

Social media has had an impact in every aspect of life for many in the last decade (Lenhart, Purcell, Smith, & Zickuhr, 2010). One of the challenges that came along with most people having availability to use social media was its unpredictability, evidenced in the inability to control people's perceptions and behavior revealed via social media. Furthermore, many millennials have become dependent on social media from a personal and professional standpoint. The availability of smart phones precedes social media and technology platforms. Even during the beginning of the technology era, when cell phones were perceived as the new tool that connected people to the world, technology had a dual role of good and evil. Military personnel describe cell phones as a necessary evil with complex advantages and disadvantages, especially while deployed, when used for personal and professional reasons (Rosenberg, 2018). Current research shows that many Millennials are dependent their cell phones in both the personal and professional arenas (Morandin, Russo, & Ollier-Malaterre, 2018). This condition may be used advantageously in the future to encourage community-led counterterrorism strategies. Research is scarce regarding the use of social media by Millennials for counterterrorism behaviors, and no metrics exist for counterterrorism initiatives (Greenberg, 2016). What is known is that social media platforms such as Facebook have an active ability to address social issues (Warren, Sulaiman, & Jaafar, a, 2014). Social media users are active both offline and online, and social media provides a unique communication style and

freedom that provokes voluntary prosocial behaviors (Mano, 2014) and awareness of social issues.

Social media can be used as a tool of counterterrorism by using civilians who, in collaboration with agencies and governments, can reduce the success rate of terrorist attacks and increase the apprehension of potential perpetrators before the attacks are carried out. The idea is to not just prepare communities for attacks and crisis intervention during and post-terrorist attacks but to prevent terrorism and teach the non-state actors how perpetrators use social media (Anson, Watson, & Wadhwa, 2015). To achieve this, it must first be established if and how millennials use social media for counterterrorism type of behaviors, which would be part of their prosocial behaviors and activism; for many, these behaviors are part of their online moral identity (Paulin, Ferguson, Schattke, & Nina, 2014).

Following the rationale of the study is a literature review that provides a succinct synopsis of the current literature that establishes the significance of the problem. I describe social media and how it is currently used by Millennials, how it impacts this specific generation, and how it has affected aspects of their lives, including communication and prosocial behavior. In addition, I present a brief discussion on the relationship between prosocial behaviors and counterterrorism type of behaviors. Finally, Chapter 2 includes a description of the gap in literature on the relationship between social media usage and counterterrorism type of behaviors for Millennials.

Literature Search Strategy

The literature search strategy started initially with a search based on various combinations of words such as *counterterrorism*, *social media*, *Millennials*, and *prosocial behaviors*. I used the combinations of words with Google Scholar as the search engine. The range was adjusted to include articles or reports that were no more than 5 years old. The search for how Millennials use social media to counter terrorism did not produce any viable results. The search was changed to include prosocial behaviors, which resulted in providing me with only two articles.

The next step was the use of Walden University resources and databases to establish what journal or fields may have articles on this population that would include *prosocial/counterterrorism behaviors* and/or *social media*. This search did not produce a many articles that pertained to the study topic. I included words such as *social causes*, *civic engagement*, and *social activism* to expand the prosocial counterterrorism type of behaviors results. I used the term *Millennials* interchangeably with *Generation Y* to see if more articles would surface as I conducted searches via EBSCO. Fields of study that I included in the search were Criminal Justice and Security, Psychology, Sociology, Information Systems and Technology, and Public Policy and Administration. Databased used were PsycINFO, PsycARTICLES, ProQuest, SocINDEX with full text, Taylor & Francis Online, Criminal Justice Database, SAGE Journals, and Elsevier. The groupings of words were separated to include either social media use and Millennials, social media and counterterrorism, social media and prosocial behaviors, Millennials and prosocial behaviors and social causes using Boolean AND or Boolean OR.

The subsequent stage included searching through articles' sections on references to find related studies or articles. This increased the number of related articles available for use, but it required a search by exact article title using the Walden University Library. The literature search strategy also consisted in purchasing materials such as the Rand Corporation reports on the Millennial generation and its position vis-à-vis the collection of intelligence and the relationship with the agencies who provide policies and strategies.

Lastly, some websites were used to obtain statistics and demographics on Millennials and the usage of social media such as the Pew Research Center, the World Health Organization, Brookings, *First Mind* online journal, Circle, Statista, American Press Institute, and official government counterterrorism strategies such as Prevent.

Theoretical Framework

The theoretical framework used for this study was the hyperpersonal communication perspective derived from SIPT developed in 1992 by J. Walther. The theory is a blend of interpersonal communication theory and media studies theory where individuals interact via CMC. According to Walther (2007), an individual who uses CMC to communicate on social media platforms is cognitively aware of their behavior and processes. The theory suggests that CMC changes relationships and behaviors in relation to the internet and social sites; therefore, social interaction is affected by CMC (Walther, 2008). This model may be used to enhance messages via technology, establish and cultivate relationships, or edit or change their behaviors based on the targeted audience who will receive the message. Walther suggested that CMC is hyperpersonal because it exceeds FtF communication and interaction; hence, Walther called it the hyperpersonal

model of interpersonal communication theory. Communicators have many advantages when they communicate via technology and social media.

Computer-Mediated Communication

CMC takes place when two or more individuals communicate via technology by using two or more devices. This could include communication via e-mail, messaging, social media, and text. CMC can occur in real time and when the individuals do not communicate simultaneously. When people use CMC, their geographical location varies, and they do not need to share the same space to communicate. CMC may influence how people use social media and engage in interpersonal communication and how they maintain relationships. Many studies discuss the differences between offline and online interactions, and how they differ when CMC is not used (Enjolras et al., 2013; Wright & Li, 2011). CMC can help people interact on social media in real time, it can preserve their anonymity, and it leaves a digital footprint. Because people communicate by using social media on various devices the level of self-disclosure is higher because this style of communication adds a layer of safety or perceived security versus FtF communication (Hoffman, 2016). When individuals interact on social media, the participants do not have the ability to see the other's body language, hear the inflection in their voice, detect the tonality, and so forth. There are some exceptions where can chat by phone or video via social media people, but for the most part, people use social media to communicate through written language; hence, they have no ability to observe nonverbal cues and emotions. Some benefits of CMC include the fact that time and location become a nonissue. People with various phobias, anxiety, and other FtF issues can interact and

participate in communications successfully by using CMC. Fears and prejudices can be minimized or eliminated due to the safety people feel when communicating on social platforms using technology rather than FtF. Some may argue that these are disadvantages that would lead people to miscommunicate due to the lack of nonverbal cues and eye contact. Nonetheless, most research shows that communication via media and computers has been creating communities where social interaction and relationships prosper (Baym, 1998), where people connect on an interpersonal level and develop bonds based on a variety of reasons including similarity in social causes they support. Communication via computers and social media has exponentially increased in the last decade due to the ability of people to connect globally creating the opportunity for virtual communities with people from all over the world (Perrin, 2015).

Some researchers disagree with the CMC and its potential to help people create rich, meaningful communications and establish social interactions due to its limited function of communication through text messages and written language (Hian, Chuan, Trevor, & Detenber, 2004). However, the literature review on CMC only found sources that discussed e-mail, Internet chat rooms, games, instant messaging, and bulletin boards. Social media was not discussed due to it coming into existence after the time CMC and SIPT were studied by researchers. Walther (2007) addressed social media and how CMC related to it 2 decades later. Correspondingly, since CMC and SIPT were presented to academia, computers evolved with laptops and mobile devices such as tablets and smartphones. This enables CMC to take place in a more fluid fashion, more frequent, more synchronously, and with the ability to provide rich information among users. More

empirical research into theoretical frameworks derived from CMCs that are based on

multimedia platforms and networks is required (Soukup, 2000).

Social Information Processing Theory

SIPT was developed by Joseph Walther in 1992. This theory infers that humans

are prone to interact socially and to form relationships regardless of the style of

communication, computer vis-à-vis FtF. Basically, because social media communication

lacks nonverbal prompts, the other parts of the communication system take over to

compensate for the missing portion. The theory suggests that language and writing are

used more in CMC, and they are considered to be transposable with nonverbal signals,

and similarly to FtF interactions, where time is the mediator between the development (or

not) of relationships and communities (Walther, 2008). Time as a mediator is more

important and influential than the model of communication such as computer-media

versus FtF. When both groups communicate and accumulate messages over time social

effects occur based on the communication, and the groups are very similar in their

relational communication (Walther & Burgoon, 1992).

This theory has been used as the framework to how people relate socially and

establish relationships online (Walther, 2011). Since computer-mediated communication

also includes social media, SIPT was used as a framework for this study. According to

Walther, who is a communications and media specialist, people tend to adapt regardless

of their environment, and learn to use communication systems such as the CMC to create

virtual communities parallel to the real world, where strong relationships and

collaborations can occur. Walther conceptualized SIPT with the sole purpose to focus on

social processes that occur when communication takes place via media and technology. The theory assesses how people manage their online identities, if it is comparable to the real-life identity of self, and if the true self is present in social media interactions.

SIPT has also been used as a tool in understanding issues related to international online communities, where culture plays a major role. Meanings are fluid and must be interpreted based on the culture the information originated from, and how culture affects interpersonal communication (Olaniran, Rodriguez, & Williams, 2012). With the appearance of social media platforms, the internet has been used as a platform for politics, entertainment, as well as social interaction and purposes. Social media has become an avenue for social activism and prosocial behaviors that per SIP theory infers people solicit and present socially revealing relational behaviors via CMCs (Hian, Chuan, Trevor, & Detenber, 2004).

Hyperpersonal Computer-Media Communication Perspective

SIPT discusses three steps in computer-mediated communication: impersonal, personal, and hyperpersonal. Walther (2007) focuses on the hyperpersonal perspective, which he developed in 1996 from its predecessor the SIPT, to explain how people interact on social media. The hyperpersonal CMC extends SIPT's idea that computer-media type communications use cue systems to transmit information between people or groups that foster interpersonal communication where people are social and relate to one another just like FtF interactions (Walther, 1997). The hyperpersonal model infers that sometimes the interpersonal interaction and communication between people using CMC surpasses FtF communication (Walther, 1996); hence being coined as hyperpersonal.

Both FtF and CMC can be impersonal or interpersonal depending on the situation. Only CMC can be hyperpersonal, where communication takes place via social media and other technological platforms and studies show that CMC produces more participation with the same frequency and quantity as FtF conversations (Walther, 1996). Furthermore, these relationships created based on CMC are often taken offline where people meet, which increases the validity of the hyperpersonal model of online communication. As mentioned earlier, time is a powerful mediator for both FtF and CMC discussions, but more so it is the rate at which people interact socially and not the amount (Walther, 2008). Because social interaction and exchange of information may develop slower via CMC than FtF, there is an invalid belief that FtF communication is different from interaction via social media, but the two are very similar and seen more on a continuum line than two separate entities. The CMC interpersonal communications equal communication via FtF (Walther, 1993). Additionally, any impersonal effects that CMC interactions may have are not attributed to the fact that the mode of conversation is through CMC and not FtF (Walther, 1994).

According to Walther (2007), there are four major components in the hyperpersonal model. One component is the sender, who by having the ability to control how they present themselves can acquire positive kinship from others. Senders can provide the people they interact with information that would establish positive impressions and interactions. This type of self-presentation consists of increased cognitive allocation to messages that emphasize the hyperpersonal model of CMC users (Walther, 2007). Another component is the receiver, who finds similarities with senders,

and forms positive perceptions, sometimes overlooking differences or exacerbating likenesses. The third component is channel management, which is basically the ability to create, edit, and change messages prior to sending them. It is the ability to control the environment more than if it was a FtF interaction. Lastly, feedback, as a component of this model is the self-fulfilling prophecy of reciprocity and likeness between sender and receiver. Walther refers to social media platforms as perfect examples of SIP on a large scale and it is in part due to "overattribution", a behavioral confirmation loop senders and receivers engage in (Walther, 1996). Hyperpersonal communication via CMC sometimes is preferred because it is social and unattainable FtF, depending on the circumstances. Not only is CMC similar to FtF communication, but it can help people express ideas and attain socially desirable goals because the messages are free of behavioral constraints imposed by FtF communication. A problem with this model is that is assumes the person is stereotypically positive and does not account for negative communicators. Another challenge of the SIP theory according to some researchers is the inability of the CMC to covey personal messages, being more conducive to group interactions. However, the appearance of social media may have proven this theory to be inaccurate as people globally connect via technology and social networks.

Walther stated even before the inception of social media platforms that CMC is interpersonal and hyperpersonal when users exchange information to form an opinion, when forming collaborations and relationships, affiliations. To manage those interactions users construct and reciprocate messages, self-representations through a limited-cues channel that is not affected by geographical location or environment. Walther had no way

of predicting that CMC would be applicable to what we now know as social media, but it seems that his theory predicted how social and interactive messages would be conducted via CMC. Nonetheless, Walther has found empirical support for the hyperpersonal model through a series of studies he conducted between 1992 and 2018. According to Walther, experience in using CMCs (technology and proficiency level in using social media) affected virtual interaction and interpersonal relationships (Walther, 2002). People are more direct and less superficial on social media versus FtF interactions (Tidwell & Walther, 2002). Initially the process is more complex within social media relationships established via CMC where conflict exists, but this eventually subsides (Hobman, Bordia, Irmer, & Chang, 2002), and strong interpersonal relationships are established. The same stands true for the bond between group members and individuals who interact and collaborate online. Trust is established slower for the computer media communications versus FtF, but over time the trust levels for both groups develop similarly and at comparable levels (Wilson, Straus, & McEvily, 2006).

Conclusion

SIP theory and the hyperpersonal model provides a theoretical basis on how people relate to one another socially on social media platforms, and even though this type of communication lacks nonverbal cues individuals can still express emotions, alliances, social support for groups, causes, and can reach social interpersonal connections and relationships that are long-lasting. Interpersonal effects occur and social attraction towards a group or a cause is possible via social media based on SIP theory. SIP theory has quickly diffused since its inception, and it has been robustly accepted by many

researchers. Its potency is still strong despite the archaic CMC systems it analyzed and described before multimodal social media appeared (Walther, Van Der Heide, Ramirez, Burgoon, & Pena, 2015). Research shows that people can identify with a certain group, prejudices can decline, and social change can occur triggered by virtual group membership and salience, and trust and interpersonal perception among members. Social media can disseminate messages that can have potential influence on people, behaviors, and influence perceptions and decisions just like traditional messages would (Walther, 2018). When and how this happens remains unknown and needs to be researched further.

Social media has been cataloged as the platform for antagonists, negative interactions, bullying, hostility, even terrorism. Research should focus on its positive attributes and how through social media people communicate and establish beneficial relationships or interrelated groups that foster harmony, reduce prejudices, remove barriers that can impact social behavior positively (Walther, 2018). This could be prosocial behavior that people exhibit via social media. This was inferred in previous studies that found that synchronous systems such as social media that use CMC robustly support SIP theory (Walther, Van Der Heide, Ramirez, Burgoon, & Pena, 2015).

This theoretical framework provides details on differences for millennials from a social responsibility perspective and offers direction on how to detect and increase counterterrorism behaviors and attitudes through social learning via social media platforms creating a constructive social culture for such behaviors. As new media platforms continue to emerge, and social media evolves, new extensions to SIP theory arise and new ways to communicate via computer-media interactions.

Background of the Problem

Even though some millennials do not use social media, the number of millennials who do is staggering. According to the Pew Center for Research 93% of young adults use the internet (Lenhart, et al., 2010) of whom 87% are members on multiple social media platforms (Bobkowski & Smith, 2013). Age seems to be the most influential factor in whether a person will use and engage via social media. (Zickuhr & Aaron, 2012). Social media particularly appeals to millennials (also known as generation Y), and research shows that 90% of college students engage in multiple social media networks daily. The appeal involves the existence of smart phone applications for almost anything, and how it makes them feel about themselves by enhancing belongingness (Hoffman, 2017). Millennials are attracted to social media because it is stimulating, collaborative, and promotes learning and staying informed while on the go. Furthermore, millennials are socially conscious (Jayadeva, 2018), who for the most part have a digital citizenship. A "digital citizenship" is a "combination of respectful online behavior and online civic engagement," that is correlated to helpful bystander behaviors online and offline (Jones & Mitchell, 2016).

The research involving social media usage for the millennial generation is quite large. However, studies looking at the interaction of social media and prosocial behaviors is sparse. Hence, even though it is a known fact that social media influences generation Y, there is a gap in how it influences millennials to act prosocially and get involved in social causes that would affect their community. Seeling (2018) discusses the need for further research to see if millennials can be influenced towards prosocial behavior via

social media. Research on the usage of social media for prosocial behaviors, specifically counterterrorism behaviors, has not yet been conducted. Currently, there is no research on counterterrorism type of behaviors displayed via social media (Golder & Macy, 2014). This could be due to potential ethical and safety issues and, therefore, a reluctance to engage in the abovementioned behaviors and/or studies. Prosocial behavior comes with personal sacrifice at times. Therefore, according to terror-based management theory people do not want to be a "good Samaritan" if it comes with risks to self. Another factor that may hinder prosocial behavior is self-interest or moral disengagement based on Bandura's theory. Self-interest and moral disengagement reduce prosocial behaviors and leads to diffusion of responsibility (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996). Nonetheless, the improvement of self and a cultural worldview may aid in the desire to engage in social activism (Hirschberger, 2010).

Rationale for the Study

The scope of the study was to shift the focus from media's negative effects to its potential advantages in relation to counterterrorism behaviors, which fall in the category of social activism and prosocial civil engagement. Social media can potentially be a valuable outlet for positive communication among millennials and with other entities and agencies involved in counterterrorism. Understanding millennials' counter-terroristic behavior via social media is important because it could be a powerful tool for agencies. Using civic engagement in pro-counterterrorism efforts can counteract the influx of radicalization and recruitment of millennials for terrorism purposes by various groups.

This can close some of the gap in terrorism prevention, and the potential for using generation Y to take action via social media platforms (Howie, 2014).

The purpose of this quantitative study was to examine how millennials from various cultures and geographical areas exhibit counterterrorism types of behaviors via technology and social media platforms. Behaviors towards counterterrorism were explored using social media as a tool. Millennials' use of technology and social networks in relation to combating terrorism were investigated by looking at their online counterterrorism behaviors, which fall within the cluster of prosocial behaviors. Social media is a powerful tool used reprehensibly by terrorist organizations such as ISIS, but it can be used constructively to counter terrorism, and the group of individuals easier to be reached who embrace social media better than all other generations are millennials (Kilian, Hennigs, & Langner, 2012). The people prone to exhibit social acceptance and community related helpful behaviors via social media could be more open to counterterrorism behaviors via online platforms and applications. Insofar, research shows that usage of social media and online activity are correlated to online and offline community activism and prosocial behaviors (Hoffman, 2017; Leyva, 2016). This could lead to research on community supported or led counterterrorism towards multiple strategies that would include use of social media, which is an unexploited opportunity that governments and agencies can cultivate (Huq, 2016). These digital natives regard their mobile devices as extensions of their selves, and like social media platform because information flows and it is easily accessible. They are team players who were taught from an early age how to collaborate and share information, who want to make a difference in

their environment, which is useful to the intelligence communities (Weinbaum, Girven, & Oberholtzer, 2016).

Millennial Social Media Usage

Social media is described as social networks that provide services on the internet, where users create profiles, share information with others, communicate with others in real time, and make their profiles public to be transparent for others. Users connect and communicate with total strangers with whom contact would not otherwise have been possible to establish (Boyd & Ellison, 2007). Even so, many scholars agree that there is still ambiguity to what the definition of social media is; its terminology is vague and fluid, referred to as social networks or social media platforms with no agreed upon definition in academia and research. Social media is often described as web 2.0 applications who use the internet to facilitate social networks and mobile based platforms (Obar & Wildman, 2015). The profiles may be public, semi-public, or private and used for both personal and professional purposes.

Social media is used in large quantities and more frequently by millennials who are the first generation who have grown up digitally connected. The younger spectrum of generation Y have no experiences that do not include having access to social media and mobile applications. For this generation, being digitally connected is normal, needed, and expected, and cannot imagine a world where social media did not exist.

Millennials are individuals who were born between 1981 and 1996 with the oldest millennial turning 37 this year and the youngest being 22 (Dimock, 2018). This generation became the largest demographic group in 2015 (Cannon & Mackay, 2017).

This spectrum of this generation from 22 to 37 are communally connected to persons worldwide via social media using mobile technology.

Social media usage and how is used is split between younger and older millennials. Younger millennials (age 22 to 29) use 3.7 social networks out of seven platforms, while older millennials (ages 30 through 36) use 2.9 out of the seven platforms (American Press Institute, 2015). This shows differences within the group, but overall their usage of social media is much more homogenous within the group in comparison to how much social media is used by other generations. Eighty-eight percent of millennials use Facebook, 83% use YouTube and 50% use Instagram to stay updated on news and important information (American Press Institute, 2015). Facebook leads as the social media platform for news with 57% of millennials using it at least once a day to stay informed on current events. Six out of ten like, share, repost, and actively engage in comments, while seven out of ten read and watch news on Facebook. Fifty percent of millennials follow an organic process of obtaining the news by just clicking and sharing what they see on their news feed (American Press Institute, 2015). Fifty-eight percent follow entertainment and funny posts, while 76% keep tabs on the social component posted by family and friends.

Millennials are not concerned with what researchers coined as the "filter bubble", where they are supposedly isolated to see only certain information on their social media based on algorithms (Pariser, 2011). Millennials are confident that they choose the sources they use to obtain their news, and they investigate further to establish credibility, accuracy, nature of the sources, and so forth. Seventy percent of Millennials believe their

news feeds are heterogenous portraying both similar and opposing views in comparison to their own perspectives (American Press Institute, 2015). Social media for millennials is the easiest way to obtain news, to get ideas, and to communicate with others. Some millennials are viewed as "influencers," meaning groups of people trust their opinion and follow their posts and get involved based on the information the influencers are providing. (Andrew, 2017). The use of social media for professional and personal reasons is similar, with one in five millennials using the social media for professional networking and one in five to connect with people and communicate on a personal level. How Millennials use social media and via which devices varies. Ninety-three percent of Millennials own a cell phone, with a gender difference where men own more cell phones versus women (Lenhart et al., 2010). Most Millennials choose laptops over desktops and use multiple wireless devices. Younger Millennials lead with 81% usage via wireless services, and 73% of overall use of social media networks.

The leading reason why some millennials do not use social media is privacy. When social media platforms are used people leave a digital footprint that cannot be erased; therefore, Millennials who use social media knowingly or inadvertently give up privacy and the information on their social profiles cannot be protected. More Millennials than ever are removing posts, pictures, and getting informed on privacy settings before they use a specific platform (American Press Institute, 2015). The research does not discuss the age of these Millennials. There is no known information on whether millennials are concerned with privacy, versus the majority, who is not.

Millennials use social media for professional purposes with ease and navigate platforms better than any other generation. Because they are digital natives, they do not find it abnormal to be in the public eye within the social platforms' environment, and social media intertwines and affects all aspects of their life from school to work, personal and social (Bolton, et al., 2013). The use of social media by millennials differs based on the topic such as nutrition, social causes, entertainment, professional networking, hiring, etc. Their values, preferences, and behaviors are diverse from other generations. The way millennials use social media can be affected by environmental variables such as culture, politics, law, economy, and transactional factors such as age, personal values, socio-economic status, goals, emotions, and social norms (Bolton, et al., 2013). Some of the advantages to using social media by millennials include contribution through posting, consuming information through observing, sharing, searching, and participating (by reposting and responding). However, the content and frequency of usage of social media, and their level of comfort and agility, are factors that affect how millennials use and rely on social media.

A disadvantage of using social media could be the opportunity, due to anonymity, to engage in illegal destructive behaviors. Another indirect disadvantage is not having access to technology and social media by millennials. The "digital divide" (Bolton, et al., 2013) describes millennials in certain geographical areas such as South Africa where 23% of millennials do not own a cell phone, or Brazil where they still use dial-up internet, versus places like Japan where everyone is connected to social media. Some disadvantages are based on laws and regulations on usage of technology and social

media, where American millennials are on the other side of the spectrum from Korean millennials. This is based on the digital divide affected by social class, education, type of government and regulations on media usage. Korean millennials are not as connected digitally in comparison to Americans or Japanese millennials (Bolton, et al., 2013).

