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TURNING THE TIDES: AN INOCULATION THEORY AND THEORY OF
PLANNED BEHAVIOR APPROACH TO DEVELOPING MENTAL HEALTH HELP-
SEEKING INTERVENTIONS FOR GEN Z

DISSERTATION

A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy in the
College of Communication and Information
at the University of Kentucky

By
Sarah Ann Geegan

Lexington, Kentucky

Co-directors: Dr. Kimberly A. Parker, Associate Professor of Integrated Strategic
Communication and
Dr. Bobi Ivanov, Professor of Integrated Strategic Communication

Lexington, Kentucky

2021

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ABSTRACT OF DISSERTATION

TURNING THE TIDES: AN INOCULATION THEORY AND THEORY OF PLANNED BEHAVIOR APPROACH TO DEVELOPING MENTAL HEALTH HELP- SEEKING INTERVENTIONS FOR GEN Z

Extensive research, predating and during the COVID-19 pandemic, demonstrates the rising prevalence of anxiety and depression among Gen Z college students in the United States—findings which are accompanied by rising rates of suicide, the second leading cause of death among people aged 15-24. Although college campuses often offer mental health resources, the number of college students utilizing them is significantly less than the number of students reporting mental health challenges. A dearth of empirical evidence, focused on Gen Z specifically, exists as a basis for developing interventions to address this issue. This investigation addressed this gap through two component studies. Study 1 consisted of formative focus groups guided by the theory of planned behavior, which revealed insight into students’ attitudes, experiences, and knowledge related to mental health help-seeking. Study 2 involved message design and testing, leveraging formative data from Study 1. Using inoculation theory as a theoretical framework, messages were designed and delivered in terse formats (less than 280 characters) and as part of a booster message, or reinforcement, strategy in alignment with the theory’s biological metaphor. Results demonstrated some support for the use of terse messages as initial treatments and as booster messages—the first evidence of either effective design for either operationalization of inoculation theory. The findings provide a foundation for further research into these theoretical nuances, as well as for comprehensive social marketing campaign development aiming to persuade Gen Z college students to seek treatment for mental health.

KEYWORDS: Inoculation Theory, Theory of Planned Behavior, Social Marketing, Terse Messages, Booster Messages, Mental Health

Sarah Ann Geegan

12/17/2021

Date

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DEDICATION

This dissertation is dedicated to anyone who has ever felt ashamed—or who has been shamed—for seeking help for their mental health. The world is a better place with you in it.

ACKNOWLEDGMENTS

My early years of graduate study prepared me for the notion that writing a dissertation would be a time of angst, of anxiety, and, perhaps, of isolation. Of course, I had no way to predict the circumstances that would define the years I spent completing this work — a global pandemic that forced us to separate and isolate, to sever physical connections and reimagine almost every aspect of our lives. The years 2020 and 2021 were a time of heightened anxiety for all of us. We lost people. We lost opportunities. We lost time.

But I believe we gained something, too.

I think we learned not to take our people for granted. I certainly did. While I wrote this dissertation often in physical isolation, I never felt alone. I'm grateful for the support of so many people who were always in my corner, as we learned how to embrace each other across a physical void. In fact, because we were physically separated, I think we truly realized the importance of our connections. I know this was true for me.

Perhaps, among the most telling findings from this work is the importance of peer influence. Our people are important. I'm so grateful for those who have been there for me throughout this journey.

My family has always served as my greatest band of cheerleaders. I'm grateful for the work ethic, determination, and desire to make the world better, which I surely either inherited or adopted from them. My mom, in particular, has listened to me discuss the theoretical foundations of this work more times than I can count. Always, she asked questions and desired to understand more. My extended family — Lauren Cook and Eddie Hazle — were my source of respite and rejuvenation as we formed “quaran-teams,” small groups that only socialized with each other throughout the pandemic. The

weekend trips to their house for a quick writing break gave me the precious resets I needed, despite always having to rush back on Sundays to catch back up. But these two offered so much more than a reprieve; they make me feel like the best version of myself. That feeling helped propel me through times when I felt anxious or overwhelmed, frustrated or feeble.

My advisors, Kimberly Parker and Bobi Ivanov, also have become my family. They've demonstrated that to me in every conversation, every embrace, and every piece of advice they've offered me.