Millennials are not homogenous, and empirical research on this digital generation is limited. Millennials are either restrained users of social media, entertainment seeking millennials, or highly connected millennials (Kilian, Hennings, & Langner, 2012). The restrained group is 51% female with a mean age of 23, the entertainment-seeking group is 54% male with a mean age of 25, and the highly connected group is 68% male with a mean age of 25, which is the group to be most likely to be active and participate via social media (Kilian et al., 2012). They have transformed traditional ways of communication and replaced them with social media, which offers these young individuals, new ways to create networks and pass on knowledge and information from one to another. The variables that affect millennials have created subgroups where the use of social media is used differently and for various reasons by each subgroup.

Social media and how millennials use it is not homogenous and it is affected by various factors such as age within this generation, cultural and religious beliefs, peer groups, personal beliefs, relationships, geographical location, gender, etc. (American Press Institute, 2015). However, using only U.S. college students as participants may not illustrate the true nature of how millennials view and use social media, or how they respond to social causes and engage in prosocial behaviors. Culture, and geographical location could impact the way millennials perceive and engage via social media

(American Press Institute, 2015). Moreover, even though social media is part of the conglomerate of media platforms, it does not function the same way nor it is used in a similar way, thus, there are distinctive attributes and functions social media has that appeals to millennials more than other traditional media platforms.

Relationship to Prosocial Behaviors

According to Merriam Webster dictionary, social media is a collection of social networking and microblogging that is categorized as a form of electronic communication where individuals form and partake in online communities to communicate and share information (Merriam-Webster, Inc., 2018). Social media are applications that can only be used using the internet, and that can be accessed via desktops, laptops, tablets, or other mobile device. Not only do the users consume information, but they can communicate, create, and collaborate with other users (Obar & Wildman, 2015). Individuals, specifically millennials, choose to upload and share personal information via social media that will influence their decisions and behaviors once the information is seen, commented on, or used by other users. Social media usage becomes an even more complex issue due to privacy levels and common interests and beliefs that users may share.

At the top of the social media hierarchy, Facebook and YouTube are the two most used social media platforms worldwide. By April 2018, Facebook had 2.2 billion active users per month, You Tube and WhatsApp 1.5 billion, Instagram 800 million, and Twitter had 330 million users per month (Statista, 2018). Some social media platforms require identifying information about the user, and other applications such as Yik Yak or Kik do not. Therefore, users can choose what to share on which social account based on

privacy issues and anonymity. Nonetheless, most applications ask for permission to access location and information from the user's phone. As a result, the idea of anonymity is a fallacy. The silver lining is that in theory, the companies who launch and own social media platforms are not supposed to share users' information with anyone unless required by the law or due to the actions and possible threatening information posted by the user (Sanchez, Levin, & Del Riego, 2012).

One of the reasons people use social media and create social media accounts is to support specific companies, organizations, agencies, social causes and to engage civically online in social activism. Whether they wish to stay anonymous, maintain some level of privacy, or be in the public eye, millennials influence social media and vice versa. Generation Y is more comfortable engaging in social causes and prosocial behavior online versus face-to-face (Enjorlas, Steen-Johnsen, & Wollebaek, 2013; Kruglanski & Fishman, 2006; Weinstein, 2014). This does not mean that social media is replacing traditional ways of engaging in prosocial behavior, it just means that the new ways millennials are approaching civic activism and social change will solidify and strengthen traditional paths.

For societies to be successful currently and in the future, researchers, academia, agencies, governments, and organizations must keep millennials interested and engaged. The best way to do this is via social media such as Facebook, because social networking sites allow millennials to interact in real time. Some studies show that social media is a good avenue for millennials to engage in charitable causes and prosocial behaviors, specifically when others stand to benefit versus only the self (Paulin et al., 2014).

Additionally, intentions towards social change and social causes are valid predictors of behaviors. Consequently, there is need for research to establish if there is a link between millennials, social media, and pro-counterterrorism behaviors.

Counterterrorism strategies can include the use of millennials and social media to counter the increase of terrorism. Even though some research supports the idea that millennials are a "ME" generation that present a materialistic and shallow image, who are selfish and only interested in their success and public image, most studies support the opposite (Paulin et al., 2014). Millennials are referred to as empathetic, respectful, and concerned with world problems, and use social media to create positive change (Bolton et al., 2013). This "WE" generation is a cohort of free agents who communicate via social networks. Their willingness to engage in counterterrorism behaviors via social media environments has not been researched. Additionally, there is limited research on how millennials perceive engagement via social media for social causes and activism (Seeling, 2018). There is also very little research on the interaction and dynamic of social media and social activism. It is unclear on how social media influences and pushes millennials to engage in prosocial behavior. What is clear is that millennials are theoretically open to using social media for social activism.

How do millennials currently use social media to engage in prosocial behaviors? They participate in political processes, help to increase social capital, are engaged in raising awareness about a multitude of issues, partake in discussions regarding policies and social issues, raise money, share information with the public, and coordinate efforts online and on various technological platforms (Ferguson et al., 2015; Haro-de-Rosario et

al., 2018; Paulin et al., 2014; Seeling, 2018). Millennials use social media as an influential tool not just for entertainment, but to mobilize others for various social issues. Social media can become a powerful social mobilization tool and based on millennials' testimonies they would partake in prosocial behavior more if the message came from a trusted online source like a friend (Seeling, 2018). Social media is an appreciated communication tool and millennials use it to have a telepresence and to engage in prosocial behaviors. Social media, when used for social activism, pushes millennials to build relationships and be active not just to share content, but to connect and share information with others with the potential to become influencers.

A disadvantage of using social media for social activism is that it is similar to traditional avenues for engaging in prosocial behavior, in that it cannot be controlled. Just like offline modalities, social media is a multifaceted system composed from different groups, subgroups, networks, and members. Even though the messages spread easier and faster, how the message is received and interpreted cannot be controlled and will differ based on how popular some influencers are, how members use social media, and for what purposes. Moreover, prosocial behaviors online may differ from how members act in a prosocial way in vivo. However, social media could create a chain of positive responses and counterterrorism behaviors by using millennials who are influencers to inspire others to act similarly and to elicit support for the cause (Paulin et al., 2014) via online networks. Multiple studies suggest the behaviors are successful and engagement is achieved if the millennials' behaviors help others versus self-gratification (Skoric, et al., 2016; Zavattaro & Sementelli, 2014; Wang & Chen, 2012). The idea that the goal is to

help others and society is more powerful than personal gain alone. It is possible that Andreoni's warm glow effect pushes millennials to engage in prosocial activities. This means that they are receiving satisfaction from the actual act of doing or giving, therefore, the act itself is based on impure altruism and desire for social acclaim (Andreoni, 1990). Consequently, in order for millennials to be willing to engage in specific prosocial behaviors we must tread lightly between social justice and personal gain such as social acclaim, to maintain support from millennials via social media.

Another theory why millennials use social media to engage in prosocial behaviors is the self-identification with the cause and empathy for the groups of people who directly or indirectly are part of that cause. Not only that they feel compassion for others in trouble, but even more if their identity overlaps or is similar to the cause. Whether the identity overlap is real or perceived, it will lead to more positive psychological connections to the cause (Vanhamme, et al., 2012). In traditional offline situations counterterrorism behavior is influenced by a variety of things such as the proximity to the situation, what would happen if the person does not help, the degree of closeness to the victims, and the emotional closeness to the cause. Individuals may choose to communicate via social media even when they are in close proximity to the event as it unfolds. In cases when that is not the circumstance, the more the emotional link to the cause, the greater the involvement of millennials on social networks with supportive action towards the cause. This may be more conducive for millennials who take on more of a passive and observational role versus physical implication.

An important aspect that aids the millennials' desire to help is having the choice to help. Having the freedom to choose their prosocial behaviors fosters the desire to help via social media to various social issues (Tufekci & Christopher, 2012). To elicit prosocial behaviors from millennials their behaviors must be recognized and supported, and they must have the freedom to choose. Millennials need to be observed and engaged in conversation where their opinions are heard, messages must elicit their empathy, and most of all the communication path should be social media platforms.

Social Media Counterterrorism Strategies

Millennials form 30% of the population and are becoming the largest cohort in the U.S. and worldwide (Smith & Anderson, Social Media Use in 2018, 2018). Their thought process and tactics on gaining support and engaging people in social change and prosocial behaviors are unique and vital. The way they engage is diverse from other generations, and they possess the unique desire to create positive change not just individually but as a cohort, which could be very advantageous for counterterrorism strategies that include the use of civilians.

To use millennials for counterterrorism behaviors via social media is a comprehensive idea based on the fact that generation Y individuals are digital natives and they use technology for all aspects of their lives. Therefore, it makes sense to use the people with the most experience and who feel most comfortable with social media networking and communication. They use social media to play and work, so they are more prone to detect unusual things and more agile to spread the information, and to an extent more willing to share it via social media platforms. Millennials use social media to

contribute by posting, to consume by observing, to search for information, to share and distribute, and to participate (Bolton, et al., 2013), which is what is needed to be successful using social networks for combating terrorism. The use of social media has a cognitive, emotional, and social component and effect for millennials, which would seem communicating and participating in counterterrorism behaviors normal for this generation versus other cohorts. Current research on millennials agree that they differ in behavior, values, and preferences, but overall are more prone to get involved via social media in comparison to other generations.

Some researchers and professionals in the field support the idea of using millennials for counterterrorism behaviors and strategies due to some similarities between millennials and terrorists. Monahan (2012) suggested that as far as marital status both groups are in majority single, both groups are educated, and mental illness is not correlated to behaviors of terrorism or counterterrorism. Age is another similarity where average age for terrorists is between 20 and 29, with the average age of recruit 27 (Greenberg, 2016), while millennials range from 18 to 36 (Monahan, 2012). Based on such similarities and the agility and comfort both groups present in using social media, millennial citizens can be tools for counterterrorism strategy and policy as "weapons of choice" that can be activated (Jarvis & Michael, 2013).

Another reason to include millennials in the reporting and engaging in counterterrorism behaviors is to prevent them from being recruited and used as tools by terrorist organizations. According to Prevent initiative in the U.K., younger people are at greater risk of being radicalized, and most recruits are millennials (Home Department,

2011). Careful consideration should be given to ethnicity and geographical location, demographics that are important when assessing millennials and their willingness to participate in such behaviors. Behaviors could be affected by ethnic background if the millennials feel like second class citizens or part of a group that feels marginalized, stigmatized, or disconnected from the collective identity of the community and majority of its citizens. Behaviors can also be affected by location due to fears of repercussions, competing loyalties, finger-pointing, communication issues, and equilibrium between freedom of choice and duty to act (Jarvis & Michael, 2013). By using friendly websites and social media to engage the millennials, people can be connected online to reinforce traditional real-world linking and networking (Janbek, College, & Prado, 2012).

Social Media in Counterterrorism Behaviors

Researchers address millennials and their prosocial behaviors as users of social media, but we should regard millennials as "influencers". There is a need to facilitate and research new approaches involving social media and millennials such as counterterrorism behaviors. If Facebook is a model for online community and prosocial behavior (Warren et al., 2014), a similar platform could be potentially created for counterterrorism, and millennials are critical and indispensable for this cause due to their unique and valuable exposure to social media and their ability to use it. The millennials and younger cohorts use and depend on social media to communicate and engage with people globally. Because of this, the use of social media's power and online communities may be inevitable in the fight against terrorism. The idea is to blend online and offline prosocial and counterterrorism behaviors for the common good of societies all over the globe, and

to take advantage of the wider audience social media creates. Using social networking sites can increase the audience exponentially, and the exchange of information and gaining of support takes place much quicker.

According to specialists in this area, governments have had significant issues in creating programs and strategies to counter terrorism that have been successful, especially when trying to counter recruitment, radicalization, and propaganda via social media (Weinbaum et al., 2016). It is important to use community involvement when creating online programs and strategies to undermine terrorist behavior (Aistrope, 2016). This could prevent recruitment and radicalization by including vulnerable youth in something that would give them a sense of belonging, by participating in the prevention of terrorism and by providing information during and post-attack. Because government programs have serious limitations that weaken effectiveness, community efforts and community-led strategies could be successful because they are not limited by government regulations. The connection between the two is crucial and the best cohort to engage are the millennials due to their proficiency with technology and social media.

Social media should be used for counterterrorism efforts because it is a power tool for predictive modeling, where open source data can be exploited by data mining (Ball, 2016), which can disrupt the terrorist online networks. The act of terrorism per se is not as important as how it is advertised and presented and has direct and indirect effects on civilians, hence the importance of public opinion and help (Ioana, 2015). Ninety percent of modern terrorist activity takes place online via social networks because it provides direct contact with another person while maintaining anonymity (Weimann, 2014). Social

media are two-way communication interactive platforms that are mobile, inexpensive, and reliable. Terrorists can co-create and share information, discuss plans and propaganda, and target potential recruits remotely. They do this by using anonymization software, fake data, and narrowcasting strategies based on geographical location and interests. The average recruit is 27, while the average Facebook user is 30, with 1.31 billion users worldwide (Weimann, 2014). Therefore, terrorist organizations target millennials who not only are the group that spends more time online than other cohorts, but because they use social networks more frequent than others. On average millennials within the U.S. spend 23 hours a week on social networks. Twitter is used as a free microblogging platform to disseminate news on attacks and feeds, while YouTube is used for dissemination of videos and private messages, where the average user is 35 or younger (Conway & McInerney, 2008). Since radicalization and outreach is more effective due to social media use and the availability of dozens of platforms, countermeasures via social media seem logical and very much needed. This can be achieved more effectively by involving the digital generation, the millennials.

Millennials can help by watching and reporting such behaviors and advertising. They can be tools that agencies and governments use for countering terrorism via social media. Psychosocial effects on the community can be diminished, even replaced with feelings of safety and success against terrorism through collective responses, support, and resilience. Millennials can also provide support for the survivors and victims' families using social networks.

The fight between terrorism and counterterrorism has rapidly moved on the virtual front and it is vital to create countering tactics via social media platforms. Based on social movement theory, if the threat is perceived and there are resources and opportunity to act, people will unify to deliver the message (Schroeder, Everton, & Shepherd, 2012). Millennials can use social media in a collective fashion to partake in counterterrorism type behaviors and actions such as diversion, disruption, and counter-messaging to drive terrorist organizations off social media platforms. This can increase the communication links globally and produce and sustain the millennials' consensus to partake in counterterrorism behaviors via social media. This is much easier to achieve because of the lack of boundaries on addressing global issues due to a transnational global culture that millennials are part of. Research describes a global standardization of coverage where civilians are part of a global script (Gerhards & Schafer, 2014) that cannot be censored or bound to geographical location, where solidarity can be reached faster than before due to the existence of social media and technology.

Millennial civilians become overseers (Rasmussen, 2015) using social media and advising others on how to keep their community safe. There is a positive link between offline and online prosocial behaviors, where offline behaviors are predictors of online behaviors (Wright & Li, 2011). Social media can be a place for positive interactions where millennials co-construct their online and offline prosocial behaviors. Prosocial behavior in real time is similar with prosocial behavior on social platforms mediated at times by empathy levels and culture (Prot, et al., 2013). One possible explanation is that prosocial behavior online is recorded and conducted in real time, therefore, online

behavior is social behavior where the possibility of a Hawthorne effect is minimal

(Golder & Macy, 2014). This means millennials do not censor their online behaviors due

to the transparacy and lack of privacy. Prosocial behaviors such as counterterrorism acts

via social media need more empirical research.

Public opinion regarding monitoring and sharing information is important,

especially how it is related to social media platforms and it needs to be researched

(Bartlett & Reynolds, 2015). Based on what the researchers present regarding how the

millennials (the public) feels about it, counterterrorism strategies can include civilian

engagement and behaviors that could supplement traditional strategies (Cohen, 2016) and

solidify relationships between the community and the agencies in charge of surveillance

and intervention. The future relies on involving millennials by strategically using social

media platforms (Ferguson et al., 2013) to engage and elicit support for social causes

such as countering of terrorism. By learning and engaging in prosocial behavior via social

networks, millennials are more likely to engage in those behaviors offline (Gervais,

2015), which can lead to social movements and collective action both offline an online.

Even weak dormant online ties can be activated to engage people in prosocial behavior

that can trigger offline interactions, as social media is the new mobilizing tool that

supplements traditional devices (Enjolras et al., 2013).

Among the accepted reasons why social media is such a prevailing tool is the

notion that social media is not controlled or influenced by money, power, or politics

(Haro-de-Rosario et al., 2018), and individuals such as millennials are able to share and

discuss unfiltered ideas and facilitate prosocial behavior among their own networks as

well as between networks. Social media is the perfect avenue to elicit prosocial actions

such as counterterrorism behavior and planning because it cannot be controlled by

regimes (Tufekci & Wilson, 2012), it exists and connects people on a global scale, it is

inexpensive, and it can be used to communicate and elicit public participation (Agostino,

2013) in support of social causes and keeping the community safe.

Relationships Between Prosocial and Counterterrorism Behaviors

Prosocial behavior was not a word initially included in dictionaries and social

science academics created it as the opposing term for antisocial. Prosocial is used at times

interchangingly with altruism and refers to specific behaviors that are meant to help

individuals others than the self (Bénabou & Tirole, 2004). Altruism is the motivation to

helps others without the expectation of a reward, and the prosocial is the action (Batson

& Powell, 2003) to help, share and work together for the benefit of the greater good and

safety of members of one's group, race, species, etc. The behavioral response in the event

of a disaster such as a terrorist attack is described as an altruistic behavior where the

people in trouble must be helped, where people affected directly or indirectly share,

collaborate and disseminate information, time, money, resources, despite how their

involvement may affect their own safety or personal needs (Fisher, 2002). This infers that

counterterrorism behaviors are a subgroup within the arena of altruism and prosocial

behaviors. Human rights and animal activism are a few causes people fight for and

engage in prosocial behaviors. The suffering of an individual at the hands of another is

unacceptable and millennials are known for wanting to assist in the prevention of such

acts, which includes suffering and loss due to terrorist attacks. This is how counterterrorism and prosocial behavior and activism are connected.

Conclusion

There is a gap in research on millennials and how they perceive intelligence and counterterrorism strategies, and how it affects their interaction with the intelligence community (Weinbaum et al., 2016). Social media has a positive relationship to all three subcategories of engagement: social, civic, and political (Skoric et al., 2016), whereas social media does not negatively impact prosocial behaviors and engagement. For counterterrorism behaviors to take place online there is a need for information, people, and tools (Warren et al., 2014), which in this case is the relevant information, millennials, and social media. There is limited research on the willingness and frequency of prosocial behaviors portrayed by millennials on line, but the few studies show social media has a positive effect when used prosocially and has a significant positive effect on trust for e-citizens like millennials (Warren et al., 2014). Even though some studies refer to millennials as lazy individuals who expect important news and information to find them (Cannon & Mackay, 2017), the general accord on millennials' values and perceptions is that they are more interested in social justice and prosocial behaviors than any other generation. Seventy percent of millennials follow the news for at least one social or civic cause (Media Insight Project, 2015) and have a strong citizenship identity with a social engagement-oriented approach (Drok, Hermans, & Kats, 2017).

Millennials are a controversial population and research is divided regarding this cohort's values, behaviors, and what triggers these individuals to act and be involved.

What we know so far is that they are born digital experts and social media is an important part of their life. One important theme is how involved millennials are with social media, how and when they use it, and what are their thoughts on social media as a group. Most millennials are aware of privacy issues when they post and share information via social media, but for them it is an acceptable tradeoff in return for access to information and the ability to communicate with others globally. Millennials choose to be active participants when it comes to digital communication and knowledge. They are always in the news and getting attention. They are challenging norms and pushing for changes, and have no problem being active via social media to reach their goals and make changes that affect them and their macro universe.

Millennials are overachievers and martyrs, but most of all they are socially conscious (Jayadeva, 2018). Hence, they may be the adequate generation to engage in prosocial behaviors such as counterterrorism, especially since their level of technological proficiency is highest among all generations. They have the advantage of having a worldwide captive audience with whom they can interact from the comfort of their homes or while riding the metro to work. They are not confined by geographical boundaries or time constraints. Nevertheless, both Europe and the U.S. have not used this as a tool since there is very limited research on using social media as a community tool for preparedness and countering of terrorism (Anson et al., 2015). There is limited research on prosocial behaviors and how social media is a part of that (Seeling, 2018), but no research on how social media may be used for counterterrorism behaviors that is directly related to Millennials.

Social media has become a phenomenon that brings people together, and for the most part, the members of these networks are Millennials. These communities are vital resources for people, and the loyalty to certain online groups is mediated by interrelationships, social norms, interest, and social influence (Wang & Chen, 2012). Prosocial behavior tends to be affected by a group when an individual has a lower attitude towards social responsibility versus a person with a higher attitude who is less likely to change their opinion (Secchi & Bui, 2016). Individuals can create social capital that can fuel or sustain civic engagement, but it cannot be controlled because relationships vary based on the level of trust a person possesses, and the trust level varies greatly throughout someone's life (van Ingen & Bekkers, 2015). Thus, it can be assumed that as with other cohorts the variation within a group can be greater than between groups in certain situations. Even though social media is a tool used daily by millennials, as far as prosocial behavior and involvement they need a successful avenue where they can take online activism to an offline platform or forum; otherwise they may be overwhelmed and lost within the influx of groups, changes, and causes that define the social media online world (Meyer & Workman-Bray, 2013). Furthermore, we risk creating overstimulated and fatigued millennials who will not be engaged in any prosocial behaviors.

The current study attempted to establish whether there is a correlation or relationship between the use of social media and counterterrorism behaviors for millennials. Millennials are omnicompetent citizens online who are logical individuals that behave prosocially to foster change, and who have a prosocial identity and expression of ideas that benefit their community not just the self. Some researchers

concluded that millennials, as omnipresent citizens or administrators, can be used as tools and collaborators by agencies to increase engagement prosocially in public issues such as terrorism. The idea of being an omnipresent citizen means there is a combination of participation and anonymity, with millennials being accessible and present "everywhere but nowhere" (Zavattaro & Sementelli, 2014).

This may lead to the use of social media for more than just awareness and support, and more to the level of using it to counter violence and minimize fear by allowing communities and private citizens to be involved and have a sense of control over their safety. Such innovative ideas need to be empirically researched to establish how social media is or can be used to engage millennials prosocially online (Zheng & Zheng, 2014).

Chapter 3: Research Method

Introduction

The purpose of this quantitative study was to examine the relationship between the Millennials' use of social media and prosocial behaviors, specifically counterterrorism actions, and any differences that may be attributed to certain moderators. I explored perceptions of and behaviors towards counterterrorism using social media as an instrument. I investigated Millennials' use of technology and social media in relation to combating terrorism by looking at their online counterterrorism (social responsibility) behaviors and attitudes. In this study I attempted to provide a deeper understanding of the potential of social media to be used positively and constructively to combat terrorism online. The study focused on Millennials due to their connection to social media and being the first generation that grew up digitally connected that is over the age of eighteen. The assumption was that people who portray prosocial behaviors online may also be open to engage in counterterrorism behaviors through social media platforms.

There are many factors that can influence millennials' usage of social media as well as their counterterrorism behaviors. I assessed the relationship between the variables and any moderating variables via a questionnaire that used modified questions from four different scales. The scales used for the questionnaire were the APS, SRS, MTUAS, and SMUIS. Items from all four scales were modified to assess culturally sensitive counterterrorism type behaviors of Millennials and the level of prosocial behavior of Millennials. Understanding Millennials' usage of social media and behavior towards

counterterrorism could facilitate social change by introducing social media as a tool in counterterrorism strategies in the public and private sector.

This chapter provides information on the rationale of the research design, a description of variables, methodology, threats to validity, ethical concerns, and information on the target population and sampling procedures. The chapter concludes with a summary.

Research Design and Rationale

The methodology I used for this study was a cross-sectional self-report online questionnaire that was disseminated via social media using the SurveyMonkey, Facebook, and Walden University pool of participants. The data were exported in order to be analyzed quantitatively via SPSS. A cross-sectional survey methodology was appropriate because it is designed to prove or disprove an assumption quickly by gathering information from a precise point in time and addressing multiple variables. A cross-sectional study is often used to provide a snapshot of the outcomes, and it is often used in the survey form (Levin, 2006), which made it appropriate for this study. This type of study is based on questions asked of a random pool of participants regarding their past and current experiences, attitudes, behaviors, and backgrounds (Frankfort-Nachmias, Nachmias, & DeWaard, 2015). This type of data collection leads to the establishing the potential relationship between the variable, as well as moderating factors that may have influenced the possible correlation, in this case between social media use and counterterrorism type of behaviors exhibited by Millennials. By using this type of design, I had the opportunity to collect data from a larger group of participants in a minimal

timeframe. Another advantage was that I did not have to randomly assign the participants to groups. Furthermore, because social media was one of the variables, it made sense that the survey was disseminated online. The results were generalized to the Millennial population, and I was able to provide insight into the relationships between the variables and how they affect Millennials as well as positive social change.

Social media platforms are a particular form of internet technology that are influential for prosocial and civil activities. They are social movements where a multitude of various individuals share a collective identity and mobilize when needed to take collective action (Gervais, 2015). It is often easier for people to interact and communicate online than offline (Bobkowski & Smith, 2013), even though online participation triggers offline involvement. Individuals belong to different groups and social media networks; thus, as a mobilizing tool, social media usage is complex and difficult to accurately assess. It is also difficult to control the variables that may impact and influence social media usage. For example, gender and age were already established as moderating variables, and social media facilitates prosocial behavior not only within networks but also between networks (Enjolras et al., 2013). Because of such variables, in the study I used questions that were modified from instruments with robust validity and reliability related to social media usage and prosocial behaviors. Nonetheless, because the questions were modified, the validity and reliability of the instruments may have altered. To assess social media usage the MTUAS and SMUI) items were modified and used. To establish if millennials would be willing to behave or are behaving already as watchers and active participants in social action against terrorism, I had to establish via this study whether

they portray such prosocial behaviors online. Some researchers believe that online behavior is social behavior (Golder & Macy, 2014), but the question remains whether it is positive social behavior. To establish if the omnipresent Millennial (Zavattaro & Sementelli, 2014) partakes in prosocial behaviors, I assessed the prosocial counterterrorism behaviors via modified items from the APS and the SRC.

I modified the questions to fit the counterterrorism behaviors and social media usage into a survey containing no more than 75-100 questions relatable to the variables used that took approximately 10 minutes to complete. From the four instruments used, a total of 75 items were utilized as originals or were modified. Ten questions represented the demographic questions. I created 10 questions to assess counterterrorism behaviors. This created the final questionnaire composed of a total of 85 questions.

The first 10 questions addressed demographics such as age, gender, and so forth. Questions 11 through 50 addressed social media usage and attitudes. These questions combined addressed the independent variable. The questions were taken from the MTUAS and SMUIS, previously published peer-reviewed instruments. MTUAS contains 60 items and 15 subscales that address usage frequency for technology, as well as beliefs about media and technology. SMUIS contains two subscales that make up the total 10 items of the instrument, which assess emotional connection to social media and how people integrate social media into their social activities. The independent variable was split into three subscales: social media one (SM1), comprising nine questions (10-point Likert scale), social media two (SM2) made up of four items that use a frequency scale, and social media three (SM3), containing 26 questions (10-point Likert scale). The total

number of questions (39) were used as originals or modified versions taken from the MTUAS and SMUIS.

The remaining 35 questions address social responsibility and counterterrorism behaviors and were divided into two subscales, which embody the dependent variable. Both subscales are 5-point Likert scales: The first subscale, counterterrorism behaviors one (CT1), contains 14 questions, while the last 21 questions are part of the second subscale, counterterrorism behaviors two (CT2). I used the questions as original or modified versions from the Social Responsibility Scale and the Altruistic Personality Scale. Nine questions were changed to specifically address terrorism and attitudes about counterterrorism behaviors via social media.

Counterterrorism behaviors was the dependent variable and social media was the independent variable. Previous studies have looked at Millennials' use of social media or how Millennials behave prosocially. No previous studies looked at specific prosocial actions such as counterterrorism behaviors and the relationship to social media. This could reveal if Millennials could use their unique tool, social media, to portray such behaviors. The independent variable looked at social media usage, particularly the type of social media and the frequency. For the counterterrorism type behaviors, the study looked at level of altruism and the level or willingness to engage in counterterrorism behaviors via social media. Moderating variables related to demographics included age, gender, race, ethnicity, education level, employment status , marital status, place of origin/country of residency, and English proficiency. An assumption of the study was that

cultural norms may impact the relationship between social media usage and counterterrorism behaviors if there is one.

There were some limitations to using an online survey. The participants had to have access to a computer or smartphone and internet access to be able to complete the survey. This excluded potential participants who did not have access due to external factors beyond their control. There was no contact with the researcher and because the questionnaire was not mandatory, there was no way to control or obtain a certain number of valid responses. The voluntary responses may have distorted the results and overestimated the prevalence of the relationship or lack of between the variables, the usage of social media or the willingness to engage in counterterrorism behaviors. Also, there was no possibility to control the type of individual who responded to the survey; if the person was within the range that encompasses the Millennial generation, any individual was able to compete the questionnaire. Nonetheless, this may have brought variability to the participant pool that spread beyond the typical college student participant. The participants were individuals between the age of 22 and 37, which means younger Millennials could potentially have a higher media use frequency and expertise versus the older Millennials that may portray more prosocial behaviors. A disadvantage of this method was the possibility that people would overreport, underreport, and even lie on the demographic questions, which could not be controlled. This could have threatened validity and reliability of the study.

Methodology

Research Population

The population surveyed included Millennials, individuals between the age of 22 and 37, with no restrictions on location, country of origin, culture, nationality, gender, education level, marital status, or employment status. The results were generalized to the millennial population with respect to culture, gender, median age, educational levels, ethnicities, and income/poverty levels. There was no sampling location specific to the study, any millennial from any geographical location was able to complete the survey. The sample should vary and not be comprised by a majority of college students. According to Financial Times the estimated number of Millennials globally is 1.8 billion, and it is the largest population and the one that is digitally connected (Tilford, 2015).

Sampling and Sampling Procedures

A representative sample of the millennial population was sampled randomly. This is a common approach where all members have an equal chance of selection. A larger sample diminishes the chance of a random sampling error; nonetheless, the optimal sample size is contingent on the constraints of the phenomenon studied (Marshall, 1996). Random sampling is a probability sample method and it suggests that the sample is representative of the population. This can lead to valid statistical conclusions. Another advantage of this sampling for the millennial population was that it provided variety and moderating factors that were analyzed to see if they influence the relationship between the dependent and independent variables, such as age, gender, culture, location, country of origin, educational level, marital status, and employment level.

The procedure for drawing the sample size was the distribution of the online survey by using the service company Survey Monkey, which allowed the data to be exported for SPSS analysis. To inform the participants of the existence of the survey and to obtain valid completed questionnaire responses the study used Survey Monkey, the Walden University pool of participants, posted flyers (Appendix C), and created a social media account specific to the study (Appendix D). The survey was a self-report questionnaire and only people between the ages of 22 and 37 were able to complete it. Since participants were required to be over 22, no parental consent was required. Participants were required to be able to read English and understand the questions used in the survey. Further, any participant who could not or was not able to give informed consent was excluded from the study.

A 95% confidence interval was used to obtain range values, which demonstrated how well the sample estimated the population parameter. Choosing this type of confidence interval aimed to contain and decrease the possibility of making a type I error. A 95% confidence interval is appropriate in most studies (Jacob, et al., 2003; MacKinnon, Lockwood, & Williams, 2004). This means that if the study was continuously repeated, the results would be the same 95% of the time.

One of the most important calculations in an empirical quantitative study are effect sizes, because the size of an effect delineates the practical significance of results and outcomes of a study. Effect studies are also used to determine sample size for a prospective study. For social science studies it is acceptable to use a medium effect size if it is not possible to determine a more true and accurate effect size (Statistics Solutions,

2018). For this particular topic there were very few similar articles from which researcher could draw a more accurate effect size. This prompted the researcher to use a medium effect size of 0.3, given effect sizes between 0.3 and 0.5 are considered moderate based on Cohen (1988). An adequate effect size will also help because the size of the effect observed is autonomous of the likely deceptive influences of sample size (Fritz, Morris, & Richler, 2012).

Power refers to the probability that the null hypothesis will be rejected correctly, avoiding a type II error. A generally accepted power value for studies in the social sciences is 0.80 (Howell, 2010). According to Howell a high level of power requires large effects or large samples (2010). Though a type I error should be prevented, a type II error should equally be avoided, and power is important to avoid a type II error. Paying attention to power during the research design stage is imperative because it protects both the researcher and the participants (Wilson, VanVoorhis & Morgan, 2007). A power value of at least 0.8 will ensure there is an 80% or higher chance of finding statistical significance (My Environmental Educaton Evalution Resource Assistant, 2018). Therefore, a power value of 0.95 was selected based on the G*Power3 power analysis program, which has the capability to run a priori power analysis (Faul, Erdfelder, Lang, & Buchner, 2007). Based on the G*Power3 calculation, the minimum sample size for the study was 111. The researcher planned to collect data from approximately 200 people to account for attrition and to ensure there was enough data to analyze. This sample size aligned with established research that states large sample sizes strengthen power and reduces elimination error (Wilson VanVoorhis & Morgan, 2007).

Recruitment, Participation, and Data Collection

A web-based questionnaire was created using Survey Monkey, an online survey building tool, which offers free customization. The web-based questionnaire was accessible to participants via imbedded links on several social media platforms and in print via recruitment flyers, to control oversampling college students. A specific Facebook page was created for dissemination of the survey. The researcher promoted the page via Facebook by boosting the post. Researcher paid Facebook to boost the post globally setting the age range between 22 and 37 for prospective participants. Facebook promoted the page for the amount of time the survey was available through the Survey Monkey platform. Researcher could not control the promotion and was only able to see how many people viewed the Facebook page, but not how many people may have completed the survey. The link was also posted on Walden University's online forums and used the Walden University participant pool. The researcher's name and email address were included as the point of contact for potential participants questions and concerns.

Informed consent was provided in the form of electronic informed consent (eIC), prior to participants being allowed to proceed with the survey portion. This step ensured those who did not agree to the informed consent, were unable to move forward and complete the survey. The eIC contained the same elements as an informed consent compliant with the guidelines and recommendations from the US Department of Health and Human Services (HHS) for online research involving human subjects. There were no incentives for participation.

Potential participants were informed that the study would help to further the research of an important niche; the intersection of social responsibility and the use of social media. No parental or guardian consent was required since the participants were over the age of eighteen and the survey was a self-reported questionnaire. Participation was voluntary for all those who meet the age eligibility (22-37 years of age at the time of completing the survey). There were no exclusion criteria except being under the age of 22 or over the age of 37 at the time of survey completion. Any individual between the age of 22 and 37 was able to complete the survey regardless of background or geographical location, as long as they had basic knowledge of English. To protect participant privacy no identifiable information was collected at the time of survey completion. The survey question items were in English. The survey included clear instructions, clear and concise phrasing of questions, font and size that was easy to read, appropriate vocabulary, and easy flow of questions with no grammatical or spelling errors.

Reliability analyses, exploratory factor analyses, and multivariate linear regression analyses using SPSS were conducted to examine the data collected and stored in a secure, online database on the Survey Monkey platform. No intervention was included in the research design. Data collected online was transferred into a locally secured database where it will be stored for seven years in accordance to Walden University's guidelines and policy for data storage.

The raw data was mined for missing patterns and other types of data noise using the SPSS statistical package. Incomplete surveys were excluded from the main outcome data analysis, and further assessed for participant biases using post-hoc secondary

missingness analysis. Demographic information was also collected from participants as part of the first portion of the survey (after eIC was obtained). The demographic information included age, gender, race, ethnicity, education level, marital status, employment status, country of birth, country of residence, and English proficiency. No exit procedure or debriefing was required for this study. Correspondingly, there was no requirements for follow-ups, interviews, or treatments. At the end of the survey, the participants were able to see the following message: "Thank you for completing the survey and for your participation!" as part of the last screen before exiting the survey web page.

Instrumentation and Operationalization of Constructs

Media and Technology Usage and Attitudes Scale

Even though many have attempted to measure the usage of social media and technology, the Media and Technology Usage and Attitudes Scale created by Rosen and colleagues (2013) has attempted to close the gaps that have made previous measurements across studies unreliable. Further, the use of different scales to measure social media and technology has made it hard to obtain valid and reliable results. The use of a standardized measure would eliminate this problem. Since this is an emerging field no such tool exists. Currently, the MTUAS is the most reliable and valid assessment known to the field, measuring attitudes about the use of social media as well as the frequency of usage. The MTUAS and its subscales have direct validity and reliability, which makes it a powerful measurement tool (Rosen et al., 2013). MTUAS is also adaptable across various technologies (e.g. web-based, mobile) and platforms (computers, tablets, smartphones).

The assessment contains 60 items and 15 subscales. MTUAS has also been validated in youth groups across different cultures, languages and global regions. In one study, the adapted MTUAS was used to assess Portuguese youth attitudes, usage of social media, and the type of information/correspondence technologies (Costa, et al., 2016).

The MTUAS results demonstrated strong reliability and validity in corroborating Portuguese youth's strong preference to using smartphones to gather information and to communicate with others. In another study MTUAS was adapted in the Turkish language, to assess the usage of social media and new technologies, such as smartphones. According to Ozgur (2016), the Turkish adapted scale demonstrated strong reliability and validity consistent with the original MTUAS, its subscales, and its intendent youth population. Turkish and Portuguese versions not only show that the MTUAS is valid and reliable across cultures, but also for involving millennials. I contacted the developer, Dr. Rosen, via e-mail and received written consent in the form of an e-mail to use and modify the scale to fit the purpose of this study (Appendix E). To that end, the wording of specific items on the original MTUAS scale were changed to address the terms that better describe counterterrorism behaviors and attitudes.

From the attitude subscale items original items 1,2, 3, 4, 5, 7, 10, 11, and 12 were used. From the MTUAS scale items 13, 14, 15, 32, 33, 35, 36, 39, 40, 41, 42, 43, and 44 were used. Items 13 and 15 were combined into one question, and items 35 and 36 as well. The rest of the questions used were modified. The terms "technology" and "internet" were replaced by the term "social media".

Social Media Use Integration Scale

The SMUIS was developed by Jenkins-Guarnieri et al. (2013) to measure integration of social media behavior and daily practices of users, with the initial intent of looking at Facebook usage, but was extended to other social media platforms. The intended population for this scale was young millennials, and the scale provides good validity, reliability, and adequate internal consistency (Jenkins-Guarnieri et al., 2013). The creators of this scale hypothesized the frequency of use and quantity of social media usage is not the best way to assess impact of social media. To that end, they created the SMUIS to assess how young millennials integrate social media in their daily lives and their social responsibility. The SMUIS has demonstrated good psychometric values, across various social media networks. SMUIS was created based on Jenkins-Guarnieri's dissertation on Facebook use and the relationships to personality traits, attachment style, and interpersonal competency. The creators of SMUIS suggested that SMUIS has a practical applicability due to its ability to be used in research that is trying to assess social media use for young adults. For the purposes of this study, the scale items were modified to assess social media use for millennials. The researcher contacted the developer, Dr. Jenkins-Guarnieri via e-mail, and received written consent in the form of an email to use and modify the scale to fit the purpose of this study (Appendix F). Hence, the wording of specific items on the original SMUIS were changed in order to address the terms that best describe counterterrorism behaviors and attitudes. From this scale items 10, 11, 13, 14, and 18 were used, where the term "Facebook" was replaced with the term "social media". The rest of the items were modified.

Altruistic Personality Scale

Altruism is not the same as self-sacrifice. Even though these two concepts share similarities, altruism as defined by experts is a voluntary behavior of one individual that would intentionally benefit another individual stemming from a strong belief in justice, morality, and without expectations for rewards and accolades (Bénabou & Tirole, 2004). Comte coined the term as an antonym to egoism (Batson, 2014; Campbell, 2006). Altruism is often associated with selflessness, loyalty, lack of external gratification, ethics and perceptions about helping others. Therefore, to establish prosocial behaviors such as counterterrorism behaviors, items from the Altruistic Personality Scale (APS) were modified in order to assess counterterrorism behaviors in millennials using social media. It is noteworthy that self-sacrifice is a readiness to suffer and die for a cause; a trait common within individuals who have been radicalized and recruited by terrorists (Belanger, Caouette, Sharvit, & Dugas, 2014). Even though both self-sacrifice and altruism are situational and goal oriented, psychological altruism has, at its core, concern for other people, while self-sacrifice is not always related to justice, and more importantly, comes with the expectation of extrinsic rewards and accolades. Altruism is a personality trait that marks a gamut of helping actions (Bélanger, Schumpe, Menon, Conde, & Nociti, 2018).

Research shows that altruistic personality and social responsibility influence prosocial behaviors and they are interrelated with empathic concern to personal distress. Nonetheless, altruism and prosocial behaviors are related to the specific type of situation and how low or high is the probability of escaping (Bierhoff & Rohmann, 2004). So,

given a specific situation, millennials may behave in a prosocial manner that could include counterterrorism behaviors. Items from the APS were modified to assess the level of prosocial behavior for millennials. The APS scale, originally known as the Self Report Altruism Scale has been studied and discussed for decades by Rushton et al., (1981). This scale authentically measures altruism and has demonstrated stable psychometrics properties with good predictive and discriminant validity (1981). This measure is available and open for use by any researcher or dissertation candidate.

From this scale items 4, 9, 12, 14, 17, and 18 were used and changed to reflect behaviors via social media or behaviors towards individuals or society. Questions were introduced to reflect counterterrorism behaviors and attitudes.

Social Responsibility Scale

The social responsibility scale developed by Berkowitz and Daniels (1964) describes socially responsible behavior as the altruistic acts not dependent on social or material rewards varying based on situational factors such as culture, negative attitudes towards people who need help, psychological cost to the helper, and prior experiences. The 22-item scale responses are based on yes or no questions such as "every person should give some of his time for the good of his town or city (agree/disagree)". Items 2, 6, 9, 15, 18 were used, and items 12, 14, 16, and 21 were used but modified by the researcher to reflect social media and community. Items 39 and 47 from the original scale (Social Attitudes Scale) were also used and modified. Even though the scale has been mostly used to assess business/corporate social responsibility, some define social responsibility as two sides of the same coin with type A (business) and type B

(psychology). The psychological social responsibility is considered a fragment of the prosocial behavior section or as "the altruistic mechanism of reciprocation" where altruism, cooperation, and social responsibility are segments or categories of prosocial behavior (Secchi, 2012). According to Berkowitz and Daniels, prosocial behavior and social responsibility covary, therefore, items from the scale were modified to assess prosocial behaviors for millennials regarding counterterrorism behaviors. This scale is available and open for use by any researcher or dissertation candidate.

Threats to Validity

Reliability and validity are concepts important in research because they ensure stable and consistent results. Since many social science studies look and measure human behavior, validity and reliability are imperative to behavioral studies and research. Statistical validity threats were controlled by ensuring the statistical power was not low, and by ensuring the assumptions were not violated.

Internal validity typically refers to inferences regarding causal relationships. Since, the current study was not attempting to establish a causal relationship between the variables, there were few assumed threats to internal validity (Drost, 2011). As results were not misinterpreted for causation, internal validity was not a major issue for this study, which was looking at the possible correlation and prediction level of the variables. The usage of social media and prosocial behaviors such as counterterrorism may be correlated, and the nature of social media may be predictive of counterterrorism behaviors, which does not denote causality.

Reverse causation was also not an issue and therefore, did not threaten internal validity. This study was looking at the relationship between the variables, not their causes. There may have been other variables that affected the relationships and account for the variance, and moderating variables may have accounted for part of the variance, but it is not possible to establish with precision.

Internal validity could have been threatened if participants answered questions where their answers were influenced by current events in their area or the world, their opinions on social media and prosocial behavior, and their current emotional and psychological state of mind at the time they took the survey. One benefit was that prospective participants were able to take the questionnaire in their natural environment, at the location and time of their choosing, without interruptions or potential interference and influence from the researcher.

Statistical regression due to selection could have also threatened internal validity. Millennials who use social media frequently and have positive opinions on social media and/or prosocial behaviors such as counterterrorism behaviors may prefer to answer the questions while millennials who do not may ignore the survey or not complete it.

Another threat to internal validity was instrumentation. This is the first time these scales were modified and used in this fashion. The instrumentation included items from four different scales that measure social media usage and prosocial behavior that are robust with good validity and reliability. Nonetheless, the items have been modified specifically to measure counterterrorism type prosocial behaviors, which ultimately needs to be replicated to increase the internal validity.

A construct validity threat could have appeared if the participants answered because they had a perceived notion of what the answers should be or what the researcher wanted to obtain. This was coined *hypothesis guessing* (Web Center for Social Research Methods, 2006), where participants are actively attempting to figure out the purpose of the study. Participants may have desired to appear good based on their answers or did not wish to answer due to some perceived fear regarding information obtained or their answers. This may have been alleviated due to the anonymous nature of the study and self-report questionnaire.

External validity refers to the ability to generalize the results to the entire population (Mitchell & Jolley, 2010). Theoretically, extrapolations can be made based on the assumption that in general millennials are similar to the ones that participated in the study. The study will need to be replicated on different samples of millennials using the same instruments to ensure the existence of external validity. There are no similar studies conducted previously, and as a single study on this topic it cannot hold strong external validity on its own (Mitchell & Jolley, 2010). Further, participants may have more experience in using mobile devices, social media, readily available internet services, which may not be representative of the average millennial or millennials from underdeveloped areas.

Another threat to validity could have occurred if the sample was not randomly selected, which in this study was not a concern due to the sample being arbitrarily selected. Hence, there is a greater chance that the results could be generalized to the entire population of millennials.

History, maturation, and mortality were not issues that threatened validity, because the study was cross-sectional. Since the study did not include an experiment, testing and interference were not an issue. Data was collected and analyzed by one researcher; therefore, there were no issues with inter-rater reliability and variance.

Ethical Procedures

In an effort to protect participants from any physical and mental distress, discomfort or harm, Institutional Review Board (IRB) approval was requested prior to collecting data. Walden University IRB approval was obtained (02-19-18-0664445) which expires on February 18, 2020 (Appendix G). Participants were informed of any potential risks prior to participation in the study via detailed information regarding the study in the inform consent portion of the survey. Potential participants had to read the information and give informed consent before being able to access the actual questionnaire. The purpose of the study was explained to ensure participants are informed before consent was given. The consent form that was included at the beginning of the Survey Monkey online questionnaire included the researcher's contact information, detailed information about the study, how the data would be collected and used, privacy and confidentiality concerns, and the right participant have not to complete the questionnaire. By clicking "yes" after reading the consent form, the participants agreed and that was considered as their electronic signature and agreement of participation. This allowed them to continue on to the survey questions. The consent information was in English, the same language that was used for the survey questions. The participants had the option to withdraw from the questionnaire at any point during the survey.

Ethical concerns had priority and were assessed throughout the process of data collection, retrieval, storage, and analysis. The researcher deleted the data off the online platform once it was downloaded and a backup created that was only available and used by the researcher. Survey Monkey, the online platform, or any other third party could not use the data without the approval of the researcher. Data will be stored by the researcher for 7 years before it will be destroyed.

Institutional Review Board requirements and American Psychological Association guidelines were carefully and strictly followed to ensure proper ethical procedure was followed. The purpose of the study and the process of data collection were discussed in detail with dissertation committee chair and member, URR member, and IRB to ensure all concerns were addressed, and changes were made prior to data collection. Dissertation committee chair and member and the Walden University Institutional Review Board supervised data collection and statistical analyses used to obtain results presented in Chapter 4 and 5.

There were no perceived risks to participants from a health perspective, no loss of privacy anticipated as a result of participating in the study due to guaranteed anonymity, and no financial gains due to the lack of incentives offered. Participation was voluntary and anonymous, and no debriefing was essential post completion of online survey. Furthermore, there were no conflicts of interest between the researcher and the participants because the sample was randomly self-selected, and data was collected via an anonymous online survey. Data collected was completely de-identified, with no possibility of being linked to a particular participant. No names or personal information

that could have identified the person were collected; the study was completely anonymous. The online data was managed and analyzed only by the researcher, and no other individuals had access to the data. The study did not contain an experiment; therefore, there were no ethical concerns regarding interventions or adverse outcomes and events.

Summary

Chapter 3 offers information on the methodology and research design that was used in this study. The study explored the likeliness of a relationship existing between the usage of social media and prosocial behaviors such as counterterrorism exhibited by millennials. One research question with one hypothesis was suggested. The question explored the correlation between the independent and dependent variables, while assessing the moderating effects of covariates. An online questionnaire was used to collect the data, and regression analyses were performed to establish if social media usage is significantly correlated with counterterrorism behaviors described in the research question. Multivariate regression analyses were conducted to establish if the variance is explained by moderating variables.