I will forever be grateful for Kimberly, who is my mentor, but also a role model, friend, and confidant. She is among the most kind and compassionate people I've ever known. However, perhaps what I admire most about her is that she translates that care and compassion into her work. She has taught me how to be a better teacher to my students, a better partner to community organizations, and a better scholar who seeks to create meaningful social change. She helped me recognize and articulate my passions for applied communication research. Her guidance led me, not only to develop my dissertation topic, but also to discover the research agenda I hope to pursue in the future. I can't think of a more important influence a mentor could impart on her student. I am grateful that she calls me her colleague, and I am honored that she calls me her friend.

I took my first class with Bobi as a freshman undergraduate student, at age 18, without any idea how that class would change my life's trajectory. Bobi told me, as a freshman, that I should consider graduate school. He later became my undergraduate advisor and guided me into my master's program at UK. The semester before I enrolled, again, he taught a class that would shape my future. He offered to let me sit in on his

inoculation theory course — the theory that would, nearly a decade later, become a foundation of my dissertation. At every significant step of my academic growth and development, Bobi has been there — always reassuring me that I should define my own interests, but, I think, often knowing the best path for me even better than I did.

Nevertheless, he was adamant that I find my own way. I will forever be grateful that Bobi saw potential in me. He has been a steady and sturdy presence in my life, for the past 13 years, through jubilation and turbulence. It is truly my greatest hope that I can have the same impact on a future student.

I'm also extremely grateful for my committee members, Dr. Beth Barnes and Dr. Julie Cerel. Beth also has served as my mentor since I was an undergraduate student, first meeting me in London, where her class ignited a passion I still have today for education abroad. I have treasured Beth's guidance and friendship. Throughout my academic journey she always jumped at opportunities to help me learn and grow, through coursework, through experiences, and through conversations about my interests. I hope to mirror her passion and her care for her students in my future career. I'm deeply appreciative of Julie, too, for offering her guidance to a part-time student, outside of her field. Julie not only served as a mentor with respect to this dissertation, she also provided me with opportunities to work on projects and gain further research experience. I'm honored to call her a colleague as well.

I have also been honored to share this journey with a dear friend, with whom I formed the kind of bond that can only emerge from the shared experience of graduate school. Erin Hester, who I've dubbed my "life partner," is the strongest person I know. I will always cherish the memories of "zoom-writing" while in quarantine; our writing

retreat in Asheville where we never left our cabin; our pages written and tears shed at “our table” at Kentucky Native Café; and all the notes, texts, and calls of encouragement. I cannot express what her friendship has meant to me, and I feel so lucky to have her in my life.

Of course, having completed this dissertation while working full time at the University of Kentucky, I’m deeply grateful for my colleagues in UK Public Relations and Strategic Communication. Jay Blanton has been a mentor and a friend since I joined his team nearly ten years ago. I’m grateful for his support and encouragement and wouldn’t have wanted to navigate a global pandemic with anyone else. Sally Woodson, my right-hand woman in the Office of Executive Communication, who is also one of my dearest friends, has suffered my rants about graduate work too many times to count. She has been a source of joy, humor, and compassion throughout this journey. I’m so incredibly grateful for her. Chris Crumrine and I began the PhD journey together, though in different programs. He, too, has been a source of encouragement, understanding, and a distinct kind of comradery throughout this journey. I’m so grateful for his continued friendship. Finally, Tiana Thé, the newest member of my professional team was invaluable in helping me get this work to the finish line after my defense. I appreciate her patience with me as well as her endurance of countless texts, emails, and phone calls beginning with “I think this is the last time.” I offer thanks to all my colleagues who helped me pull off living a double life of both a working professional and graduate student.

Without a doubt, I could not have completed this work without the help of Scott Johnson and Jack Teegarden in the College of Communication and Information Office of

Research and Instructional Technology. Scott and Jack helped build the software solution that allowed me to bring my quantitative inoculation study to life. This required months of writing code, testing, retesting, receiving new instructions from me, recoding, among other meticulous tasks. They were absolutely critical to the success of this project, and I am eternally grateful for their diligent efforts and patience with me.

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These are just a few of the people who have left their mark on me over the past several years. There are many more. They are examples of what I consider the silver linings of this tumultuous time. It's my hope that we remember the lessons about relationships and connections that the pandemic left in its wake. I'm hopeful that the findings from this dissertation remind us to see the importance of our people, especially when we or they feel isolated or alone. I hope we remember that, circumstances be what they may, we can turn to each other. Thank you to everyone who has allowed me to turn to them. I could not have done this without you.