The sample for the study was randomly selected, therefore the assumption was that the sample was an equal representative of the target population. The participants were millennials that were defined as individuals between the age of 22 and 37. The effect size for the study was selected at .30, with an alpha (α) level of 0.05 and a statistical power (1-β) of 0.95. A 95 % confidence interval was chosen. Researcher prepared to collect data from 200 people to guarantee sufficient data available for

analysis that would have increased validity of the study. By using the G*Power3 software an optimal sample size of 111 was established. G*Power 3 was established as the best avenue for calculating sample size for a randmoly selected sample size of a cross-sectional survey study (Faul et al., 2007).

An online, self-reported questionnaire was created via Survey Monkey and the survey was disseminated through social media, flyers, and the Walden University forums and participant pool. Demographic data was collected, and participants were able to give eIC. Data was collected, managed and analyzed by the researcher as the sole proprietor of the data.

No existing instrument exist that would assess counterterrorism type behaviors in connection with social media usage; hereafter, items from four scales were modified to create a scale that addressed prosocial behaviors (counterterrorism behaviors) in connection to social media usage.

Threats to validity were addressed in this chapter, along with ethical considerations. Survey distribution began once approval from IRB was secured. Data collection started after eIC was obtained and was stored in accordance to the rules and policies dictated by the Walden University and its governing body. Furthermore, the data was analyzed using a statistical package and the results are presented in chapter 4.

Chapter 4: Results

Introduction

The purpose of this cross-sectional survey study was to assess Millennials' use of social media on counterterrorism behaviors. Factors that could influence the use of social media for specific prosocial behaviors such as counterterrorism were measured using an online self-report questionnaire created using SurveyMonkey and delivered to participants as a link via social media platforms, recruitment flyers in print, and Walden University forums. The independent variable was social media usage, while the dependent variable was counterterrorism behaviors. Moderating factors included age, gender, race, ethnicity, educational level, marital status, employment status, country of birth, country of residency, and English proficiency. I obtained descriptive and inferential statistics using SPSS statistical package.

This study had one research question with two hypotheses.

RQ: Does Millennials' social media usage predict counterterrorism behaviors of Millennials?

H_0: Social media usage portrayed by Millennials does not suggest a significant relationship with counterterrorism behaviors of Millennials.

H_a: Social media usage portrayed by Millennials does suggest a significant relationship with counterterrorism behaviors of Millennials.

This chapter addresses the process of data collection, data analyses, and results. Lastly, this chapter summarizes the findings and facilitates the transition to the discussion and recommendations.

Data Collection

Data Collection Time Frame and Recruitment

The survey distribution and data collection process lasted 30 days, starting on February 19, 2019, and ending on March 19, 2019. The survey was launched on SurveyMonkey and on the Facebook page created specifically for this study. The study was also made available to Walden University students via the participant pool. The study was approved by the Walden University IRB with approval number 02-19-18-0664445.

On March 19, at 11:59 PM when data collection stopped, SurveyMonkey registered a total of 207 respondents who attempted to complete the survey. Of those participants who consented to participate ($N = 207$), 86% completed the survey ($n = 178$). The remaining 29 data points were eliminated from main analyses due to being partially completed. All participants who consented to be in the study met criteria for age eligibility and no participants were excluded from the study. I had no direct or indirect knowledge or communication with the participants. No personal information was collected from the participants, and no follow-up was needed. The self-reported survey answers were completely anonymous. The data collection was completed based on the preset standards by me and approved by the IRB. The procedure and collection were done according to the standards; consequently, the data was valid, and analyses of data were appropriate.

The average completion rate per participant, including the 29 participants who partially completed the survey, was calculated to be 10 minutes and 27 seconds. This

matched the timeframe mentioned in the eIC. According to the process data from

SurveyMonkey, 14% were partially completed questionnaires due to unanswered

questions. The proposed sample size estimation of 111 survey responses was reached and

exceeded (n = 178), and all were included in the study. The greater sample size supports

the reliability of results and confidence level in the sample collected (Littler, 2019).

Larger sample sizes strengthen power and reduce elimination error (Wilson VanVoorhis

& Morgan, 2007). The raw online data was downloaded from the SurveyMonkey cloud

database in an Excel workbook format and was imported into SPSS to be analyzed (Table

1). The external validity of the sample size was good due to the higher number of

responses achieved in comparison to the initial targeted number of 111 based on G*3

calculations for optimal minimum sample size.

The next step was data mining. Data were cleaned, coded, converted, and

analyzed statistically. For the first 10 questions that represented the demographic

information provided by the participants, I coded the demographic variables from

categorical variables to nominal. Each variable was sorted in ascending order, and the

first group for the variable was established as the reference group (Table 2). All groups

for each of the variables were compared through pair-wise comparisons to the reference

group of the variable. For example, for the age variable, the age groups of 26-29, 30-33,

and 34-37 were compared to the reference group 22-25. The demographic variables were

recoded with dummy variables for the purpose of proper analyses via SPSS. Four items

from the social media usage independent variable were modified as well. Questions 40

through 43 were reverse scored because they were expressed in a negated form (e.g.

"Social media makes people more isolated"). For the variable country of birth, the variable was sorted based on highest frequency, and the pair-wise comparisons were compared to the reference group. Even though for this variable Romania had the highest frequency as country of birth, the United States was used as the reference group to allow for the same reference group and pair-wise comparisons to match the nationality variable. For the country of birth, the top four were Romania, United States, Greece, United Kingdom/England, and the rest were grouped as Other. The top two were reversed to match the country of residency variable. For the country of residency, the same procedure was followed, and the top four dummy variables based on frequency were United States, Romania, Greece, United Kingdom/England, and the rest grouped as Other. In this case Greece and United Kingdom/England were switched to match the country of birth dummy variable order. This was only for the purpose of coding the variables in SPSS. This process was completed to establish if nationality and residency (country of birth and country of residency) would have a significant effect as moderators on the dependent variable.

In this study I examined the connection between the variables and moderators to see if there were any relationships between the dependent and independent variables. The analyses performed were bivariate and multivariate due to moderators that were examined vis-à-vis the dependent and independent variables. Because the differences and relationships between two variables are not always clear (Bryman & Cramer, 2011), I needed to establish if any of the moderators play a significant role. I analyzed data to establish any existing patterns.

I performed initial descriptive analyses of the original variables to establish external validity of the sample in comparison with initial hypothesis and preset criteria for the sample size. I calculated frequencies and percentages for age, gender, race, ethnicity, education, marital status, employment status, country of birth, country of residence, and English proficiency.

I analyzed the independent variable, social media, based on its subscales and as a total. The social media variable included questions 12 through 51. Subscale 1 of social media (SM1) consisted of nine questions (12 through 20) and addressed active behaviors via social media. Subscale 2 for social media (SM2) contained only four questions (questions 21 through 24) and looked at the networking power of social media, while subscale 3 (SM3) addressed social media preferences and comprised 27 questions (questions 25 through 51). Overall the social media variable (SM total) consisted of 40 questions. I analyzed the dependent variable, counterterrorism behaviors, as a whole as well as based on its two distinct subscales represented by questions 52 through 85. Overall, the variable contained 34 questions divided into two subscales. Subscale 1 (CT1) looked at behaviors and consisted of 14 questions (questions 52 through 65), while subscale 2 (CT2) looked at preferences for social responsibility and consisted of 20 items (questions 66 through 85). The combined number of questions that addressed social media and counterterrorism was 85.

I selected a 95% confidence interval was selected as described in Chapter 3 to try to contain and decrease the possibility of making a type I error. I chose a medium effect size because in social sciences it is acceptable to use such an effect size if it is not

possible to determine a more true and accurate effect size (Statistics Solutions, 2018). A

medium effect size would fall between the values of 0.3 and 0.5 as described by Cohen

(1988). I selected a power value of 0.95 based on the G*Power3 power analysis program,

which has the capability to run a priori power analysis (Faul et al., 2007). A generally

accepted power value for studies in the social sciences is 0.80 (Howell, 2010). In

conclusion, the effect size for the study was selected at .30, with an alpha (α) level of

0.05 and a statistical power (1-β) of 0.95.

Results

Descriptive Statistics

I calculated frequencies and percentages for the 10 moderators. The most

frequently observed category of age was 22-25 ($n = 59$, 33%). This majority age group

represented 33% of the total number of respondents. The most frequently observed

category of gender was female ($n = 125$), representing 70% of participants. Caucasian

was the most frequently observed category for race ($n = 104$, 58%). For ethnicity the

most frequent category was Eastern European ($n = 65$, 37%). People reported having a

college degree as the most frequently observed category for education ($n = 62$, 35%). The

most frequently observed category of marital status was single ($n = 92$), which

represented a little over half of the respondents (52%). The most frequently reported

category for employment status was employed ($n = 131$), with a high percentage of 74%

out of the total of 178 completed responses. The most frequently observed category of

country of birth was Romania ($n = 66$), even though as far as percentage, it only

represented 37%. For the country of residency variable, the most frequent category was

United States ($n = 60$), which represented a total of 34%. The most frequently observed category for English proficiency was proficient ($n = 66$), representative of 37%. Frequencies and percentages are presented in Table 1.

The participants who chose to complete the online survey were diverse. As far as their age, a good number of participants were in the younger bracket of millennials between the ages of 22 and 26 (33.1%). Interestingly enough the next significant group were the millennials in the older bracket of millennials between the ages of 34 and 37 (27.5%). The groups between 26 and 29, and 30 and 33 were equally represented in the sample (19.7%).

Participants were unequally represented based on gender, with the majority of respondents being female (70.2%). Out of 178 participants 125 were female, while only 50 were males. The ratio of females versus males is 2.5.

Participants were also unequally represented based on racial identity. Fifty-eight percent of the participant pool stated they aligned with the Caucasian race. A total of 104 participant were Caucasian, while 28 participants chose category Other.

From an education perspective, most participants have a college degree. From the total of 178 individuals, 62 have a college degree (34.8%), while 65 have a graduate degree comprised of 4 doctoral graduates while 61 have a master's degree (total of 36.5%) . Because the graduate degrees are split between the Master and PhD level, it appears that the college degree category is higher at a roughly 35%. Nonetheless, the people who have a graduate degree represent approximately 36% of the total. Seventy-

eight percent of the participants have at least an associate degree, while 71% have at least a bachelor degree.

The marital status category revealed that most participants were single, the single participants represented over half of the total amount of respondents. The married and living together categories combined represent 47% of the total, with 27% for the married category and 20% for the living together. Even though separately the numbers for these categories are low, together it helps identify that the marital status of participants for the study is roughly split between single and cohabitating with a partner regardless if legally married or not.

Most participants reported being employed or self-employed, which represent approximately 80%, 142 participants of the total of 178 respondents. From this percentage roughly 74% are employed, while only 6% are self-employed. The unemployed category is represented by 36 people (20%).

The country of birth category revealed interesting results. Individuals who participated in the study were representative of 34 countries based on the geographical place where they were born (Table 3). The most represented country was Romania (66 individuals), followed by the United States (35 people), Greece (15), and the United Kingdom/England (14). Some people responded with either England or United Kingdom which created two categories, but when totaling the two, the number falls right behind Greece as the fourth country of birth with a total of fourteen. This number excludes individuals who responded for country of birth with Wales, Scotland, or Ireland. For the category of country of residence participants represented 25 country versus the 34 for

country of birth (Table 4). In this category the United States was the major country represented by 60 individuals, followed by Romania (39 individuals), the UK/England at a combined number of 27, and Greece at 15. Dummy variables were created for these two categories for the purpose of statistical analyses in conjunction with the independent and dependent variables.

The last category, English proficiency, showed most individuals were either native speakers or were proficient in English. Individuals who were proficient in English represented 37% of the total number, while native speakers were represented by approximately 33%. Only 5% (9 individuals) of the total number described their knowledge of the English language as basic. Thirteen people (7%) chose intermediate, while 32 individuals (18%) stated English was their second language.

Overall the sample is representative of the millennial population. As seen in Table 1 individuals of various ages between 22 and 37 from over 30 countries responded to the self-reported online survey.

Table 1

Frequency Table for Nominal Variables

Variable	*n*	*%*
Age		
22-25	59	33.15
26-29	35	19.66
30-33	35	19.66
34-37	49	27.53

(table continues)

Missing	0	0.00
Gender		
Male	50	28.09
Female	125	70.22
Other	2	1.12
Prefer not to answer	1	0.56
Missing	0	0.00
Race		
Caucasian	104	58.43
African American	9	5.06
Hispanic or Latino	8	4.49
American Indian or Alaska Native	1	0.56
Multiracial	5	2.81
Asian	17	9.55
Other	28	15.73
Prefer not to answer	6	3.37
Missing	0	0.00
Ethnicity		
North American	26	14.61
Central American	1	0.56
Asian	16	8.99

(table continues)

Arabic	3	1.69
African	2	1.12
Mediterranean	11	6.18
Eastern European	65	36.52
Western European	30	16.85
Other	24	13.48
Missing	0	0.00
Education		
Some college	22	12.36
Master's degree	61	34.27
College degree diploma	62	34.83
Associate degree	12	6.74
High school graduate	17	9.55
PhD doctoral degree	4	2.25
Missing	0	0.00
Marital status		
Single	92	51.69
Married	48	26.97
Living together cohabitating	35	19.66
Divorced	3	1.69
Missing	0	0.00

(table continues)

Employment status

Employed	131	73.60
Not employed	36	20.22
Self-employed working for own business	11	6.18
Missing	0	0.00

Country of birth

USA	35	19.66
Mexico	2	1.12
Philippines	6	3.37
Malaysia	2	1.12
India	4	2.25
Singapore	1	0.56
Taiwan	2	1.12
Hong Kong	1	0.56
Switzerland	1	0.56
Lebanon	1	0.56
Malawi	1	0.56
The Netherlands	1	0.56
Greece	15	8.43
Spain	2	1.12
Libya	1	0.56

Montenegro	1	0.56
Romania	66	37.08
Moldova	1	0.56
Canada	1	0.56
Czech Republic	1	0.56
Hungary	1	0.56
Estonia	1	0.56
Lithuania	1	0.56
Scotland	2	1.12
UK	6	3.37
England	9	5.06
Germany	5	2.81
Finland	2	1.12
Ireland	1	0.56
Portugal	1	0.56
Australia	1	0.56
Wales	1	0.56
Bahamas	1	0.56
Barbados	1	0.56
Missing	0	0.00

Country of residence

(table continues)

USA	60	33.71
Austria	1	0.56
Malaysia	2	1.12
Philippines	4	2.25
India	2	1.12
UK	15	8.43
Singapore	1	0.56
Hong Kong	1	0.56
Taiwan	1	0.56
England	12	6.74
The Netherlands	2	1.12
Greece	15	8.43
Australia	2	1.12
Spain	3	1.69
Romania	39	21.91
Canada	1	0.56
Germany	7	3.93
United Arab Emirates	1	0.56
Finland	2	1.12
Belgium	1	0.56
Scotland	2	1.12

(table continues)		
Ireland	1	0.56
Portugal	1	0.56
Wales	1	0.56
Bahamas	1	0.56
Missing	0	0.00
English proficiency		
Proficient	66	37.08
Native speaker	58	32.58
English is a second language	32	17.98
Intermediate	13	7.30
Basic	9	5.06
Missing	0	0.00

Note. Due to rounding errors, percentages may not equal 100%.

Summary statistics were calculated for all social media and counterterrorism subscales and totals. The observations for SM1 had an average of 51.79 ($SD = 13.39$, $SE_M = 1.00$, Min = 9.00, Max = 90.00). The observations for SM2 had an average of 19.16 ($SD = 5.75$, $SE_M = 0.43$, Min = 4.00, Max = 34.00). The observations for SM3 had an average of 78.60 ($SD = 15.51$, $SE_M = 1.16$, Min = 37.00, Max = 140.00). The observations for CT1 had an average of 52.18 ($SD = 9.12$, $SE_M = 0.68$, Min = 27.00, Max = 69.00). The observations for CT2 had an average of 55.50 ($SD = 9.98$, $SE_M = 0.75$, Min = 30.00, Max = 84.00). The observations for the overall social media scale had an

average of 149.54 (SD = 15.85, SE_M = 1.19, Min = 102.00, Max = 201.00). The

observations for the overall counterterrorism had an average of 107.68 (SD = 16.70, SE_M

= 1.25, Min = 66.00, Max = 150.00). Summary statistics and ration variables are

represented in Table 2.

Table 2

Summary Statistics Table for Interval and Ratio Variables

Variable	M	SD	n	SE_M	Skewness	Kurtosis
SM1	51.79	13.39	178	1.00	-0.11	0.28
SM2	19.16	5.75	178	0.43	0.09	0.20
SM3	78.60	15.51	178	1.16	0.48	0.80
CT1	52.18	9.12	178	0.68	-0.51	-0.04
CT2	55.50	9.98	178	0.75	0.25	0.04
SM Total	149.54	15.85	178	1.19	0.22	0.70
CT Total	107.68	16.70	178	1.25	-0.12	-0.08

Preliminary Analyses

Preliminary analyses were conducted to establish reliability and to establish how

items hang together to measure one construct. For this, the researcher looked at the

Cronbach's alpha and exploratory factor analyses. The reliability testing was conducted

to establish if there was any consistency between responses among a group of questions.

To measure the internal consistency each reliability testing looked at Cronbach's alphas.

The value of alpha established inter-item reliability, and accuracy of items testing the

same construct. These analyses were conducted to ensure all items within the composite

score are consistent with one another. The Cronbach reliability test calculates the

reliability coefficient alpha (α), which indicates the degree of consistency among the

items. According to George and Mallery (2010) the guidelines for evaluating α values suggest a value of 0.9 or above as excellent, 0.8 or above as good, 0.7 or above as acceptable, 0.6 or above as questionable, and 0.5 or above as poor, while anything that is under 0.5 as unacceptable. The Cronbach reliability test assumes that the items being tested measure a single construct (i.e., the construct is unidimensional), and that observations are independent of each other.

   Reliability testing. A Cronbach alpha coefficient was calculated for the first social media subscale that addresses active behaviors on social media (SM1) scale. The Cronbach's alpha coefficient was evaluated, and the results showed an alpha level of approximately 0.8, indicating acceptable reliability (0.79). This may suggest participants were consistent in their responses. This subscale contains 9 items and it is measured on a 10-point Likert scale. Questions 12 through 20 are included in this subscale.

   A Cronbach alpha coefficient was calculated for the second social media subscale that looks at networking power (SM2) scale. The items for SM2 had a Cronbach's alpha coefficient of 0.6, indicating questionable reliability. Nonetheless, this subscale contains only four items and it is not measured on a Likert scale (i.e. How many friends do you have on social media?). This could be due to the low number of items included in the scale (Ryff & Keyes, 1995). This subscale contains items 21 through 24.

   A Cronbach alpha coefficient was calculated for the third subscale for social media that measures social media preferences (SM3). The items for SM3 had a Cronbach's alpha coefficient of 0.9, indicating excellent reliability. This subscale contains items 25 through 51, and items 40 through 43 which were reverse scored.

A Cronbach alpha coefficient was calculated for the independent variable, the overall social media scale (SM total). The items for the overall social media scale had a Cronbach's alpha coefficient of 0.61, indicating questionable reliability.

The reliability testing on the independent variable and its subscales suggest good reliability for the subscales but questionable reliability for the overall scale. This could be due to the fact that items on the independent variable scale where gathered from two different scales: the MTUAS and the SMUIS.

A Cronbach alpha coefficient was calculated for the first counterterrorism subscale (CT1) that assesses behaviors. The items for CT1 had a Cronbach's alpha coefficient of 0.82, indicating good reliability. This subscale contains items 52 through 65.

A Cronbach alpha coefficient was calculated for the second counterterrorism subscale (CT2) that looks at preferences for social responsibility. The items for CT2 had a Cronbach's alpha coefficient of 0.84, indicating good reliability. This subscale is comprised of items 66 through 85.

A Cronbach alpha coefficient was calculated for the dependent variable, counterterrorism total scale. The items for CT total had a Cronbach's alpha coefficient of 0.89, indicating good reliability.

This concludes that the total overall alpha and subscales alphas show really good reliability for the overall counterterrorism scale and its subscales.

Exploratory factor analysis. Exploratory factor analysis (EFA) is a statistical technique that looks at possible relationships among measured variables. It looks at the

number of existing factors and can reduce the dataset to a smaller number of items. Exploratory factor analyses were conducted on each subscale and overall scales using the Kaiser criterion for determining the number of factors to retain with varimax rotation. The assumption is that there is multivariate normality per Floyd and Widaman (1995). Also, the factorability and multicollinearity assumptions were tested by examining the correlation matrix. For factor loadings Comrey and Lee (2013) suggested that values above .71 are excellent, very good between .63 and .71, good between values .53 and .63, fair between .45 and .55, and poor between .32 and .45, with a minimum threshold of .32 (Tabachnick & Fidell, 2013). Nonetheless, the inclusion of loadings for factors is a preference of the researcher. All factor with an eigenvalue above one is kept for interpretation. The sample size for exploratory factor analysis is vital when constructing repeatable and reliable factors. The most common guideline for the ratio of participant to item ratio should be at least 10 to 1, but some research indicates a minimum ratio of 5 to 1 (Osborne & Costello, 2004).

The first exploratory factor analysis (EFA) was conducted for the first social media subscale (SM1) which contains 9 variables. To assess the factorability of the data, Pearson correlations were calculated to determine the intercorrelations for each variable. Correlation coefficient over .30 are suitable for factor analysis (Tabachnick and Fidell, 2013). All variables had at least one correlation coefficient greater than .30 and appear suitable for factor analysis. Multicollinearity was assessed through a correlation matrix (0.0749) and it indicated that there is no multicollinearity within the data. The Kaiser criterion was chosen for electing how many factors to retain. As a result, one factor was

used for the EFA. The participant to item ratio for this analysis was approximately 19 to 1, where sample size was 178 and the number of variables included was 9. This indicates that the given sample size is adequate to yield reliable results. Factor 1 accounted for 31.03% of variance with an eigenvalue of 2.79. The one-factor model accounted for 31.03% of total variance in the data. Items 14 and 15 had excellent loadings, items 13 and 16 had good loadings, items 12, 17 and 18 had fair loadings. Item 20 had poor loading.

Another exploratory factor analysis (EFA) was conducted for the second social media subscale (SM2) which contains only 4 variables and a normal scatterplot. All variables had at least one correlation coefficient greater than .30 and appear suitable for factor analysis. The value of the determinant for the correlation matrix was 0.4230, indicating that there is no multicollinearity in the data. There was one factor that had an eigenvalue greater than one. As a result, one factor was used for the EFA. The participant to item ratio for this analysis was approximately 44 to 1, where sample size was 178 and the number of variables included was 4. This indicates that the given sample size is satisfactory to produce reliable results. Factor 1 accounted for 40.68% of variance with an eigenvalue of 1.63. The one-factor model accounted for 40.68% of total variance in the data.

The next exploratory factor analysis (EFA) was conducted on the third social media subscale (SM3) for 27 variables. All variables had at least one correlation coefficient greater than .30 and appear suitable for factor analysis. The value of the determinant for the correlation matrix was ≤ 0.00001, indicating that there is multicollinearity in the data and the model results may be unreliable. For this analysis,

there were three factors that had an eigenvalue greater than one. As a result, three factors were used for the EFA. The participant to item ratio for this analysis was approximately 6 to 1, where sample size was 178 and the number of variables included was 27. This indicates that the given sample size is acceptable, but results may not be reliable. Factor 1 accounted for 19.24% of variance with an eigenvalue of 5.19. Factor 2 accounted for 12.59% of variance with an eigenvalue of 3.40. Factor 3 accounted for 8.92% of variance with an eigenvalue of 2.41. The three-factor model accounted for 40.74% of total variance in the data.

Exploratory factor analysis (EFA) was conducted for the first counterterrorism subscale (CT1) on 14 items. All variables had at least one correlation coefficient greater than .30 and appear suitable for factor analysis, with a normal scatterplot. The value of the determinant for the correlation matrix was 0.0036, indicating that there is no multicollinearity in the data. This exploratory factor analysis revealed two factors that had an eigenvalue greater than one. As a result, two factors were used for the EFA. The participant to item ratio for this analysis was approximately 12 to 1, where sample size was 178 and the number of variables included was 14. This indicates that the given sample size is appropriate to produce reliable results. Factor 1 accounted for 24.23% of variance with an eigenvalue of 3.39. Factor 2 accounted for 15.66% of variance with an eigenvalue of 2.19. The two-factor model accounted for 39.89% of total variance in the data.