TABLE OF CONTENTS

| | |
|---|------|
| ACKNOWLEDGMENTS | iii |
| LIST OF TABLES | xiii |
| LIST OF FIGURES | xiv |
| LIST OF ADDITIONAL FILES | xv |
| CHAPTER 1. TURNING THE TIDES | 1 |
| CHAPTER 2. ANXIETY AND DEPRESSION IN AMERICA | 8 |
| 2.1 Gen Z: At the Zenith of Crisis | 11 |
| 2.1.1 Teens | 11 |
| 2.1.2 College Students..... | 14 |
| 2.1.3 Help-Seeking Among College Students..... | 17 |
| 2.2 The College Campus: A Place to Turn the Tide..... | 19 |
| 2.2.1 Barriers to Help-Seeking..... | 20 |
| 2.2.2 Peers and Help-Seeking..... | 21 |
| 2.2.3 Gen Z Help-Seeking Interventions | 22 |
| 2.2.4 Help-Seeking During a Crisis | 24 |
| CHAPTER 3. THEORETICAL FOUNDATIONS OF BEHAVIOR CHANGE INTERVENTIONS..... | 27 |
| 3.1 Theory of Planned Behavior | 27 |
| 3.1.1 Core Mechanisms | 29 |
| 3.1.1.1 <i>Attitude Toward the Behavior</i> | 29 |
| 3.1.1.2 <i>Subjective Norms</i> | 32 |
| 3.1.1.3 <i>Perceived Behavioral Control</i> | 36 |
| 3.1.2 Extending the Utility of the TPB..... | 39 |
| 3.2 Inoculation Theory | 40 |
| 3.2.1 Core Mechanisms | 45 |
| 3.2.1.1 <i>Threat</i> | 45 |
| 3.2.1.2 <i>Counterarguing</i> | 47 |
| 3.2.2 Relevant Inoculation Applications..... | 48 |
| 3.2.2.1 <i>Inoculation Applied to Mental Health and Crisis</i> | 48 |
| 3.2.2.2 <i>Inoculation and the TPB: Attitudes Toward the Behavior</i> | 50 |
| 3.2.2.3 <i>Inoculation and the TPB: Subjective Norms</i> | 50 |
| 3.2.2.4 <i>Inoculation and the TPB: Perceived Behavioral Control</i> | 52 |
| 3.2.2.5 <i>Theoretical Integration</i> | 53 |
| 3.3 Extending Inoculation Theory to Target Gen Z..... | 54 |

| | |
|---|------------|
| 3.3.1 Terse Messages..... | 54 |
| 3.3.1.1 <i>Terse Messages in Health and Crisis</i> | 57 |
| 3.3.2 Booster Messages..... | 65 |
| CHAPTER 4. ELICITING POSITIVE BEHAVIOR CHANGE: A SOCIAL MARKETING APPROACH | 74 |
| 4.1 Social Marketing Case Studies | 76 |
| 4.1.1 Encouraging Hand Washing Among Ghanaian Mothers..... | 77 |
| 4.1.2 Increasing Awareness of Heart Disease in American Women..... | 78 |
| 4.2 Ten Steps of Social Marketing Plan Development | 80 |
| 4.2.1 Step 1: Social Issue, Background, Purpose, and Focus | 80 |
| 4.2.2 Step 2: Situation Analysis | 82 |
| 4.2.3 Step 3: Target Audiences | 84 |
| 4.2.4 Step 4: Behavior Objectives and Target Goals..... | 86 |
| 4.2.5 Step 5: Target Audience Barriers, Benefits, and Motivators; the Competition; and Influential Others..... | 89 |
| 4.2.6 Step 6: Positioning Statement | 90 |
| 4.2.7 Step 7: Marketing Mix Strategies..... | 91 |
| 4.2.7.1 <i>Product</i> | 91 |
| 4.2.7.2 <i>Place</i> | 93 |
| 4.2.7.3 <i>Price</i> | 94 |
| 4.2.7.4 <i>Promotion</i> | 95 |
| 4.2.8 Step 8: Plan for Monitoring and Evaluation | 96 |
| 4.2.9 Step 9: Budget..... | 98 |
| 4.2.10 Step 10: Plan for Implementation and Sustaining Behaviors | 98 |
| CHAPTER 5. A MIXED METHODS APPROACH TO SOCIAL MARKETING CAMPAIGN DEVELOPMENT..... | 100 |
| 5.1 STUDY 1: Formative Insight, Applying the Theory of Planned Behavior | 100 |
| 5.1.1 Participants | 101 |
| 5.1.2 Procedures..... | 102 |
| 5.1.3 Analysis | 103 |
| 5.2 Inoculation Messages Derived from Study 1 Insight..... | 104 |
| 5.3 STUDY 2: Message Evaluation, Extending Inoculation Theory | 106 |
| 5.4 Study 2 Pilot Study..... | 106 |
| 5.4.1 Participants | 106 |
| 5.4.2 Procedures..... | 106 |
| 5.4.3 Dependent Variables..... | 107 |
| 5.4.3.1 <i>Threat</i> | 107 |
| 5.5 Study 2 Main Experiment | 108 |
| 5.5.1 Participants and Procedures..... | 108 |
| 5.5.1.1 <i>Phase 1</i> | 109 |