Exploratory factor analysis (EFA) was conducted for the second counterterrorism subscale (CT2) on 20 items. All variables had at least one correlation coefficient greater

than .30 and appear suitable for factor analysis. The value of the determinant for the

correlation matrix was 0.00057, indicating that there is no multicollinearity in the data. In

this case, there were three factors that had an eigenvalue greater than one. As a result,

three factors were used for the EFA. The participant to item ratio for this analysis was

approximately 8 to 1, where sample size was 178 and the number of variables included

was 20. This indicates that the given sample size is acceptable, but results may not be

reliable. Factor 1 accounted for 17.19% of variance with an eigenvalue of 3.44. Factor 2

accounted for 13.59% of variance with an eigenvalue of 2.72. Factor 3 accounted for

10.39% of variance with an eigenvalue of 2.08. The three-factor model accounted for

41.17% of total variance in the data.

Statistical Analyses

   Linear regression analysis. A linear regression analysis was conducted to assess

whether social media significantly predicted counterterrorism. Normality was evaluated

using a Q-Q scatterplot (Bates, Mächler, Bolker, & Walker, 2014; DeCarlo, 1997; Field,

2013). The Q-Q scatterplot for normality shows no multicollinearity and one predictor

variable. The results of the linear regression model were not significant, $F(1,176) = 1.43$,

$p = .233$, $R^2 = 0.01$, indicating social media did not explain a significant proportion of

variation in counterterrorism behaviors shown in Table 3.

Table 3

Linear Regression With SM Total Predicting CT Total

Variable	*B*	*SE*	95% CI	β	*t*	*p*
(Intercept)	93.54	11.89	[70.07, 117.01]	0.00	7.87	< .001
SM total	0.09	0.08	[-0.06, 0.25]	0.09	1.20	.233

Note. Results: $F(1,176) = 1.43$, $p = .233$, $R^2 = 0.01$
Unstandardized Regression Equation: CT Total = 93.54 + 0.09*SM Total.

Another linear regression analysis was conducted to assess whether social media

subscales SM1, SM2, and SM3 significantly predicted CT1, the counterterrorism

subscale that looks at counterterrorism behaviors. The results of the linear regression

model were significant, $F(3,174) = 11.65$, $p < .001$, $R^2 = 0.17$, indicating that

approximately 17% of the variance in CT1 is explainable by SM1, SM2, and SM3. SM1

did not significantly predict CT1, $B = -0.04$, $t(174) = -0.72$, $p = .473$. Based on this

sample, a one-unit increase in SM1 does not have a significant effect on CT1. SM2

significantly predicted CT1, $B = -0.36$, $t(174) = -2.87$, $p = .005$. This indicates that on

average, a one-unit increase of SM2 will decrease the value of CT1 by 0.36 units. SM3

significantly predicted CT1, $B = 0.13$, $t(174) = 2.72$, $p = .007$. This indicates that on

average, a one-unit increase of SM3 will increase the value of CT1 by 0.13 units. Table 4

summarizes the results of the regression model. This means that there are positive and

negative relationships between social media and counterterrorism behaviors collectively,

which depend on whether we look at perceptions, networking power, or active behaviors

on social media. SM1 is not significant, SM2 is inversely significant, and SM3 is

positively related to CT1.

Table 4

Linear Regression With SM1, SM2, and SM3 Predicting CT1

Variable	*B*	*SE*	95% CI	β	*t*	*p*
(Intercept)	51.02	6.05	[39.09, 62.95]	0.00	8.44	< .001
SM1	-0.04	0.06	[-0.15, 0.07]	-0.06	-0.72	.473
SM2	-0.36	0.13	[-0.61, -0.11]	-0.23	-2.87	.005
SM3	0.13	0.05	[0.04, 0.22]	0.22	2.72	.007

Note. Results: $F(3,174) = 11.65$, $p < .001$, $R^2 = 0.17$
Unstandardized Regression Equation: CT1 = 51.02 - 0.04*SM1- 0.36*SM2 + 0.13*SM3

Another linear regression analysis was conducted to assess whether SM1, SM2, and SM3 significantly predicted CT2. The Q-Q scatterplot for normality method was used to obtain pertinent information. The results of the linear regression model were significant, $F(3,174) = 19.69$, $p < .001$, $R^2 = 0.25$, indicating that approximately 25% of the variance in CT2 is explainable by SM1, SM2, and SM3. SM1 did not significantly predict CT2, $B = -0.03$, $t(174) = -0.59$, $p = .557$. Based on this sample, a one-unit increase in SM1 does not have a significant effect on CT2. SM2 did not significantly predict CT2, $B = -0.03$, $t(174) = -0.23$, $p = .816$. Based on this sample, a one-unit increase in SM2 does not have a significant effect on CT2. SM3 significantly predicted CT2, $B = 0.30$, $t(174) = 6.14$, $p < .001$. This indicates that on average, a one-unit increase of SM3 will increase the value of CT2 by 0.30 units (Table 5). This means that social media subscale assessing social media preferences is positively related to preferences for social responsibility.

Table 5

Linear Regression With SM1, SM2, and SM3 Predicting CT2

Variable	B	SE	95% CI	β	t	p
(Intercept)	34.05	6.26	[21.69, 46.41]	0.00	5.44	< .001
SM1	-0.03	0.06	[-0.15, 0.08]	-0.05	-0.59	.557
SM2	-0.03	0.13	[-0.29, 0.23]	-0.02	-0.23	.816
SM3	0.30	0.05	[0.21, 0.40]	0.47	6.14	< .001

Note. Results: $F(3,174) = 19.69, p < .001, R^2 = 0.25$
Unstandardized Regression Equation: CT2 = 34.05 - 0.03*SM1 - 0.03*SM2+ 0.30*SM3

A linear regression analysis was conducted to assess whether SM1 significantly predicted CT1. Based on the Q-Q scatterplot for normality there was only one predictor variable and multicollinearity does not apply. The results of the linear regression model were significant, $F(1,176) = 13.87, p < .001, R^2 = 0.07$, indicating that approximately 7% of the variance in CT1 is explainable by SM1. SM1significantly predicted CT1, $B = -0.18, t(176) = -3.72, p < .001$. This indicates that on average, a one-unit increase of SM1 will decrease the value of CT1 by 0.18 units (Table 6).

Table 6

Linear Regression With SM1 Predicting CT1

Variable	B	SE	95% CI	β	t	p
(Intercept)	61.71	2.64	[56.50, 66.93]	0.00	23.35	< .001
SM1	-0.18	0.05	[-0.28, -0.09]	-0.27	-3.72	< .001

Note. Results: $F(1,176) = 13.87, p < .001, R^2 = 0.07$
Unstandardized Regression Equation: CT1 = 61.71 - 0.18*SM1

A linear regression analysis was conducted to assess whether SM2 significantly predicted CT1. According to the Q-Q scatterplot for normality there was only one predictor variable, multicollinearity does not apply . The results of the linear regression model were significant, $F(1,176) = 22.70, p < .001, R^2 = 0.11$, indicating that

approximately 11% of the variance in CT1 is explainable by SM2. SM2 significantly

predicted CT1, B = -0.54, $t(176)$ = -4.76, $p < .001$. This indicates that on average, a one-

unit increase of SM2 will decrease the value of CT1 by 0.54 units (Table 7).

Table 7

Linear Regression With SM2 Predicting CT1

Variable	B	SE	95% CI	β	t	p
(Intercept)	62.44	2.25	[58.00, 66.88]	0.00	27.77	< .001
SM2	-0.54	0.11	[-0.76, -0.31]	-0.34	-4.76	< .001

Note. Results: $F(1,176)$ = 22.70, $p < .001$, R^2 = 0.11
Unstandardized Regression Equation: CT1 = 62.44 - 0.54*SM2

A linear regression analysis was conducted to assess whether SM3 significantly

predicted CT1. The Q-Q scatterplot for normality showed there was only one predictor

variable, multicollinearity does not apply. The results of the linear regression model were

significant, $F(1,176)$ = 22.43, $p < .001$, R^2 = 0.11, indicating that approximately 11% of

the variance in CT1 is explainable by SM3. SM3 significantly predicted CT1, B = 0.20,

$t(176)$ = 4.74, $p < .001$. This indicates that on average, a one-unit increase of SM3 will

increase the value of CT1 by 0.20 units (Table 8).

Table 8

Linear Regression With SM3 Predicting CT1

Variable	B	SE	95% CI	β	t	p
(Intercept)	36.65	3.34	[30.05, 43.24]	0.00	10.96	< .001
SM3	0.20	0.04	[0.12, 0.28]	0.34	4.74	< .001

Note. Results: $F(1,176)$ = 22.43, $p < .001$, R^2 = 0.11
Unstandardized Regression Equation: CT1 = 36.65 + 0.20*SM3

A linear regression analysis was conducted to assess whether SM1 significantly

predicted CT2. The Q-Q scatterplot showed there was only one predictor variable,

multicollinearity does not apply. The results of the linear regression model were

significant, $F(1,176) = 15.60$, $p < .001$, $R^2 = 0.08$, indicating that approximately 8% of

the variance in CT2 is explainable by SM1. SM1 significantly predicted CT2, $B = -0.21$,

$t(176) = -3.95$, $p < .001$. This indicates that on average, a one-unit increase of SM1 will

decrease the value of CT2 by 0.21 units (Table 9).

Table 9

Linear Regression With SM1 Predicting CT2

Variable	B	SE	95% CI	β	t	p
(Intercept)	66.51	2.88	[60.83, 72.19]	0.00	23.11	< .001
SM1	-0.21	0.05	[-0.32, -0.11]	-0.29	-3.95	< .001

Note. Results: $F(1,176) = 15.60$, $p < .001$, $R^2 = 0.08$
Unstandardized Regression Equation: CT2 = 66.51 - 0.21*SM1

A linear regression analysis was conducted to assess whether SM2 significantly

predicted CT2. The Q-Q scatterplot for normality showed there was only one predictor

variable, multicollinearity does not apply. The results of the linear regression model were

significant, $F(1,176) = 8.73$, $p = .004$, $R^2 = 0.05$, indicating that approximately 5% of the

variance in CT2 is explainable by SM2. SM2 significantly predicted CT2, $B = -0.38$,

$t(176) = -2.96$, $p = .004$. This indicates that on average, a one-unit increase of SM2 will

decrease the value of CT2 by 0.38 units (Table 10).

Table 10

Linear Regression With SM2 Predicting CT2

Variable	B	SE	95% CI	$β$	t	p
(Intercept)	62.72	2.55	[57.69, 67.76]	0.00	24.59	< .001
SM2	-0.38	0.13	[-0.63, -0.13]	-0.22	-2.96	.004

Note. Results: $F(1,176) = 8.73, p = .004, R^2 = 0.05$
Unstandardized Regression Equation: CT2= 62.72 - 0.38*SM2

A linear regression analysis was conducted to assess whether SM3 significantly

predicted CT2. The Q-Q scatterplot for normality showed there was only one predictor

variable, multicollinearity does not apply. The results of the linear regression model were

significant, $F(1,176) = 59.00, p < .001, R^2 = 0.25$, indicating that approximately 25% of

the variance in CT2 is explainable by SM3. SM3 significantly predicted CT2, $B = 0.32$,

$t(176) = 7.68, p < .001$. This indicates that on average, a one-unit increase of SM3 will

increase the value of CT2 by 0.32 units (Table 11).

Table 11

Linear Regression With SM3 Predicting CT2

Variable	B	SE	95% CI	$β$	t	p
(Intercept)	30.18	3.36	[23.55, 36.81]	0.00	8.98	< .001
SM3	0.32	0.04	[0.24, 0.40]	0.50	7.68	< .001

Note. Results: $F(1,176) = 59.00, p < .001, R^2 = 0.25$
Unstandardized Regression Equation: CT2 = 30.18 + 0.32*SM3

Hierarchical linear regression. A two-step hierarchical linear regression was

conducted with CT1 as the dependent variable. For Step 1, age, gender, race, education

level, marital status, employment status, and English proficiency were entered as

predictor variables into the null model. SM1, SM2, and SM3 were added as predictor

variables into the model at Step 2. The *F*-test for Step 1 was not significant, $F (28, 143) =$

$1.46, p = .079, \Delta R^2 = 0.22$. This model indicates that adding the moderators did not

account for a significant amount of additional variation in CT1. The *F*-test for Step 2 was significant, $F(3, 140) = 6.87$, $p < .001$, $\Delta R^2 = 0.10$. This model indicates that adding SM1, SM2, and SM3 explained an additional 9.97% of the variation in CT1 (Table 15). SM1 did not significantly predict CT1, $B = -0.00$, $t(140) = -0.03$, $p = .976$. Based on this sample, a one-unit increase in SM1 does not have a significant effect on CT1. SM2 significantly predicted CT1, $B = -0.30$, $t(140) = -2.14$, $p = .034$. This indicates that on average, a one-unit increase of SM2 will decrease the value of CT1 by 0.30 units. SM3 significantly predicted CT1, $B = 0.16$, $t(140) = 2.82$, $p = .005$. This indicates that on average, a one-unit increase of SM3 will increase the value of CT1 by 0.16 units (Table 12).

Table 12

Model Comparisons for Variables predicting CT1

Model	R^2	df_{mod}	df_{res}	F	p	ΔR^2
Step 1	0.22	28	143	1.46	.079	0.22
Step 2	0.32	3	140	6.87	< .001	0.10

Note: Each Step was compared to the previous model in the hierarchical regression analysis

A two-step hierarchical linear regression was conducted with CT2 as the dependent variable. For Step 1, age, gender, race, education level, marital status, employment status, and English proficiency were entered as predictor variables into the null model. SM1, SM2, and SM3 were added as predictor variables into the model at Step 2. The *F*-test for Step 1 was significant, $F(28, 143) = 1.57$, $p = .045$, $\Delta R^2 = 0.24$. This model indicates that adding the moderators explained an additional 23.56% of the variation in CT2. The *F*-test for Step 2 was significant, $F(3, 140) = 11.62$, $p < .001$, $\Delta R^2 = 0.15$. This model indicates that adding SM1, SM2, and SM3 explained an additional

15.24% of the variation in CT2 (Table 17). Based on this sample, a one-unit increase in

SM1 does not have a significant effect on CT2. SM2 did not significantly predict

CT2, $B = 0.06$, $t(140) = 0.40$, $p = .690$. Based on this sample, a one-unit increase in SM2

does not have a significant effect on CT2. SM3 significantly predicted CT2, $B =$

0.32, $t(140) = 5.26$, $p < .001$. This indicates that on average, a one-unit increase of SM3

will increase the value of CT2 by 0.32 units. The results for each regression are shown

in Table 13.

Table 13

Model Comparisons for Variables Predicting CT2

Model	R^2	df_{mod}	df_{res}	F	p	ΔR^2
Step 1	0.24	28	143	1.57	.045	0.24
Step 2	0.39	3	140	11.62	< .001	0.15

Note: Each Step was compared to the previous model in the hierarchical regression analysis

Eastern European ethnicity vs. North American category significantly predicted

CT2, $B = -6.96$, $t(140) = -2.56$, $p = .011$. This indicates that on average, a one-unit

increase of Eastern European/North American will decrease the value of CT2 by 6.96

units. Basic vs. Native English speaker significantly predicted CT2, $B = 9.66$, $t(140) =$

2.43, $p = .016$. This indicates that on average, a one-unit increase of Basic/Native English

speaker will increase the value of CT2 by 9.66 units. SM1 did not significantly predict

CT2, $B = -0.01$, $t(140) = -0.24$, $p = .814$. Based on this sample, a one-unit increase in

SM1 does not have a significant effect on CT2. SM2 did not significantly predict CT2, B

$= 0.06$, $t(140) = 0.40$, $p = .690$. Based on this sample, a one-unit increase in SM2 does not

have a significant effect on CT2. SM3 significantly predicted CT2, $B = 0.32$, $t(140) =$

5.26, $p < .001$. This indicates that on average, a one-unit increase of SM3 will increase the value of CT2 by 0.32 units.

A three-step hierarchical linear regression was conducted with CT1 as the dependent variable. For Step 1, SM1 was entered as a predictor variable into the null model. SM2 was added as a predictor variable into the model at Step 2. SM3 was added as a predictor variable into the model at Step 3.The F-test for Step 1 was significant, F (1, 176) = 13.87, $p < .001$, $\Delta R^2 = 0.07$. This model indicates that adding SM1 explained an additional 7.31% of the variation in CT1. The F-test for Step 2 was significant, F (1, 175) = 11.84, $p < .001$, $\Delta R^2 = 0.06$. This model indicates that adding SM2 explained an additional 5.87% of the variation in CT1. The F-test for Step 3 was significant, F (1, 174) = 7.40, $p = .007$, $\Delta R^2 = 0.04$. This model indicates that adding SM3 explained an additional 3.54% of the variation in CT1 as seen in Table 14.

Table 14

Model Comparisons for Variables Predicting CT1/SM1, SM2, SM3

Model	R^2	df_{mod}	df_{res}	F	p	ΔR^2
Step 1	0.07	1	176	13.87	< .001	0.07
Step 2	0.13	1	175	11.84	< .001	0.06
Step 3	0.17	1	174	7.40	.007	0.04

Note: Each Step was compared to the previous model in the hierarchical regression analysis

SM1 did not significantly predict CT1, $B = -0.04$, $t(174) = -0.72$, $p = .473$. Based on this sample, a one-unit increase in SM1 does not have a significant effect on CT1. SM2 significantly predicted CT1, $B = -0.36$, $t(174) = -2.87$, $p = .005$. This indicates that on average, a one-unit increase of SM2 will decrease the value of CT1 by 0.36 units.

SM3 significantly predicted CT1, $B = 0.13$, $t(174) = 2.72$, $p = .007$. This indicates that on average, a one-unit increase of SM3 will increase the value of CT1 by 0.13 units (Table 20).

A three-step hierarchical linear regression was conducted with CT2 as the dependent variable. For Step 1, SM1 was entered as a predictor variable into the null model. SM2 was added as a predictor variable into the model at Step 2. SM3 was added as a predictor variable into the model at Step 3. The F-test for Step 1 was significant, F $(1, 176) = 15.60$, $p < .001$, $\Delta R^2 = 0.08$. This model indicates that adding SM1 explained an additional 8.14% of the variation in CT2. The F-test for Step 2 was not significant, F $(1, 175) = 1.92$, $p = .167$, $\Delta R^2 = 0.01$. This model indicates that adding SM2 did not account for a significant amount of additional variation in CT2. The F-test for Step 3 was significant, $F (1, 174) = 37.76$, $p < .001$, $\Delta R^2 = 0.16$. This model indicates that adding SM3 explained an additional 16.20% of the variation in CT2 (Table 15).

Table 15

Model Comparisons for Variables Predicting CT2/SM1, SM2, SM3

Model	R^2	df_{mod}	df_{res}	F	p	ΔR^2
Step 1	0.08	1	176	15.60	< .001	0.08
Step 2	0.09	1	175	1.92	.167	0.01
Step 3	0.25	1	174	37.76	< .001	0.16

Note: Each Step was compared to the previous model in the hierarchical regression analysis

SM1 did not significantly predict CT2, $B = -0.03$, $t(174) = -0.59$, $p = .557$. Based on this sample, a one-unit increase in SM1 does not have a significant effect on CT2. SM2 did not significantly predict CT2, $B = -0.03$, $t(174) = -0.23$, $p = .816$. Based on this sample, a one-unit increase in SM2 does not have a significant effect on CT2. SM3

significantly predicted CT2, $B = 0.30$, $t(174) = 6.14$, $p < .001$. This indicates that on average, a one-unit increase of SM3 will increase the value of CT2 by 0.30 units.

A two-step hierarchical linear regression was conducted with counterterrorism total number of responses as the dependent variable (CT total). For Step 1, the created dummy variables for nationality were introduced as a moderator: Romania versus US, Greece versus US, UK versus Us, and Other versus US were entered as predictor variables into the null model. SM total was added as a predictor variable into the model at Step 2. The F-test for Step 1 was not significant, $F (4, 173) = 0.46$, $p = .765$, $\Delta R^2 = 0.01$. This model indicates that adding nationality did not account for a significant amount of additional variation in CT total. The F-test for Step 2 was not significant, $F (1, 172) = 0.00$, $p = .996$, $\Delta R^2 = 0.00$. This model indicates that adding SM total did not account for a significant amount of additional variation in CT total. The results for the model comparisons are in Table 16.

Table 16

Model Comparisons for Variables Predicting CT total/nationality

Model	R^2	df_{mod}	df_{res}	F	p	ΔR^2
Step 1	0.01	4	173	0.46	.765	0.01
Step 2	0.01	1	172	0.00	.996	0.00

Note: Each Step was compared to the previous model in the hierarchical regression analysis

Nationality variable Romania vs. US did not significantly predict CT total, $B = -1.76$, $t(172) = -0.48$, $p = .633$. Based on this sample, a one-unit increase in this variable does not significantly affect the dependent variable. The nationality Greece vs. US did not significantly predict CT total, $B = 2.63$, $t(172) = 0.49$, $p = .625$. This shows that a one-unit increase in this variable does not have a significant effect on CT total.

Nationality variable UK vs. US did not significantly predict CT total, $B = -5.37$, $t(172) = -1.00$, $p = .319$. Therefore, a one-unit increase in this variable does not significantly affect the CT total variable. Nationality variable Other vs. US did not significantly predict CT total, $B = -1.40$, $t(172) = -0.36$, $p = .720$. Based on this, a one-unit increase in this variable does not have a significant effect on CT total. SM total did not significantly predict CT total, $B = -0.00$, $t(172) = -0.00$, $p = .996$. Hence, a one-unit increase in SM total does not have a significant effect on CT total.

A two-step hierarchical linear regression was conducted with counterterrorism total number of responses as the dependent variable. For Step 1, the created dummy variables for country of residency were introduced as a moderator: Romania versus US, Greece versus US, UK versus Us, and Other versus US were entered as predictor variables into the null model. SM total was added as a predictor variable into the model at Step 2. The F-test for Step 1 was not significant, $F(4, 173) = 0.85$, $p = .494$, $\Delta R^2 = 0.02$. This model indicates that adding residence as a variable did not account for a significant amount of additional variation in CT total. The F-test for Step 2 was not significant, $F(1, 172) = 0.00$, $p = 1.000$, $\Delta R^2 = 0.00$. This model indicates that adding SM total did not account for a significant amount of additional variation in CT total. The results for the model comparisons are in Table 17.

Table 17

Model Comparisons for Variables predicting CT Total/Residency

Model	R^2	df_{mod}	df_{res}	F	p	ΔR^2
Step 1	0.02	4	173	0.85	.494	0.02
Step 2	0.02	1	172	0.00	1.000	0.00

Note: Each Step was compared to the previous model in the hierarchical regression analysis

Residence variable Romania versus United States did not significantly predict CT total, $B = -3.47$, $t(172) = -0.86$, $p = .391$. Based on this sample, a one-unit increase in country of birth for this variable does not have a significant effect on CT total. Residence for Greece vs. US did not significantly predict CT total, $B = 5.70$, $t(172) = 1.07$, $p = .288$. This means that a one-unit increase in this variable does not significantly affect CT total. Residence variable for UK vs. US did not significantly predict CT total, $B = -2.02$, $t(172) = -0.45$, $p = .651$. Hence, a one-unit increase in this variable does not have a significant effect on CT total. Residence variable Other vs. US did not significantly predict CT total, $B = -1.91$, $t(172) = -0.51$, $p = .609$. This infers that a one-unit increase in this variable does not significantly affect CT total. SM total did not significantly predict CT total, $B = 0.00$, $t(172) = 0.00$, $p = 1.000$. Therefore, a one-unit increase in SM total does not have a significant effect on CT total. The results for each regression are shown in Table 26.

Summary

The hypothesis was that millennials' social media usage predicts counterterrorism behavior. Based on the linear regression conducted the overall usage of social media by millennials does not predict counterterrorism behaviors. This means the null hypothesis is accepted. However, when conducting linear regressions between each subscale of the social media independent variable and each subscale of the counterterrorism dependent

variable the results show that all three social media subscales, SM1, SM2, and SM3, individually predict each counterterrorism subscale (CT1 and CT2). Furthermore, collectively SM1, SM2, and SM3 predicts CT1, and SM1, SM2, and SM3 collectively predicts CT2. Nevertheless, for the collective analyses the individual relationships change when addressed as groups.

When conducting stepwise regression analyses the moderators where not significant when looking at how SM1, SM2, and SM3 relates to CT1. The analysis looking at SM1, SM2, and SM3 in relation to CT2 show that ethnicity and English proficiency moderators are significant. On the hierarchical regressions SM2 and SM3 are significant and predict CT1, while SM3 is significant and predicts CT2. Country of birth and country of residency as moderators entered separately in hierarchical regression models with the dependent and independent variables were not significant.

We can infer from these results that networking power and social media preferences are significant and predict counterterrorism behaviors showing a variance of 10%. Likewise, social media preferences are significant and predict preferences for social responsibility.

Cronbach's alphas show that most subscales have acceptable or good reliability, with one exception, SM2, which could be related to the number of items on the scale and the method used to calculate responses. Exploratory factor analyses show some one factor and multiple factor loadings. All findings will be elucidated and expounded in Chapter 5.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of the study was to elucidate if social media usage and preferences correlate with and predict counterterrorism behaviors. I explored attitudes and behaviors towards counterterrorism with social media as a tool. In this cross-sectional quantitative study, I looked at how Millennials use social media and networks in relations to their online counterterrorism behaviors and attitudes, which could explain Millennials' current or future willingness to combat terrorism from a civilian standpoint via social media. I hypothesized that the usage of social media by Millennials correlated to their counterterrorism behaviors. Millennials were identified as individuals between the ages of 22 and 37 (Dimock, 2018). Millennials are outspoken, ambitious, want to be involved in things that matter and have value, take ownership in the procedures and processes that lead to verdicts that affect them, and want to have a voice (Benfer & Shanahan, 2013). This is the generation considered a veiled wealth of potential (Deloitte Development, 2009). Due to shortcomings of government programs (Aistrope, 2016) and no online strategies that could counter terrorism by including civilians, in the study I attempted to discover if any correlations were present to establish a baseline for further work in establishing whether there is a potential to use Millennials in community-led counterterrorism efforts. The problem is to determine how to use the potential and energy Millennials have, to take advantage of the moment (Benfer & Shanahan, 2013), and offer them a voice in combatting terrorism, a global threat to all citizens around the world.

The study was conducted via an online self-reported questionnaire that contained 85 questions, with the first 10 questions referring to demographics. The questions that were used to assess social media usage, the independent variable, were extracted from two peer-reviewed scales, the MTUAS and SMUIS. The questions that referred to social responsibility and counterterrorism behaviors, the dependent variable, were extracted from the SRS and APS. Questions were modified with the authors' approval, especially when assessing counterterrorism behaviors due to no such scale currently existing. Country of origin, country of residency, age, gender, race, ethnicity, education level, marital status, employment status, and English proficiency were used as moderators. Participation was voluntary and individuals who took the online questionnaire were not limited to college students or U.S. residents. The geographical area of participants was vast and gave me a good idea of how Millennials respond regarding social media and counterterrorism from a global perspective. The study used descriptive statistics, preliminary statistics such as reliability testing, and exploratory factor analysis, linear and hierarchical regression analyses to obtain information regarding the relations and strengths among variables and moderating factors. The total number of individuals who took the survey was 207, and the total number of completed questionnaires was 178. The estimated global millennial population is 1.8 billion (Tilford, 2015). This specific cohort is the first digital generation; they use digital platforms and technology daily, more frequently, and with more ease than all other previous generations. They are digitally connected to one another and represent approximate 30% of the global population (Paulin et al., 2014).

The independent variable contained three subscales, SM1, SM2, and SM3, while the dependent variable contained two subscales, CT1 and CT2. SM1 assessed active behaviors on social media, SM2 assessed networking power, while SM3 assessed social media preferences. CT1 assessed counterterrorism and social responsibility behaviors, while CT2 assessed preferences for counterterrorism and social responsibility. Questions about counterterrorism specific behaviors were adapted and created due to the lack of a scale or instrument that assesses an individual's attitudes and behaviors specifically related to counterterrorism. The independent variable representing social media usage contained a total of 39 questions divided between the three subscales, SM1 (9), SM2 (4) and SM2 (26). The dependent variable of counterterrorism behaviors contained a total of 35 questions divided between the two subscales, CT1 (14) and CT2 (21). the analyses I conducted looked at the overall total of SM and CT, as well as individual correlations between the independent variable and dependent variable subscales, and collectively all independent variable subscales in relation to each separate dependent variable subscale.

The results showed that overall social media usage (total SM) did not predict counterterrorism behaviors (total CT). Therefore, the null hypothesis was accepted. However, each individual SM subscale predicted each individual CT subscale. Furthermore, SM1 + SM2+ SM3 predicted both CT1 and CT2 individually. For CT1 none of the moderators were significant, but for CT2 English proficiency and ethnicity were significant moderators. Hierarchical regression analyses showed that networking power (SM2) and social media preferences (SM3) were significant and predicted counterterrorism behaviors (CT total) with a variance of 10%. Social media preferences

(SM3) were significant and predicted preferences for counterterrorism/social responsibility.

Interpretations of the findings

This study's research question looked at Millennials' social media usage and if it predicts counterterrorism behaviors of Millennials. The question referred to the social media usage of Millennials and if it suggested a strong positive relationship with counterterrorism behaviors of Millennials, such that the higher the frequency of social media usage portrayed by the Millennials, the higher the frequency of their counterterrorism behaviors. At first glance, the null hypothesis was accepted due to the results that showed that social media usage does not predict counterterrorism behaviors for the Millennial population. The results were obtained by conducting a linear regression analysis for the overall social media usage and overall counterterrorism behaviors where the independent and dependent variables were analyzed as totals of their respective subscales. The result of the linear regression analysis was not significant ($F(1,176) =$ 1.43, $p = .233$, $R^2 = 0.01$), indicating that the social media subscales collectively (SM total) did not explain a significant portion of the variance.

The questions used to obtain the independent and dependent subscales derived from the four scales used: APS, SRS, MTUAS, and SMUIS. MTUAS and SMUIS look at the social media usage of individuals. Both scales contain inimitable items that incorporate a variety of behaviors, attitudes, and frequencies in relation to the usage of social media. Jenkins-Guarnieri and colleagues (2013) created the SMUIS as a measure that looks at individuals' social behavior, daily routines, and the emotional connection the

use of social media has for a person along with its importance. Rosen and colleagues (2013) created the MTUAS as a measure of the usage, attitudes about the use, and frequency of use of technology such as Internet, e-mail, smart phones, and so forth. Even though there were many measurement tools looking at different aspects of social media and technology usage, some may or may not have been valid and reliable. This amount of measurement tools used produced questionable comparisons across studies (Rosen et al., 2013). According to Rosen et al., the MTUAS's inception was based on this lack of possible and valid comparisons regarding the measure of social media and technology usage. Both the APS and SRS have been used for much longer than the social media instruments and are valid and reliable scales. However, the questions used for all four scales were used both in their original form as well as modified versions; this may have affected the results that depicted no correlation between the independent and dependent variables.

The main theoretical framework used for this study was based on Walther's hyperpersonal model of computer-mediated communication, which infers that individuals are cognitively aware of their behavior when communicating online. Walther suggest that CMC changes how people behave and changes relationships; thus, social interaction is affected by CMC (Walther, 2007). He suggests that CMC may even surpass FtF communication because people have the advantage and opportunity to use and enhance messages when using technology, to establish and cultivate relationships and to edit, change, and reframe their behaviors based on the targeted audience, which gives online communicators an advantage. The idea is that social relationships and interaction

improve (Baym, 1998). If this is true, social responsivity should increase, and people should be more involved, connected, and support social causes and participate in community-led strategies on important issues and threats such as terrorism. The theory related to this study because the individual analyses of the independent and dependent variables showed a connection between social media preferences and counterterrorism/social responsibility behaviors. As communication via social media and technology has increased, the FtF interactions between people have decreased (Walther,1996). Whether this is a positive or negative side effect, the idea is that people communicate via social media and technology more frequently and more easily, using technology as an extension of themselves both personally and professionally. Subsequently, the results obtained based on the linear regression analyses were interesting.

When conducting analyses on each social media subscale in relation to each counterterrorism subscale, linear regressions showed that individually, SM1, SM2, and SM3 predict CT1 and CT2. This means that active behaviors on social media, networking power, and social media preferences each predict counterterrorism behaviors and preferences for social responsibility. Active behaviors on social media (SM1) explains 7% of counterterrorism behaviors (CT1) ($F(1,176) = 13.87$, $p < .001$, $R^2 = 0.07$), and 8% of counterterrorism preferences (CT2) ($F(1,176) = 15.60$, $p < .001$, $R^2 = 0.08$). Networking power (SM2) explains 11% of counterterrorism behaviors (CT1) ($F(1,176) = 22.70$, $p < .001$, $R^2 = 0.11$), and 5% of counterterrorism preferences (CT2) ($F(1,176) = 8.73$, $p = .004$, $R^2 = 0.05$). Social media preference (SM3) explains 11% of the variance in

counterterrorism behaviors (CT1) ($F(1,176) = 22.43$, $p < .001$, $R^2 = 0.11$), and 25% of counterterrorism preferences (CT2) ($F(1,176) = 59.00$, $p < .001$, $R^2 = 0.25$). These findings indicate a correlation between certain aspects of social media usage and preferences and counterterrorism behaviors and attitudes. How much people use social media, their attitudes towards social media, and what they would use it for is related to how they will respond and act regarding counterterrorism strategies.

When all three social media subscales were analyzed in relation to the counterterrorism behaviors subscale (CT1), the results showed that 17% of the variance in the counterterrorism behaviors was explained by the social media variable as a collective of all three subscales ($F(3,174) = 11.65$, $p < .001$, $R^2 = 0.17$). A linear regression showed SM1 did not significantly predict CT1 ($p = .473$), while SM2 ($p = .005$) and SM3 ($p = .007$) significantly predicted CT1. This is supported by the results of the hierarchical linear regression that showed that as each social media subscale was introduced, active behaviors on social media was not significant (SM1), but networking power (SM2) and social media preferences (SM3) were significant. Active behaviors on social media explained 7% of variance for counterterrorism behaviors ($F(1, 176) = 13.87$, $p < .001$, $\Delta R^2 = 0.07$). Networking power (SM2) explained an additional approximately 6% of the variance ($F(1, 175) = 11.84$, $p < .001$, $\Delta R^2 = 0.06$). Social media preferences (SM3) explained an additional 3% of variance in counterterrorism behaviors ($F(1, 174) = 7.40$, $p = .007$, $\Delta R^2 = 0.04$) indicating that as the social media preferences and networking power increased, counterterrorism behaviors increased.

When all three social media subscales were analyzed in relation to the counterterrorism preferences subscale (CT2), the results show that 25% of the variance in the counterterrorism preferences is explained by the social media variable as a collective of all three subscales ($F(3,174) = 19.69$, $p < .001$, $R^2 = 0.25$). Linear regression showed SM3 significantly predicts CT2 ($p < .001$), while SM1 ($p = .557$) and SM2 ($p = .816$) do not significantly predict CT2.

The same hierarchical linear regression analysis was conducted on the social media subscales in relation to preferences for counterterrorism/social responsibility (CT2). Social media usage variable as a compilation of all three subscales significantly predicts CT2, indicating that approximately 25% of variance in counterterrorism preferences is explained by the three social media subscales. Individually SM1 and SM2 do not have a significant effect on CT2, but SM3 significantly predicts CT2. Active behaviors on social media explain 8% of variance for counterterrorism behaviors ($F (1, 176) = 15.60$, $p < .001$, $\Delta R^2 = 0.08$). Networking power (SM2) did not further explain the variance ($F (1, 175) = 1.92$, $p = .167$, $\Delta R^2 = 0.01$). Social media preferences (SM3) explains an additional 16% of variance in counterterrorism behaviors ($F (1, 174) = 37.76$, $p < .001$, $\Delta R^2 = 0.16$). This translates into counterterrorism behaviors not being predicted by active behaviors by social media or networking power. However, social media preferences predict counterterrorism/social responsibility preferences; as social media preferences increase, the counterterrorism preferences increase.

This was further solidified by the hierarchical linear regression conducted on the dependent variable as a total of both subscales (CT total) and the three independent

variable social media subscales, SM1, SM2, and SM3. This model showed that SM 1

explained 10% of the variance (F (1, 176) = 19.81, p < .001, ΔR^2 = 0.10). SM2 explained

an additional approximate 4% of variance (F (1, 175) = 7.49, p = .007, ΔR^2 = 0.04). SM3

explained an additional approximate 12% of variance (F (1, 174) = 27.55, p < .001, ΔR^2 =

0.12). This suggests that active behaviors on social media (SM1) and networking power

(SM2) do not predict counterterrorism behaviors and preferences (CT total), while social

media preferences (SM3) significantly predict counterterrorism behaviors and

preferences (CT total).

Based on these regressions it is evident that social media preferences and both

counterterrorism behaviors and preferences have a positive relationship, where as one

increases so does the other. This is important to know because if people believe that

social media provides opportunity to establish relationships, to be active in social causes,

to solve social issues, to provide awareness and belonging exist and increase, their

willingness to get involved to provide aid and information, to actually voluntarily engage

in counterterrorism behaviors would increase.

The hierarchical multiple regression analyses that looked at the moderators in

relation to the independent and dependent variables produced thought-provoking results.

The first analysis looked at the three independent variable social media subscales and

counterterrorism behaviors (CT1) as the dependent variable. Step one introduced the ten

moderators: age, gender, race, ethnicity, education level, marital status, employment

status, country of origin, country of residency, and English proficiency, followed by step

two which introduced SM1, SM2, and SM3 subscales. The analysis showed that step one

was not significant (F (28, 143) = 1.46, p = .079, ΔR^2= 0.22), which means the moderators were not significant in this model. Step two showed that adding the three social media subscales explained 10% of the variance for counterterrorism behaviors (F (3, 140) = 6.87, p < .001, ΔR^2 = 0.10). It seems that the moderators do not predict in any way counterterrorism behaviors in relation to social media.

The same process was repeated for the counterterrorism preferences subscale (CT2), as first step moderators were introduced, followed by SM1, SM2, and SM3 subscales as a second step. In this case both steps produced significant results. The moderatos explained 24% of variance for the counterterrorism preferences (F (28, 143) = 1.57, p = .045, ΔR^2 = 0.24), while the three social media subscales added another 15% variance (F (3, 140) = 11.62, p < .001, ΔR^2 = 0.15). The category Easter European versus North American category from the ethnicity moderator significantly predicts counterterrorism preference. The category basic speaker versus native speaker of English included in the English proficiency moderator categories also significantly predicts counterterrorism preferences. This suggests that for counterterrorism preferences in relation to social media usage and preferences English proficiency and Eastern European ethnicity are significant as moderators. Resultantly, regardless of gender, age, race, education level, marital status, employment level, country of origin and country of residence, there were more people who declared Eastern European (N=65) as their ethnicity, and English proficiency is significant as a moderator.

Overall results suggest a positive relationship between social media preferences and counterterrorism behaviors and preferences. Unfortunately, the results cannot be

compared to previous studies, due to the lack of peer-reviewed literature and studies conducted on this specific issue. This is the first study conducted on social media usage and preferences and counterterrorism behaviors and preferences exhibited by millennials. Consequently, the findings cannot confirm or disconfirm knowledge in the discipline. There is a definite need for researchers in this area to conduct similar studies that will validate or invalidate the results of this study. Future research can help better generalize these findings to the population and help with social change.

Limitations of the Study

A limitation of the study is the fact that people had to have a certain level of English proficiency, and even though this moderator was significant for CT2 subscale, we have no way of assessing if the participants were correct in their assessment of their knowledge of English language or if they truly understood the questions. However, it is noteworthy to mention that out of the 178 completed and used questionnaires for this study, 124 people declared they were native speakers or proficient, and 32 stated English was their second language which could potentially be the same as proficient. Some people use the two categories interchangeably. This assumption is based on researcher's own experience as a proficient/English as a second language speaker. For future research this moderator needs to be better defined and the categories better explained to potential participants, especially if researcher will continue to look at a global population. The total number of people who reported a basic or intermediate level of English knowledge was 22, minimal in comparison to the other categories.

Another limitation is the context of the study. To be able to complete the questionnaire, prospective participants had to have access to the internet and be familiar with technology to be able to navigate online directions. This may have limited the amount of millennials able to participate due to inexperience with technology, lack of internet access in their geographical location, or simply lack of a smart phone or a computer to access the link. Nonetheless, 1 in 5 millennials report using social media for professional and personal purposes (American Press Institute, 2015), which infers they have access and knowledge of using the internet and social media networks.

Another limitation relates to the country of origin and country of residency moderators. For country of origin, where people were born, there were 34 countries represented. For most countries there were one or two entries, while others were heavily represented such as USA, Romania, UK, and Greece. Similar results were obtained for the country of residence, where people live, where out of the 25 countries represented the most answers came from the same four countries mentioned above, while the others had one or two entries. The dummy variable created to look at the four highest countries for both origin and residency may have not be the best way to assess these moderators. Another option would have been to look at the counties by continents to avoid data being diluted. Instead of eliminating data, all data could have been used and distributed among the five continents. Countries with a lot of entries could have still been highlighted and discussed.

The race variable and moderator could have also been simplified to see if the statistical power would increase. The race categories could have been simplified to:

Caucasian, African-American, Hispanic, Asian, Multiracial, and Other. The same could

have been done for the level of education variable. For the marital status variable, the

divorce category could have been eliminated because it would have improved the

statistical power.

Another limitation is the potential change in reliability and validity of the

instruments. The four scales from which the questions derived have strong validity and

reliability, but the questions used in this study had been modified. This may have

impacted the reliability and validity of the new instrument, especially the scale assessing

counterterrorism behaviors. No relevant research and instrument have been conducted or

used, which created the need to generate a new scale that would assess these specific

behaviors, which are part of the social responsibility aspect of attitudes people maintain.

The lack of such an instrument that would assess counterterrorism behaviors may

potentially threaten validity, reliability, application, and the interpretation of results.

Thus, there is a need for future research to modify and/or calibrate the instrument to

ensure it is valid and reliable. This could affect the inferences and generalization

regarding this specific population.

The next limitation refers to the missing data from the questionnaire. The

questionnaire was conducted via Survey Monkey, which in retrospect may not have been

the best option for this online survey. Starting with question 11 through question 49, 24

people omitted to answer all 37 questions. Question 11 " Do you have a social media

account such as Facebook, Instagram, or other similar applications?" is the first question

regarding social media immediately following the demographics questions. It is a "yes"

or "no" question and it appears to be a benign question that would not elicit any emotions. As a basic question, and the first real question, it is unknown why 24 people missed it and continued to neglect to answer the next 36 questions. Starting with question 50 through the last question 29 people did not answer all questions. This is also interesting, since questions 49 and 50 do not delineate the independent variable from the dependent variable. Question 50 addresses social media but does not ask about counterterrorism. Question 50 states "I actively respond through personal action in daily activities to news and events that others share using social media" and is the last question pertaining to social media before questions about counterterrorism and social responsibility. This is what reduces the total number of responses of 178 from the total number of 207 participants. There is no indication that the problem was internal or related to some glitch with Survey Monkey, or whether there was a connection between the questions. Tests could have been run to look at the missing data and what questions they missed perhaps to establish a pattern, however, due to the large number of questions missed it is highly unlikely. The reason for so many questioned unanswered remains unknown and further investigation is required.

Another limitation is the age range of the population studied. Only people between the ages of 22 and 37 were able to take the questionnaire. Even though this is the age range for the millennial population, many people right on the cusp, who may be very experienced and knowledgeable about both social media and social responsibility/counterterrorism were excluded from the study based on this criterion.

Another limitation is the possible lack of truthfulness in the responses provided. This could be attributed to fear, privacy, or lack of understanding of the questions. Subjectivity may have influenced the responses such as perceptions about social media even though the survey was about social media in part. Perceptions about technology, terrorism, world events, how they are positioned socially, economically, geographically in relation to other millennials and people in general. The time of the day, the mood of the participant, their physical or mental health, the time constraints and free time available to concentrate on the questionnaire and give objective responses, interpretations, definitions of concepts, ideology, as well as politics and their own safety based on their location. The participants may be more versed in technology and social media networks versus other millennials, their experience with social media may be more positive; therefore, their experience and expertise may have affected their responses.

Lastly, the current random sample was overrepresented by females with a ratio of 2:1 for females versus males. The sample was also overrepresented by people of Eastern European ethnicity and specific geographical areas such as United Kingdom, Romania, Greece, and the United States.

Recommendations

The results indicate a strong positive relationship between social media preferences and both counterterrorism subscale individually and collectively (behaviors and preferences). First, the study should be replicated to establish reliability and validity of instrument and results, and to aid with generalization of findings. Secondly a closer look should be accorded to the moderators. As discussed in the limitation section, some

moderator variables could be regrouped and categorized. If the results produce the same significant moderators, there should be a more in-depth examination of those categories. Race, education, marital status, country of residence, country of origin, and English proficiency may be regrouped. This may not affect the current ethnicity and English proficiency moderators. The English proficiency can combine the proficient speaker and English as a second language speaker categories, but it may not affect results since it is the basic versus native category that is significant for the current study. Nonetheless, it is worth taking a second look. For future studies researchers can address the above-mentioned changes, regroup variables, and rerun analyses to look at potential similarities and differences from original analyses.

Future research might produce different results if studies are conducted much later, due to millennials being older. If that happens their experiences and maturity may affect the results. Therefore, possible future studies should be conducted within an acceptable timeframe.

Current data collected shows clustering from certain geographical locations and ethnicities. Future research may find potential avenues to collect data from a more varied global millennial population.

Another recommendation is the standardizing of the instrument to ensure it is valid and reliable. The questions used to assess counterterrorism behaviors/social responsibility should be reassessed and changed to only discuss counterterrorism behaviors and preferences and not the bigger area of social responsibility, where these behaviors have their place as a subgroup. The number of questions may be reduced as

well to create a shorter version of the instrument tool, to allow easier use and less time needed for responses by prospective participants.

The Walden University participation pool and Survey Monkey were not good platforms for data collection. Future research should consider other platforms similar to Survey Monkey that are better suited for data collection to improve the data collection process and to increase the number of responses.

Current study and previous studies show that social media is a powerful tool to promote social issues and engagement of people (Agostino, 2013; Haro-de-Rosario et al., 2018; Golder & Macy, 2014; Jones & Mitchell, 2015; Mano, 2014; Ozdemir, 2012; Tufecki & Christopher, 2012). Consequently, future studies should continue to harness the power of social media and technology, specifically in relation to counterterrorism behaviors and preferences.

Social Change Implications

Implications for social change include looking more closely at social media as a powerful tool for combating terrorism globally. In 2018 there were 187 million emails sent, 973,000 Facebook logins, 2.4 million snaps, 375,000 apps downloaded, 174,000 scrolling Instagram, 481,000 tweets, and 38 million messages sent via WhatsApp during one internet minute (Lewis & Callahan, 2019). Clearly, social media has become the most prodigious means for conveying information in the world (Figure A1). In 2019, the authors of the infographic (Figure A2) show how these numbers stayed steady or increased, suggesting people spend a vast amount of time using technology and a variety of apps or social media networks. By using online social networks not only that social

change can be achieved in the real world, but the gap in the research in this area can be filled regarding counterterrorism behaviors and preferences.

Understanding social media networks and applications that promote online social involvement and networking and how it affects counterterrorism behaviors and attitudes is instrumental in effecting change. It is instrumental in the development and implementation of counterterrorism strategies, in creating a unique type of "neighborhood watch" where citizens share information, provide aid and information, engage in the protection of their community, preventing the increase in the number of victims and keeping people safe, which can all lead to stronger relationships and collaborations. These will help establish a network of sharing information and better communication that will increase prevention of terrorist attacks and apprehension of potential terrorists.

Based on the results of current study social media preferences are positively correlated to counterterrorism behaviors and preferences, meaning as one increases, so does the other. By engaging on social media platforms individuals can get involved in counterterrorism strategies, or at the least promote such strategies and online platforms that are created specifically for counterterrorism. Such applications can be promoted and explained to civilian and non-civilian groups to demonstrate the benefits, showcase successful cases, and educate in the use of the application or social platform. If people perceive the application and networks to be easy to use, they will more prone to use and promote them. A key aspect of this potential implication and social change is people making an informed conclusion regarding the social media application to

counterterrorism strategies that would strengthen beliefs. If people believe the applications are important and beneficial for safety it will increase their involvement and use of such strategies. Developers and managers of such networks or applications will need to facilitate conditions and create user-friendly online applications to influence and habituate people in using the tools created to engage in the prevention of terrorism. Applications similar to TraffickCam have the potential to be developed to help combat terrorism by sharing information.

There is a new emerging international criminal landscape with new methods and technology used by perpetrators. Internationalization is a reflection of a globalized society. Organized crime groups launder money, traffic drugs and finance terrorism, use the dark web as well as social media to recruit, promote their ideology, share their philosophy (personal communication, presentation on economic crimes, Forensic Psychology International Intensive, Spain, 2019).