| | |
|---|------------|
| 5.5.1.2 Phase 2 | 112 |
| 5.5.1.3 Phase 3 | 113 |
| 5.5.2 Experimental Materials | 114 |
| 5.5.2.1 Treatment Messages (Independent Variables)..... | 114 |
| 5.5.2.2 Attack Message..... | 117 |
| 5.5.3 Covariates | 118 |
| 5.5.3.1 Involvement..... | 118 |
| 5.5.3.2 Number of Years Enrolled at the University..... | 119 |
| 5.5.4 Manipulation Checks | 119 |
| 5.5.4.1 Perceived Threat..... | 119 |
| 5.5.4.2 Counterarguing Output..... | 120 |
| 5.5.5 Dependent Variables..... | 120 |
| 5.5.5.1 Attitude Certainty..... | 120 |
| 5.5.5.2 Attitude Change..... | 121 |
| 5.5.6 Statistical Analysis..... | 121 |
| CHAPTER 6. ANALYSIS OF STUDY 1 FORMATIVE DATA, FOUNDATION FOR STUDY 2 MESSAGES | 123 |
| 6.1 Findings | 124 |
| 6.2 Attitudes Toward the Behavior..... | 125 |
| 6.2.1 Attitude: On-Campus Mental Health Resources Are Not High-Quality..... | 126 |
| 6.2.1.1 Factors Shaping the Attitude Toward Both Target Behaviors | 128 |
| 6.2.2 Attitude: On-Campus Resources Are Not Well Known or Understood | 129 |
| 6.2.2.1 Factors Shaping the Attitude Toward Seeking Help for Oneself..... | 130 |
| 6.2.2.2 Factors Shaping the Attitude Toward Recommending Services to Others | 131 |
| 6.2.3 Attitude: Help-Seeking is Unpleasant And/Or Intimidating..... | 132 |
| 6.2.3.1 Factors Shaping the Attitude Toward Help-Seeking for Oneself..... | 133 |
| 6.2.3.2 Factors Shaping the Attitude Toward Recommending Services to Others | 133 |
| 6.2.4 Summary of Findings: Attitude Toward the Behavior | 135 |
| 6.3 Subjective Norms | 135 |
| 6.3.1 Subjective Norm: Other People Need It More Than I Do..... | 136 |
| 6.3.1.1 Factors Shaping the Subjective Norm of Seeking Help for Oneself | 139 |
| 6.3.2 Subjective Norm: College is Supposed to be Stressful..... | 140 |
| 6.3.2.1 Factors Shaping the Subjective Norm Toward Both Target Behaviors | 143 |
| 6.3.3 Subjective Norm: The Anxiety From the Global Pandemic is Something Everyone Shares | 144 |
| 6.3.3.1 Factors Shaping the Subjective Norm Toward Both Target Behaviors | 146 |
| 6.3.4 Subjective Norm: Mental Health Resources Are Stigmatized | 147 |
| 6.3.4.1 Factors Shaping the Subjective Norm Toward Both Target Behaviors | 148 |
| 6.3.5 Subjective Norm: Influential Others Don't Value Mental Health..... | 149 |

| | |
|--|-----|
| 6.3.5.1 <i>Factors Shaping the Subjective Norm</i> | 152 |
| 6.3.6 Gender Differences in Subjective Norms | 153 |
| 6.3.6.1 <i>Discussing (or not) Mental Health Challenges, But Never Help-Seeking</i> | 153 |
| 6.3.7 Summary of Findings: Subjective Norms..... | 157 |
| 6.4 Perceived Behavioral Control | 157 |
| 6.4.1 PBC: On-Campus Mental Health Services Are Prohibitively Expensive | 158 |
| 6.4.1.1 <i>Factors Shaping Perceived Behavioral Control Toward Both Target Behaviors</i> | 159 |
| 6.4.2 PCB: On-Campus Mental Health Resources Are Difficult to Access in Other Ways | 160 |
| 6.4.2.1 <i>Factors Shaping Perceived Behavioral Control Toward Both Target Behaviors</i> | 161 |
| 6.4.3 Summary of Findings..... | 162 |
| 6.5 Limitations | 162 |
| 6.6 Discussion and Implications for Study 2..... | 163 |
| 6.7 Discussion and Implications for the Social Marketing Plan..... | 165 |
| CHAPTER 7. ANALYSIS OF QUANTITATIVE DATA FROM STUDY 2..... | 170 |
| 7.1 Study 2 Pilot Study..... | 170 |
| 7.1.1 Analysis | 170 |
| 7.1.2 Discussion | 171 |
| 7.2 Study 2 Main Experiment | 172 |
| 7.2.1 Data Screening and Preparation | 172 |
| 7.2.2 Omnibus Results (Multivariate and Univariate Analyses) | 173 |
| 7.2.3 Manipulation Checks | 173 |
| 7.3 Main Analysis..... | 177 |
| 7.4 Discussion..... | 184 |
| 7.5 Limitations | 191 |
| 7.6 Conclusion | 192 |
| CHAPTER 8. GENERAL DISCUSSION | 194 |
| 8.1 The Question of Initial Attitude Valence | 194 |
| 8.2 The Promise of Terse Messaging..... | 198 |
| 8.3 The Prospect of Interactive Terse Messaging..... | 200 |
| 8.4 The Lingering Question of Boosters..... | 202 |
| CHAPTER 9. GENERAL LIMITATIONS AND FUTURE STUDIES | 205 |
| CHAPTER 10. GENERAL CONCLUSION | 207 |
| APPENDICES | 211 |
| APPENDIX 1. Study 2 Messages..... | 211 |
| APPENDIX 2. Hypotheses and Research Questions and Results | 214 |

| | |
|------------------|-----|
| REFERENCES | 218 |
| VITA..... | 251 |

LIST OF TABLES

| | |
|--|-----|
| Table 5.1: Themes by TPB Category, Foundation for Inoculation Messages | 105 |
| Table 5.2: Experimental Conditions | 110 |
| Table 5.3: Timeline for Message Distribution 6 | 112 |
| Table 5.4: 7x1 Between Subjects Factorial Design 7 | 114 |
| Table 6.1: Research Questions: Attitude Toward the Behavior 8 | 126 |
| Table 6.2 Research Questions: Subjective Norms 9 | 136 |
| Table 6.3: Research Questions: Perceived Behavioral Control 10 | 158 |

LIST OF FIGURES

| | |
|---|----|
| Figure 1: Mean Depressive Affect Symptoms by Year Among US Adolescent Girls and Boys, 1991–2018 | 13 |
| Figure 2: Deaths by Suicide Among People Aged 15-19, United States, 2000-2017 | 16 |
| Figure 3: Deaths by Suicide Among People Aged 20-24, United States, 2000-2017 | 17 |

LIST OF ADDITIONAL FILES

APPENDIX 1. Study 2 Messages

APPENDIX 2. Hypotheses and Research Questions and Results

CHAPTER 1. TURNING THE TIDES

As we embarked on the early days of our new semester, our community has been ruptured by the loss of two of our students – two of us – departed far too soon. They sat beside us in our classes and at our meals, walked beside us in our hallways and on our campus paths, and experienced joy and sorrow in our midst. Such losses of people so absurdly young and so remarkably full of promise make dimmer our community spirit and make heavy our individual hearts. – Eli Capilouto, President of the University of Kentucky, following two student suicides, which both occurred in January 2019.