World economic forums provide information on the vulnerability of cities to terrorist attacks experimentation with innovative successful approaches that include detecting crime before it happens, intelligence gathering, using new technologies, and community outreach by having access to real-time data, and prevention tools (Muggah, 2018). This aligns with the current study's assumption that social media platform and high tech approached will successfully help with prevention of terrorism in the future. From 2004 to 2016 terrorism cost Europe 180 billion euros. In 2016 there were 30 terrorist attacks in Europe, 366 in Syria, 1342 in Afghanistan, and 2965 in Iraq, which shows that the number of terrorist attacks in Western Europe are rising (Ward, 2018),

which brings to Europe and Middle East loss of life, damage to infrastructure, psychological impact, significant economic cost, and cultural damage. Consequently, this produces involuntary migration globally related to risks and trends (Martinez-Vasquez, 2019). Both US citizens and European citizens fear terrorist attacks, cyberterrorism, Islamic extremism, and terrorism has at one point been the number one public policy priority. This calls for better counterterrorism strategies that involve the public. Community-led tactics are an untapped opportunity, where civilians collaborate with agencies and government to reduce the success rate of terrorism by using social networks (Huq, 2017). The internet and social media have created a cyber dependency that we can use to protect our communities and infrastructure.

ISIL disseminates 38.2 messages per day from the self-proclaimed caliphate (Farag, 2017). If terrorist groups such as ISIL use social media to disseminate propaganda, recruit, and reach jihadists worldwide, we can likewise use social media to counter those actions, protect communities, cities, and prevent future attacks. Technology, the internet, and social media are seen as devices used for terrorism, but we can also use them as devices to counter terrorism, as a form of communication to prevent as well as during and post an attack or crisis due to the possibility to distribute and share information in real-time (Heighington, 2011). Social media platform and applications can offer people new opportunities to engage and network (Skoric et al., 2016) to create public outreach, public engagement, and accountability. If terrorism is not witnessed it is not feared (Howie, 2015), therefore, we can use it against them by implementing strategies to prevent and counter. Civilian involvement is he solution as stated even by

the RAND reports, where community has to have social media knowledge and the preference to want to get involved and have a voice in the solution of this problem, where community resilience increases detecting, reporting, sharing, and intervening (Cohen, 2016).

Conclusion

Terrorism is a global threat and youth are being radicalized to kill their own. There is a need for strong collaboration within and between groups and an international approach is ideal by providing prevention, intervention, support to law enforcement agencies, and partnership between countries and their agencies. Even though terrorism represents a small percentage of total crimes in comparison to violent crimes and suicides, it is gruesome and provokes fear (Martinez-Vasquez, 2019). In 2017 alone, there were 10,900 terrorist attacks and a total of 26,400 deaths that included 8,075 terrorists. Further, until now most of the attacks took place in the Middle East, but attacks are increasingly happening closer to home as terrorists are attacking throughout Europe, looking for highest impact by killing private citizens non-discriminatively, which makes them even more terrifying. Low cost, high impact attacks producing loss of life are escalating, with Europe being added to the U.S as the newest enemy. Questions such as what the profile of the new type of terrorist is, and how we can deradicalize these people recruited by the terrorist groups are almost impossible to answer, given the diverse proliferation of violent extremism . What is certain is that jihadist propaganda uses social media to address and recruit youth from other countries who become foreign fighters due to an identity crisis; a lack of identity that pushes them to religion and then radicalization

fueled by their failure to integrate into society. Terrorist groups recruit our youth by understanding the psychology of these young adults and by using original propaganda coined as "weapons of mass seduction" (Martinez-Vasquez, 2019).

The strategy to overcome this is to prevent, protect, pursue, and respond. The preventing part is up to academia and the public to tackle and achieve through counterterrorism strategies, which include the use of social media tools and communities, while the protect, pursue, and respond parts are up to law enforcement agencies. Civilians can be involved in the prevention part that can provide emotional satisfaction due to helping, as well as counterterrorism behaviors as a tactic of warfare. The "war on terrorism" can change to include civilians, the use of social media as a tool. This could be a more covert, inexpensive, and safe strategy to fight terrorism. Its success lies in successfully engage civilians by marketing to this audience and supporting positive change by eliciting prosocial behaviors. Such types of counterterrorism strategies and their success will be directly linked to how the public reacts, how engaged civilians are, and the relationship between the public and various agencies responsible for responding and protecting.

Terrorists have a collective identity that motivates them. Therefore, the public must have a similar collective identity and choose to function collectively to help formulate and be part of counterterrorism measures. This could also prevent recruitment of millennials by terrorist groups such as ISIS. Finally, globalization of strategies and flow of informal and formal communication will increase civilians' resilience and create calmness among the public. It will also increase solidarization, and condemnation and

consensus to stop terrorism before it takes place. As a society we can use the terrorists'

own tools such as social media to stop radicalization and outreach, by disrupting their

networks.

References

Aggarwal, C. C. (2011). An introduction to social network data . In C. C. Aggarwal,

Social network data analytics (pp. 1-15). Hawthorne, NY: Springer.

doi:10.1007/978-1-4419-8462-3_1

Agostino, D. (2013). Using social media to engage citizens: A study of Italian

municipalities. *Public Relations Review, 39*(3), 232-234.

doi:10.1016/j.pubrev.2013.02.009

Aistrope, T. (2016). Social media and counterterrorism strategy. *Australian Journal of*

international Affairs, 70(2), 121-138. doi:10.1080/10357718.2015.1113230

American Press Institute. (2015, 03 16). *How millennials use and control social media*.

Retrieved from American Press Institute:

https://www.americanpressinstitute.org/publications/reports/survey-

research/millennials-social-media/

Andreoni, J. (1990). Impure altruism and donations to public goods: A theory of warm-

glow giving. *Economic Journal, 100*(401), 464-477. doi:10.2307/2234133

Andrew, A. (2017, December). 4 ways social media influences millennials' purchasing

decisions. *Forbes.* Retrieved from

https://www.forbes.com/sites/andrewarnold/2017/12/22/4-ways-social-media-

influences-millennials-purchasing-decisions/#71decf5f539f

Anson, S., Watson, H., & Wadhwa, K. (2015). Social media: A paradox for increasing

European community preparedness. *Proceedings of the European Conference on*

e-Learning (pp. 607-610). London, United Kingdom: Trilateral Research & Consulting.

Bakshy, E., Hofman, J. A., Winter, M. A., & Watts, D. J. (2011). Everyone's an influencer: Quantifying influence on Twitter. *Proceedings of the Fourth ACM International Conference on Web Search and Data <ining* (pp. 65-74). Hong Kong: ACM.

Bakshy, E., Rosenn, I., Marlow, C., & Adamic, L. (2012). The role of social networks in information diffusion. *Proceedings of the 21st International Conference on World Wide Web, Lyon, France* (pp. 519-528). Geneva, Switzerland: International World Wide Web Conference Committee. Retrieved from https://www.researchgate.net/publication/51990613_The_Role_of_Social_Networks_in_Information_Diffusion

Ball, L. (2016). Automating social network analysis: A power tool for counter-terrorism. *Security Journal, 29*(2), 147-168. doi:10.1057/sj.2013.3

Bar-Tal, D. (1976). *Prosocial behavior: Theory and research.* Washington, DC: Hemisphere Publishing Corp.

Bartlett, J., & Reynolds, L. (2015). *The state of the art 2015: A literature review of social media intelligence capabilities for counter-terrorism.* London, United Kingdom: Demos.

Batson, D. C. (2014). *The altruism question: Toward a social-psychological answer.* London, United Kingdom: Psychology Press.

Batson, D. C., & Powell, A. A. (2003). Altruism and prosocial behavior. In T. Millon, &
M. J. Lerner (Eds.), *Handbook of Psychology: Personality and social psychology*
(pp. 463-484). Hoboken, NJ: John Wiley & Sons. Retrieved from
https://is.muni.cz/el/1441/podzim2012/SZk1025a/um/Handbook_Of_Psychology
_-_Personality_And_Social_Psychology__Malestrom_.pdf#page=486

Baym, N. K. (1998). The emergence of on-line community. In S. G. Jones (Ed.),
Cybersociety 2.0: Revisiting computer-mediated communication and community
(p. 256). Thousand Oaks, CA: Sage Publications. doi:10.4135/9781452243689.n2

Bénabou, R., & Tirole, J. (2006). Incentives and prosocial behavior. *American Economic
Review*, pp. 1652-1678.

Benfer, E. A., & Shanahan, C. F. (2013). Educating the Invincibles: Strategies for
teaching the Millennial generation in law school. *Clinical Law Review, 20*(1), 1-
39.

Bennett, S., Maton, K., & Kervin, L. (2008). The 'digital natives' debate: A critical review
of the evidence. *British Journal of Educational Technology, 39*(5), 775-786.
doi:10.1111/j.1467-8535.2007.00793.x

Berkowitz, L., & Daniels, L. R. (1964). Affecting the salience of the social responsibility
norm: Effects of past help on the response to dependency relationships. *Journal of
Abnormal and Social Psychology, 68*(3), 275-281. doi:10.1037/h0040164

Bobkowski, P., & Smith, J. (2013). Social media divide: Characteristics of emerging
adults who do not use social network websites. *Media, Culture, and Society,
35*(6), 771-781. doi:10.1177/0163443713491517

Bolton, R. N., Parasuraman, A., Hoefnagels, A., Migchels, N., Kabadayi, S., Gruber, T., . . . Solnet, D. (2013). Understanding Generation Y and their use of social media: A review and research agenda. *Journal of Service Management, 24*(3), 245-267. doi:10.1108/09564231311326987

Booth, N., & Matic, J. A. (2012). Method and system for identifying a key influencer in social media utilizing topic modeling and social diffusion analysis. *Corporate Communications: An International Journal, 16*(3), 184-191. doi:10.1108/13563281111156853

Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication, 13*(1), 210-230. doi:10.1111/j.1083-6101.2007.00393.x

Bryman, A., & Cramer, D. (2011). *Quantitative data analysis with SPSS 17, 18 and 19; a guide for social scientists.* New York, NY: Routledge.

Campbell, R. L. (2006). Altruism in Auguste Comte and Ayn Rand. *Journal of Ayn Rand Studies, 7*(2), 357-369.

Comrey, A. L., & Lee, H. B. (2013). *A first course in factor analysis*. New York, NY: Psychology Press.

Cannon, D. F., & Mackay, J. B. (2017). Millennials fail to embrace civic duty to keep informed. *Newspaper Research Journal, 38*(3), 306-315. doi:10.1177/0739532917722972

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences.* New York, NY: Routledge.

Cohen, J. D. (2016). The next generation of government CVE strategies at home: Expanding opportunities for intervention. *Annals of the Academy of Political and Social Science, 668*(1), 118-128. doi:10.1177/0002716216669933

Cottee, S., & Hayward, K. (2011). Terrorist (E)motives: The existential attractions in terorism. *Studies in Conflict & Terrorism, 34*(12), 963-986. doi:10.1080/1057610X.2011.621116

Diaz, P., Aedo, I., Arias, R., & Diaz, D. (2012). Towards emergency 2.0: Social media and civil engagement in emergency management. *Workshop on Large Scale Ideation and Deliberation Systems* (p. 4). Surrey, Canada: ACM. Retrieved from https://www.researchgate.net/profile/Paloma_Diaz/publication/229505353_Towar ds_Emergency_20_Social_media_and_Civil_Engagement_in_Emergency_Manag ement/links/09e415044801cba487000000/Towards-Emergency-20-Social-media-and-Civil-Engagement-in-Emergency-Manage

Deloitte Development. (2009). *Gen Y-Powerhouse of the global economy*. Republic of Trinidad and Tobago: Deloitte Development. Retrieved from Jobbatical: https://jobbatical.com/blog/gen-y-powerhouse-of-the-global-economy/

Dimock, M. (2018, March 1). *Defining generations: Where millennials end and post-millennials begin*. Retrieved from Pew Research Center: http://www.pewresearch.org/fact-tank/2018/03/01/defining-generations-where-millennials-end-and-post-millennials-begin/

Drok, N., Hermans, L., & Kats, K. (2017). Decoding youth DNA: The relationship between social engagement and news interest, news media use and news

preference of Dutch millennials. *Journalism, 19*(5), 699-717.

doi:10.1177/1464884917703469

Drost, E. A. (2011). Validity and reliability in social science research. *Education*

Research and Perspectives, 38(1), 105-123.

Efaw, J., & Heidger, C. (2012). Another tool in the influencer's toolbox: A case study.

Combating Terrorism Exchange, 2(4), 45-55.

Enjolras, B., Steen-Johnsen, K., & Wollebaek, D. (2013). Social media and mobilization

to offline demonstrations – transcending participatory divides? *New Media and*

Society, 15(6), 890-908. doi:10.1177/1461444812462844

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible

statistical power analysis program for the social, behavioral, and biomedical

sciences. *Behavior Research Methods, 39*(2), 175-191. doi:10.3758/bf03193146

Farag, D. (2017). From Tweeter to terrorist: Combatting online propaganda when Jihad

goes viral. *Americal Criminal Law Review, 8-54*(4), 843-883.

Federal Bureau of Investigation. (2018). *Terrorism* . Retrieved from

https://www.fbi.gov/investigate/terrorism

Ferguson, R., Gutberg, J., Schattke, K., & Paulin, M. (2015). Self-determination theory,

social media and charitable causes: An in-depth analysis of autonomous

motivation. *European Journal of Social Psychology, 45*(3), 298-307.

doi:10.1002/ejsp.2038

Ferguson, R., Paulin, M., Jost, N., Fallu, J.-M., & Schattke, K. P. (2013). Millennials,

social media, moral identity & support for social causes: Do gender differences

count? *Academy of Management Proceedings, 2013*(1), 12032. doi:10.5465/ambpp.2013.12032abstract

Fisher, H. W. (2002). Terrorism and 11 September 2001: Does the "behavioral response to disaster" model fit? *Disaster Prevention and Management: An International Journal, 11*(2), 123-127. doi:10.1108/09653560210426803

Floyd, F. J., & Widaman, K. F. (1995). Factor analysis in the development and refinement of clinical assessment instruments. *Psychological assessment, 7*(3), 286.

Frankfort-Nachmias, C., Nachmias, D., & DeWaard, J. (2015). *Research methods in the social sciences* (8th ed.). New York, NY: Worth.

Fritz, C. O., Morris, P. E., & Richler, J. J. (2012). Effect size estimates: Current use, calculations, and interpretation. *Journal of Experimental Psychology: General, 141*(1), 2-18. doi:10.1037/a0024338

George, D. & Mallery, P. (2016). *SPSS for Windows step by step: A simple guide and reference, 11.0 update* (14th ed.). Boston, MA: Allyn and Bacon.

Gerhards, J., & Schafer, M. S. (2014). International terrorism, domestic coverage? How terrorist attacks are presented in the news of CNN, Al Jazeera, the BBC, and ARD. *International Community Gazette, 76*(1), 3-26. doi:10.1177/1748048513504158

Gervais, E. A. (2015). Social network websites as information channels for the US social forum. *Media, Culture, and Society, 37*(4), 547-565. doi:10.1177/0163443714566899

Gifford-Smith, M. E., & Brownell, C. A. (2003). Childhood peer relationships: Social

acceptance, friendships, and peer networks. *Journal of School Psychology, 41*(4),

235-284. doi:10.1016/S0022-4405(03)00048-7

Gil de Zuniga, H., Jung, N., & Valenzuela, S. (2012). Social media use for news and

individuals' social capital, civic engaement and political participation. *Journal of

computer-mediated communication, 17*(3), 319-336. doi:10.1111/j.1083-

6101.2012.01574.x

Golder, S. A., & Macy, M. W. (2014). Digital footprints: Opportunities and challenges

for online social research. *Annual Review of Sociology, 40*, 129-152.

doi:10.1146/annurev-soc-071913-043145

Greenberg, K. J. (2016). Counter-radicalization via the internet. *Annals of the American

Academy of Political and Social Science, 668*(1), 165-179.

doi:10.1177/0002716216672635

Gruzd, A., Jacobson, J., Wellman, B., & Mai, P. (2016). Understanding communities in

an age of social media: the good, the bad, and the complicated. *Information,

Communication & Society, 19*(9), 1187-1193.

doi:10.1080/1369118X.2016.1187195

Haro-de-Rosario, A., Saez-Martin, A., & Caba-Perez, M. d. (2018). Using social media to

enhance citizen engagement with local government: Twitter or Facebook? *New

Media & Society, 20*(1), 29-49. doi:10.1177/1461444816645652

Heighington, A. (2011). Homeland security in real-time the power of the public and

    mobile technology. *Homeland Security Affairs, 7*(13), 1-6. Retrieved from

    https://calhoun.nps.edu/handle/10945/24973

Hian, L. B., Chuan, S. L., Trevor, T. M., & Detenber, B. H. (2004). Getting to know you:

    Exploring the development of relational intimacy in computer-mediated

    communication. *Journal of computer-mediated communication, 9*(3).

    doi:10.1111/j.1083-6101.2004.tb00290.x

Hirschberger, G. (2010). Compassionate callousness: A terror management perspective

    on prosocial behavior. In M. Mikulincer, & P. R. Shaver, *Prosocial Motives,*

    Emotions, and Behavior: The Better Angels of Our Nature (pp. 201-219).

    Washington D.C. American Psychological Association . doi:10.1037/12061-011

Hobman, E. V., Bordia, P., Irmer, B., & Chang, A. (2002). The expression of conflict in

    computer-mediated and face-to-face groups. *Small Group Research, 33*(4), 439-

    465. doi:10.1177/104649640203300403

Hoffman, A. J. (2017). Millennials, technology, and perceived relevance of community

    service organizations: Is social media replacing community service activities?

    Urban Review, 49(1), 140-152. doi:10.1007/s11256-016-0385-6

Home Department. (2011). *Prevent strategy.* The Crown, Home Department. London,

    United Kingdom: The Stationery Office Limited. Retrieved from

    https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attac

    hment_data/file/97976/prevent-strategy-review.pdf

Howell, D. C. (2010). *Statistical methods for psychology.* Belmont, CA: Wadsworth

Howie, L. (2015). Witnessing terrorism. *Journal of Sociology, 51*(3), 507-521.

     doi:10.1177/1440783313500760

Huq, A. Z. (2017). Community-led counterterrorism. *Studies in Conflict and Terrorism,*

     40(12), 1038–1053. doi:10.1080/1057610X.2016.1253988

Ioana, I. (2015). *The terrorism and its psychological effects.* Paper presented at the

     International Conference of Scientific Paper AFASES, Brasov, Romania.

     Retrieved from

     http://www.afahc.ro/ro/afases/2015/afases_2015/socio/Irina%20Ioana.pdf

Jacob, C., Cohen, P., West, S., & Aiken, L. (2003). *Applied multiple*

     regression/correlation analyses for the behavioral sciences. Mahwah, NJ:

     Lawrence Erlbaum Associates.

Janbek, D., College, L., & Prado, P. (2012). Rethinking the role of virtual communities in

     terrorist websites. *Combating Terrorism Exchange, 2*(4), 23-27.

Jarvis, L., & Michael, L. (2013). Disconnected citizenship? The impacts of anti-terrorism

     policy on citizenship in the UK. *Political Studies, 61*(3), 656-675.

     doi:10.1111/j.1467-9248.2012.00993.x

Jayadeva, R. (2018). Mentoring millennials: perceptions and analysis. *College and*

     University, 93(2), 29-33.

Jenkins-Guarnieri, M. A., Wright, S. A., & Johnson, B. (2013). Development and

     validation of a social media use integration scale. *Psychology of Popular Media*

     Culture, 2(1), 38-50. doi:10.1037/a0030277

Joint Chiefs of Staff. (2014). *Counterterrorism* (U.S. Department of the Army and U.S.

    Department of the Navy Joint Publication 3-26). Retrieved from

    http://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_26.pdf

Jones, L. M., & Mitchell, K. J. (2016). Defining and measuring youth digital citizenship.

    New Media & Society, 18(9), 2063-2079. doi:10.1177/1461444815577797

Kalsi, R. G. (2017, November). Why we millennials are happy to be free of social media

    tyranny. *The Guardian*. Retrieved from

    https://www.theguardian.com/media/2017/nov/12/millennials-backlash-social-

    media-facebook-instagram-snapchat

Kilian, T., Hennings, N., & Langner, S. (2012). Do Millennials read books or blogs?

    Introducing a media usage typology of the internet generation. *Journal of*

    Consumer Marketing, 29(2), 114-124. doi:10.1108/07363761211206366

Klausen, J. (2015). Tweeting the Jihad: Social media networks of western foreign fighters

    in Syria and Iraq. *Studies in Conflict & Terrorism, 38*(1), 1-22.

    doi:10.1080/1057610X.2014.974948

Kruglanski, A. W., & Fishman, S. (2006). The Psychology of terrorism: "syndrome"

    versus "tool" perspective. *Terrrorism and Political Violence, 18*, 193-215.

    doi:10.1080/09546550600570119

Lenhart, A., Purcell, K., Smith, A., & Zickuhr, K. (2010). *Social media & mobile internet*

    use among teens and young adults. Washington, DC: Pew Research Center.

    Retrieved from http://pewinternet.org/Reports/2010/Social-Media-and-Young-

    Adults.aspx

Levin, K. A. (2006). Study design III: Cross-sectional studies. *Evidence-Based Dentistry,* *7*(1), 24-25. doi:10.1038/sj.ebd.6400375

Lewis, L., & Callahan, C. (2019). *2018 This is what happens in an internet minute.* Retrieved from World Econimic Forum: https://www.weforum.org/agenda/2018/05/what-happens-in-an-internet-minute-in-2018

Littler, S. (2019). *The importance and effect of sample size.* Retrieved from Select statistical services: https://select-statistics.co.uk/blog/importance-effect-sample-size/

MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research, 39*(1), 99-128. doi:10.1207/s15327906mbr3901_4

Mano, R. S. (2014). Social media, social causes, giving behavior and money contributions. *Computers in Human Behavior, 31*, 287-293. doi:10.1016/j.chb.2013.10.044

Marshall, M. N. (1996). Sampling for qualitative research. *Family Practice, 13*(6), 522-525.

Martinez-Vasquez, F. (2019). *Challenges for security and intelligence.* Madrid: Walden Univerity International Forensic Psychology Intensive.

Media Insight Project. (2015). *How millennials get news: Inside the habits of America's first digital generation.* Chicago, IL: American Press Institute.

Meyer, M. D., & Workman-Bray, C. (2013). Emerging adult usage of social networks as sites of activism: A critical examination of the TOMS and TWLOHA movements. *Ohio Communication Journal, 51*, 53-77.

Miller, M. (2009). A practical understanding of social media. *DTC Perspectives*, 12-16.

Mitchell, M. L., & Jolley, J. M. (2010). *Research design explained* (7th ed.). Belmont, CA: Wadsworth.

Monahan, J. (2012). The individual risk assessment of terrorism. *Psychology, Public Policy, and Law, 18*(2), 167-205. doi:10.1037/a0025792

Morandin, G., Russo, M., & Ollier-Malaterre, A. (2018). Put down that phone! Smart use of smartphones for work and beyond. *Journal of Management Inquiry, 27*(3), 352-356. doi:10.1177/1056492618762964

Muggah, R. (2018, June 15). *How smart tech helps cities fight terrorism and crime*. Retrieved from World Economic Forum : https://www.weforum.org/agenda/2018/06/cities-crime-data-agile-security-robert-muggah/

My Environmental Educaton Evalution Resource Assistant. (2018). *Power Analysis, Statistical Significance, & Effect Size*. Retrieved from My Environmental Educaton Evalution Resource Assistant: http://meera.snre.umich.edu/power-analysis-statistical-significance-effect-size

Nancy, E., & Mussen, P. H. (1989). *The roots of prosocial behavior in children.* Cambridge, United Kingdom: Cambridge University Press.

Obar, J. A., & Wildman, S. S. (2015). Social media definition and the governance challenge: An introduction to the special issue. *Telecommunication Policy, 39*(9), 745-761. doi:10.2139/ssrn.2637879

Olaniran, B. A., Rodriguez, N., & Williams, I. M. (2012). Social inforamtion processing theory (SIPT): A cultural perspective for internaional online communication environments. In K. St. Amant, & S. Kelsey, *Computer-mediated communication across cultures: International interactions in online environments* (pp. 45-65). Hershey: IGI Global. doi:10.4018/978-1-60960-833-0.ch004

Organization for Security and Co-operation in Europe. (2018). *Countering terrorism*. Retrieved from https://www.osce.org/countering-terrorism

Osborne, J. W., & Costello, A. B. (2004). Sample size and subject to item ratio in principal components analysis. *Practical assessment, research & evaluation*, 9(11), 8. doi: 10.4172/2155-6180.1000106

Ozdemir, P. (2012). Social media as a tool for online advocacy campaigns: Greenpeace Mediterranean's anti genetically engineered food campaign in Turkey. *Global Media Journal, 5*(2), 23-39.

Pariser, E. (2011). *The filter bubble: what the internet is hiding from you.* New York: The Penguin Press.

Paulin, M., Ferguson, R. J., Jost, N., & Fallu, J.-M. (2014). Motivating millennials to engage in charitable causes through social media. *Journal of Service Management, 25*(3), 334-348. doi:10.1108/JOSM-05-2013-0122

Paulin, M., Ferguson, R. J., Schattke, K., & Nina, J. (2014). Millennials, social media, prosocial emotions, and charitable causes: The paradox of gender differences. *Journal of Nonprofit & Public Sector Marketing, 26*(4), 335-353. doi:10.1080/10495142.2014.965069

Pauwels, L., & Schils, N. (2016). Differential online exposure to extremist content and political violence: Testing the relative strength of social learning and competing perspectives. *Terrorism and Political Violence, 28*(1), 1-29. doi:10.1080/09546553.2013.876414

Perrin, A. (2015). *Social Networking Usage: 2005-2015.* Washington, D.C.: Pew Research Center.

Poland, J. M. (1988). *Understanding terrorism: groups, strategies, and responses.* Englewood Cliffs: Prentice Hall.

Post, J. M. (2010). "When hatred is bred in the bone:" The social psychology of terrorism. *Annals of the New York Academy of Sciences, 1208*(1), 15-23. doi:10.1111/j.1749-6632.2010.05694.x

Prot, S., Gentile, D. A., Anderson, C. A., Suzuki, K., Swing, E., Lim, K. M., . . . Pan Lam, B. C. (2013). Long-term relations among prosocial-media use, empathy, and prosocial behavior. *Psychological Science, 25*(2), 358-368. doi:10.1177/0956797613503854

Rasmussen, J. (2015). 'Should each of us take over the role as watcher?' Attitudes on Twitter towards the 2014 Norwegian terror alert. *Journal of Multicultural Discourses, 10*(2), 197-213. doi:10.1080/17447143.2015.1042882

Ressler, S. (2006). Social network analysis as an approach to combat terrorism: Past, present, and future research. *Homeland Security Affairs, 2*(2), 1-10.

Richter, F. (2018). *Facebook's the Common Ground for Adults on Social Media.* Hamburg, Germany. Statista. Retrieved from https://www.statista.com/chart/13218/social-media-user-reciprocity/

Riu, J., & Stefanone, M. A. (2013). Strategic self-presentation online: A cross-cultural study. *Computers in Human Behavior, 29*(1), 110-118. doi:10.1016/j.chb.2012.07.022

Rosen, L. D., Whaling, K., Carrier, L. M., Cheever, N. A., & Rokkum, J. (2013). The media and technology usage and attitudes scale: An empirical investigation. *Computers in Human Behavior, 29*(6), 2501-2511. doi:10.1016/j.chb.2013.06.006

Rosenau, W. (2007). *Subversion and terrorism: Understanding and countering the threat.* Arlington, VA: National Defense Research Institute. Retrieved from https://www.rand.org/content/dam/rand/pubs/occasional_papers/2007/RAND_OP 172.pdf

Rosenberg, H. (2018). Home, front, and mobile phones: The case of the second Lebanon war. *First Monday, 23*(2). doi:10.5210/fm.v23i2.7899

Rotman, D., Vieweg, S., Yardi, S., Chi, E., Preece, J., Shneiderman, B., . . . Glaisyer, T. (2011). From slacktivism to activism: Participatory culture in the age of social media. *CHI'11 Extended Abstracts on Human Factors in Computing Systems* (pp. 819-822). ACM. doi:10.1145/1979742.1979543

Rubin, A. M. (2008). Uses-and-gratifications perspective on media effects. In J. Bryant, & M. B. Oliver, *Media effects: Advances in theory and research* (3rd ed., pp. 181-200). Abingdon, United Kingdom: Routledge.

Rushton, P. J., Chrisjohn, R. D., & Fekken, C. G. (1981). The altruistic personality and the self-reportaltruism scale. *Persoanl Individual Differences, 2*(4), 293-302. doi:10.1016/0191-8869(81)90084-2

Ryff, C. D., & Keyes, C. L. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology, 69*(4), 719–727. doi:10.1037/0022-3514.69.4.719

Sanchez, A. P., Levin, A., & Del Riego, A. (2012). Blurred boundaries: Social media privacy and the twenty-first-century employee. *American Business Law Journal, 49*(1), 63-124. doi:10.1111/j.1744-1714.2011.01127x

Schroeder, R., Everton, S., & Shepherd, R. (2012). Mining Twitter data from the Arab Spring. *Combating Terrorism Exchange*(2), 56-64.

Seeling, M. I. (2018). Social activism: engaging millennials in social causes. *First Monday, 23*(2). doi:10.5210/fm.v23i2.8125

Selwyn, N. (2009). The digital native – myth and reality. *Aslib Proceedings, 61*(4), 364-379. doi:10.1108/00012530910973776

Shao, G. (2009). Understanding the appeal of user-generated media: A uses and gratification perspective. *Internet Research, 19*(1), 7-25. doi:10.1108/10662240910927795

Shetret, L. (2011). *Use of the Internet for counter-terrorist purposes.* Washington, DC:

Center on Global Counterterrorism Cooperation.

Skoric, M. M., Zhu, Q., Goh, D., & Pang, N. (2016). Social media and citizen

engagement: A meta-analytic review. *New Media & Society, 18*(9), 1817-1839.

doi:10.1177/1461444815616221

Smith, A., & Anderson, M. (2018, March 01). *Soial Media Use in 2018*. Retrieved from

Pew Research Center Internet & Technology:

https://www.pweinternet.org/2018/03/01/social-media-se-in-2018

Soukup, C. (2000). Building a theory of multimedia: an analysis, critique and integration

of computer-mediated communication theory and research. *New Media & Society,*

2(4), 407-425. doi:10.1177/1461444800002004002

Statista. (2018). *Most popular social networks worldwide as of April 2018, ranked by*

number of active users (in millions). Retrieved from The Statistics Portal:

https://www.statista.com/statistics/272014/global-social-networks-ranked-by-

number-of-users/

Statistics Solutions. (2018). *Effect size for power analysis*. Retrieved from

http://www.statisticssolutions.com/effect-size-for-a-power-analysis/

Swartz, D. (1997). *Culture and power: The sociology of Pierre Bourdieu.* Chicago, IL:

The University of Chicago Press.

Tabachnick, B. & Fidell, L. (2013). *Using multivariate statistics.* Boston, MA: Pearson

Education.

Taylor, R. W., Fritsch, E. J., & Liederbach, J. (2014). *Digital crime and digital terrorism.* Upper Saddle River, NJ: Pretice Hall Press.

Tianlu, Q., Yang, C. J., Chan, B., & Hao, C. C. (2016). *Terrorism of the Islamic state: Social media strategies.* Cambridge, United Kingdom: The Wilberforce Society.

Tidwell, L. C., & Walther, J. B. (2002). Computer-mediated communication effects on disclosure, impressions and interpersonal evaluations: Getting to know one another a bit at a time. *Human Communication Research, 28*(3), 317-348. doi:10.1093/hcr/28.3.317

Tilford, C. (2018, June 6). *The millennial moment — in charts*. Retrieved from Financial Times: https://www.ft.com/content/f81ac17a-68ae-11e8-b6eb-4acfcfb08c11

Tufekci, Z., & Wilson, C. (2012). Social media and the decision to participate in political protest: Observations from Tahrir Square. *Journal of Communication, 62*(2), 363-379. doi:10.1111/j.1460-2466.2012.01629.x

Twenge, J. M. (2014). *Generation Me: why today's young Americans are more confident, assertive, entitled and more miserable than ever before.* New York, NY: Atria Paperback.

van Ingen, E., & Bekkers, R. (2015). Generalized trust through civic engagement? Evidence from five national panel studies. *Political Psychology, 36*(3), 277-294. doi:doi: 10.1111/pops.12105

Vanhamme, J., Lindgreen, A., Reast, J., & Van Popering, N. (2012). To do well by doing good: Improving corporate image through cause-related marketing. *Journal of Business Ethics, 109*(3), 259-274. doi:10.1007/s10551-011-1134-0

Walther, J. B. (1993). Impression development in computer-mediated interaction. *Western Journal of Communication, 57*(4), 381-398. doi:10.1080/10570319309374463

Walther, J. B. (1994). Anticipated ongoing interaction versus channel effects on relational communication in computer-mediated interaction. *Human Communication Research, 20*(4), 473-501. doi:10.1111/j.1468-2958.1994.tb00332.x

Walther, J. B. (1996). Computer-mediated communication: Impersonal, interpersonal, and hyperpersonal interaction. *Communication Research, 23*(3), 3-43. doi:10.1177/009365096023001001

Walther, J. B. (1997). Group and interpersonal effects in international computer-mediated collaboration. *Human Communication Research, 23*(3), 342-369. doi:10.1111/j.1468-2958.1997.tb00400.x

Walther, J. B. (2007). Selective self-presentation in computer-mediated communication: Hyperpersonal dimensions of technology, language, and cognition. *Computers in Human Behavior, 23*(5), 2538-2557. doi:10.1016/j.chb.2006.05.002

Walther, J. B. (2008). Relationship-centered theories of interpersonal communication. In L. A. Baxter, & D. O. Braithwaite (Eds.), *Engaging theories in interpersonal communication: multiple perspectives* (pp. 391-404). Thousand Oaks, CA: Sage Publications.

Walther, J. B. (2011). Theories of computer- mediated communication and interpersonal relations. In M. L. Knapp & J. A. Daly (Eds.), *The SAGE handbook of*

interpersonal communication (pp. 443-444). Santa Barbara, CA: Sage
Publications.

Walther, J. B., Van Der Heide, B., Ramirez, A. J., Burgoon, J. K., & Pena, J. (2015).
Interpersonal and hyperpersonal dimentions of computer-mediated
communication. In S. Sundar (Ed.), *The Handbook of the Psychology of
Communication Technology* (1st ed., pp. 3-22). Hoboken, NJ: John Wiley &
Sons, Inc.

Walther, J. B. (2018). The emergence, convergence, and resurgence of intergroup
communication theory in computer-mediated communication. *Atlantic Journal of
Communication, 26*(2), 86-97. doi:10.1080/15456870.2018.1432616

Walther, J. B., & Burgoon, J. K. (1992). Relational communication in computer-mediated
interaction. *Human Communication Research, 19*(1), 50-88.

Walther, J. B., Van Der Heide, B., Ramirez, A. J., Burgoon, J. K., & Pena, J. (2015).
Interpersonal and hyperpersonal dimentions of computer-mediated
communication. In S. Sundar (Ed.), *The Handbook of the Psychology of
Communication Technology* (1st ed., pp. 3-22). Hoboken, NJ: John Wiley &
Sons, Inc.

Wang, E. S.-T., & Chen, L. S.-L. (2012). Forming relationship commitments to online
communities: The role of social motivations. *Computers in Human Behavior,
28*(2), 570-575. doi:10.1016/j.chb.2011.11.002

Ward, A. (2018, October 1). *Why we need to measure the economic impact of terrorism
in the Middle East*. New York, NY: World Econimic Forum. Retrieved from

https://www.weforum.org/agenda/2018/10/why-we-need-to-measure-the-economic-impact-of-terrorism-in-the-middle-east/

Warren, A. M., Sulaiman, A., & Jaafar, N. I. (2014). Facebook: The enabler of online civic engagement for activists. *Computers in Human Behavior, 32,* 284-289. doi:10.1016/j.chb.2013.12.017

Web Center for Social Research Methods. (2006, October 10). *Threats to Construct Validity.* Retrieved from Web Center for Social Research Methods: https://socialresearchmethods.net/kb/consthre.php

Weimann, G. (2014). *New terrorism and new media.* Washington, D.C.: Commons Lab of the Woodrow Wilson International Center for Scholars.

Weinbaum, C., Girven, R., & Oberholtzer, J. (2016). *The millennial generation: implications for the intelligence and policy communities.* Santa Monica, CA: RAND Corporation. Retrieved from https://www.rand.org/content/dam/rand/pubs/research_reports/RR1300/RR1306/RAND_RR1306.pdf

Wilson VanVoorhis, C. R., & Morgan, B. L. (2007). Understanding power and rules of thumb for determining sample sizes. *Tutorials in Quantitative Methods for Psychology, 3*(2), 43-50. doi:10.20982/tqmp.03.2.p043

Wilson, J. M., Straus, S. G., & McEvily, B. (2006). All in due time: The development of trust in computer-mediated and face-to-face teams. *Organizational Behavior and Human Decision Processes, 99*(1), 16-33. doi:10.1016/j.obhdp.2005.08.001

Wright, M. F., & Li, Y. (2011). The associations between young adults' face-to-face

    prosocial behaviors and their online prosocial behaviors. *Computers in Human*

    Behavior, 27, 1959-1962. doi:10.1016/j.chb.2011.04.019

Zavattaro, S. M., & Sementelli, A. J. (2014). A critical examination of social media

    adoption in government: Introducing omnipresence. *Government Information*

    Quarterly, 31(2), 257-264. doi:10.1016/j.giq.2013.10.007

Zheng, L., & Zheng, T. (2014). Innovation through social media in the public sector:

    Information and interactions. *Government Information Quarterly, 31*(1), 106-117.

    doi:10.1016/j.giq.2014.01.011

Appendix A: Figures

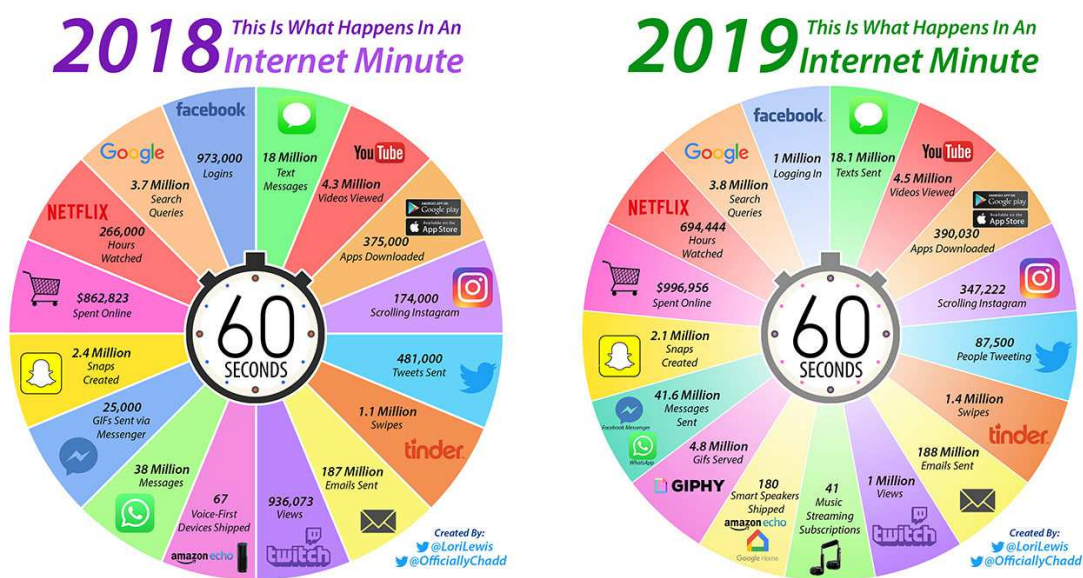

Figure A1. An Internet minute in 2018.

Figure A2. 2018 versus 2019 Internet minute.

Appendix B: Survey Instrument

Welcome and thank you for your willingness to participate in my survey. Your feedback

is very important. You will need to read the informed consent and agree in order to be

able to proceed with the survey questions.

I have read the and understand the informed consent and I wish to continue to take the

survey

Demographics
1. Age
- 22-25
- 26-29
- 30-33
- 34-37

2. Gender
- Male
- Female
- Other
- Prefer not to answer

3. Race
- Caucasian
- African American
- Asian
- Hispanic or Latino
- Not Hispanic or Latino
- American Indian or Alaska Native
- Native Hawaiian or Other Pacific Islander
- Multiracial
- Other_____
- Prefer not to answer

4.. Ethnicity
- North American
- South American
- Central American

- Australian/New Zealander
- Asian
- Arabic
- African
- Mediterranean
- Eastern European
- Western European
- Other_____

5. Education level
- Not a high school graduate
- High school graduate
- Some college
- Associate degree
- College degree (diploma)
- Master's degree
- PhD (doctoral) degree

6. Marital status
- Single
- Married
- Living together (cohabitating)
- Separated
- Divorced
- Widow/widower

7. Employment status
- Employed
- Not employed
- Self-employed (working for self/owning own business)

8. Country where you were born

9. Country of residency (where you live now)

10. English reading/speaking proficiency
- Basic
- Intermediate
- Proficient
- Native reader/speaker

- English is a second language

<u>Social media questions</u>
11. Do you have a social media account such as Facebook, Instagram, or other similar applications?
- Yes
- No

Using the following frequency scale please select the best category that describes your social media use:
(1) Never
(2) Once a month
(3) Several times a month
(4) Once a week
(5) Several times a week
(6) Once a day
(7) Several times a day
(8) Once an hour
(9) Several times an hour
(10) All the time

How often do you do each of the following activities on social media sites such as Facebook?
12. Check your Facebook page or other social networks

13. Post status updates, photos or videos

14. Read and comment on postings, status updates, photos posted by known or unknown sources

15. Click "Like" to a posting, photo, etc.

16. Share many of my day to day activities through social media

17. Browse the web and check social media from a mobile phone

18. Take pictures and record videos using a mobile phone

19. Check the news on a mobile phone

20. Use apps (for any purpose) on a mobile phone

Using the following frequency scale please select the best category that describes your social media interpersonal communication:
- **(1) 0**
- **(2) 1-50**
- **(3) 51-100**
- **(4) 101-175**
- **(5) 176-250**
- **(6) 251-375**
- **(7) 376-500**
- **(8) 501-750**
- **(9) 750-800**
- **(10) 801 or more**

21. How many friends do you have on social media?

22. How many of your social media friends do you know in person?

23. How many people do you regularly interact with online that you have never met in person?

24. Average number of minutes spent actively using social media per week?

Using the following scale, please select the category that best describes your attitude towards social media:
- **(5) Strongly Agree**
- **(4) Agree**
- **(3) Neither Agree nor Disagree**
- **(2) Disagree**
- **(1) Strongly Disagree**

25. I feel it is important to be able to find any information whenever I want online

26. I feel it is important to be able to access social media any time I want

27. I think it is important to keep up with the latest trends in social media

28. Social media will provide solutions to many social problems

29. I feel social media helps me want to assist people more and gives me the tools to help people

30. Social media plays an important role in my social relationships because I build and maintain some relationships through social media

31. Social media offers multiple ways for people to participate in prosocial behavior

32. Social media contributes to dialogue on social issues that interest me

33. Social media allow people to engage in whatever ways they feel most comfortable

34. Social media provides a pleasant environment for social interactions

35. Social media allow me to write my opinions about the things that others say

36. Social media provides a sense of belonging with other people like me

37. I am more aware of protests and other social causes because of social media

38. I am dependent on my smartphone and social media

39. I get anxious when I don't have social media available to me.

40. Social media makes people waste too much time.

41. Social media makes life more complicated.

42. Social media makes people more isolated.

43. I do not like using social media

44. Social media is part of my everyday activity

45. I prefer to communicate with others mainly through social media

46. I have an emotional connection to social media and its role in my social relationships

47. The people who I listen to could influence me to use social media

48. I could influence people to take actions via social media

49. I actively respond by commenting to news and events that others share using social media

50. I actively respond through personal action in daily activities to news and events that others share using social media

<u>Questions that address social reasonability</u>
Using the following scale, please select the category that conforms to the frequency with which you have carried out the following acts:

(5) Very often
(4) Often
(3) More than once
(2) Once
(1) Never

51. I have attended social issue related events

52. I have helped a person via social media in the past

53. I have helped society in various situations by participating in online activities

54. I helped a neighbor whom I didn't know too well

55. I helped strangers to safety during a disaster or terrorist attack

56. I have voluntarily looked after my community or neighbors to ensure safety of people and/or property

57. I have contributed money or volunteered my time to a charity or a social cause

58. I have visited the website/social media account of a charity or social cause

59. I have voluntarily worked on solving a problem in my community

60. I have voluntarily worked to help groups like the poor, homeless, or victims of disasters

61. I have rushed to help people that were hurt

62. I would provide anonymous aid via social media to help stop terrorism globally

63. I would provide anonymous aid in person to help my community fight terrorism

64. I would help strangers to safety during a disaster or terrorist attack

Using the following scale, please select the category that best describes your attitude towards social responsibility:
(5) Strongly agree
(4) Agree
(3) Neither agree or disagree

(2) Disagree
(1) Strongly disagree

65. There is no point worrying about current events or public affairs; I can't do anything about them anyway

66. When I work on a committee, I usually let other people do most of the planning

67. I am the kind of person that people can count on

68. Why bother to help when I can only help via social media

69. Our world would be a lot better off if we didn't have to worry about terrorism and other disasters

70. It is more important to work for the good of the team than to work for your own good

71. I would never let people down when something is expected of me socially or civically

72. Every person should give some time for the good of his town or city

73. I usually volunteer for special projects that would help the community and protect other civilians

74. If I could remain anonymous, I would take opportunities to provide support for community counterterrorism strategies

75. I would post information, news, and links about social issues on social media and share information that would be helpful to society/community

76. I would post photos/videos/images of social issues and calamities such as terrorist attacks

77. I plan activities and invite people to help and attend events related to social issues

78. I promote the involvement in social issues and help society against terrorism via social media

79. I would aid the government by doing civil duties such as protecting my community against terrorist attacks via social media

80. Engaging in social issues is a must for every citizen if we want to reduce social problems for the benefit of our societies

81. Online activism appeals to me more than off-line activism

82. Activism on social media translates into activism off-line

83. Activities in my community are an important part in my life.

84. It is important to me to engage in social issues in my community

85. I am the type of person who likes to engage in my community.

Appendix C: Media and Technology Usage and Attitudes Scale

Larry Rosen
Sun 7/22/2018, 3:46 PM

I am happy to grant you access to use the MTUAS scale in any way you choose. I have attached an article and additional document with the measure for your use. Some people use the whole scale while others use either subscales alone or even the top loaded items in each scale. Up to you!
Best of luck
LR

****
Dr. Larry D. Rosen
Professor Emeritus ... Keynote Speaker .... Research Consultant
California State University, Dominguez Hills
George Marsh Applied Cognition Laboratory

Larry Rosen
Sun 12/16/2018, 12:11 PM

Sure! Feel free to modify the MTUAS in any way you wish!
LR
****
Dr. Larry D. Rosen
Professor Emeritus .... Keynote Speaker .... Research Consultant
California State University, Dominguez Hills
George Marsh Applied Cognition Laboratory

Appendix D: Permission to Use the Social Media Use Integration Scale

Michael Jenkins-Guarnieri
Sun 9/16/2018, 2:12 PM

Good afternoon,

Thanks for your interest in our scale, and you are certainly authorized to use the scale in your research. Everything for the scale can be found in the methods section in the original article, including scale items, administration instructions, response scale, and scoring of the two subscales.

Best of luck on this interesting project, and please let me know your findings if you have a free moment.
Thanks,
Dr. Jenkins

Laura Domasneanu-Miulescu
Sun 12/16/2018, 3:38 AM

Dr. Jenkins-Guarnieri,
I emailed you back in September to see if I could use the scale for my dissertation, and you were very kind and responded and agreed to allow me to use the SMUIS scale.

In the process of writing my proposal I realized I would like to modify some of the questions to fit my purpose of the study and to more closely assess counterterrorism behaviors and attitudes. In order to ensure the IRB will give me permission to proceed I would need your permission to modify the questions from the SMUIS that I will be using. Would you give me permission to modify the items I will be using?

Thank you in advance
Laura Domasneanu-Miulescu
Walden University

Michael Jenkins-Guarnieri
Tue 12/18/2018, 7:14 PM

Hi Laura,

Thanks for letting me know and please feel free to modify items as you need.

Thanks,
Dr. Jenkins