As universities across the country grapple with how to support a more diverse, hyper-connected, and increasingly distressed population of students (Twenge, 2017), decades of data paint a concerning picture of mental well-being among American college students. Trends in anxiety and depression rates among college students has led university administrators and higher education experts to declare a mental health crisis among this population (Twenge, 2017).

National data do, in fact, depict a grim reality among college students, as suicide represents the second leading cause of death among people aged 15-24 (Centers for Disease Control and Prevention [CDC], 2021). Moreover, in the spring 2019 National College Health Assessment (NCHA), a national survey of nearly 68,000 students implemented by the American College Health Association ACHA, 45.1% of students reported feeling “so depressed that it was difficult to function” in the 12 months preceding the survey; in the same timeframe, 65.7% indicated they had experienced “overwhelming anxiety” (ACHA, 2019, p. 14). For comparison, in the NCHA survey administered a decade earlier, those reported rates amounted to 30.7% and 49.1%, respectively (ACHA, 2009).

At the same time, the number of students utilizing mental health resources is much lower than the number reporting challenges with mental health. For example, in the

same spring 2019 NCHA survey, less than a quarter of students reported seeking treatment for anxiety or depression. This gap—between the number of students reporting a challenge and of those who seek help—has galvanized research agendas exploring key determinants of, and barriers to, help-seeking behavior among college students (Hunt & Eisenberg, 2010).

Although scholars point to a variety of factors likely contributing to mental health challenges for this generation (Generation Z, or Gen Z), from social media usage to lower levels of resilience (Twenge, 2017), when it comes to designing and evaluating effective interventions to encourage help-seeking, scholars have scant empirical evidence from which to draw conclusions or model future interventions (Eisenberg et al., 2012). Filling this knowledge gap is a worthy pursuit during any period of time, but particularly during times of increased anxiety or periods of crisis, such as those following a man-made or natural disaster.

The current landscape of mental health amid the COVID-19 pandemic demonstrates the toll crises can take on college students. According to the 2020 ACHA report, college students surveyed between March and May 2020 reported, unsurprisingly, lower levels of psychological well-being than in the previous, fall 2019 semester. These data further underscore the need for empirical investigations involving systematic procedures for developing mental health interventions, both during periods of normal operations and in times of crisis.

The current study addresses this gap, merging into this void a systematic, theoretically driven framework for gathering insight and designing messages to elicit behavior change. As such, the investigation focuses on two overarching behaviors: 1)

students seeking on-campus mental health resources for themselves when they experience anxiety and/or depression and, 2) students encouraging peers to seek on-campus mental health resources when their peers are experiencing anxiety and/or depression. The first objective is straightforward. The second arises from research demonstrating strong links between social networks and willingness to seek mental health (e.g., Eisenberg et al., 2012). Thus, we can assume that progress toward the latter objective should augment progress toward the former.

This work will culminate in a fully developed messaging campaign grounded in two theories of persuasion, the theory of planned behavior (TPB; Ajzen, 1985) and inoculation theory (McGuire, 1964). The compatibility of these two theories derives from overlapping constructs and complementary functions. The TPB holds that three core mechanisms drive behavioral intention and, consequently, behavior: attitude toward the behavior, subjective norms, and perceived behavioral control (Ajzen, 1985). Thus, this theory will be used to gain a rich understanding of existing influences on help-seeking behavior, oriented around these mechanisms. Inoculation theory prescribes a message design format for influencing attitudes. Thus, it provides a framework for structuring content gleaned through the lens of the TPB into persuasive messages. Used together, the theories provide a structure for systematic, sequential intervention development, with TPB guiding *what* information the messages confer, and inoculation theory directing *how* that content is presented. This process will proceed in three, sequential stages, consisting of two component studies.

The first stage of this dissertation, or Study 1, will consist of formative research, theoretically guided by the TPB. A breadth of research exploring college student mental

health demonstrates the relevance of all three mechanisms in relation to help seeking, including attitude toward the behavior (e.g., Bonabi et al., 2016; Horwitz et al., 2020), subjective norms (e.g., Chang et al., 2020; Wong et al., 2017), and perceived behavioral control (e.g., Horwitz et al., 2020; Lattie et al., 2019). Accordingly, the theory provides an ideal framework for gathering rich, formative insight on the knowledge, beliefs, experiences, and behavior that are shaping current help-seeking patterns. Utilizing the TPB as part of empirical message design procedures also answers scholars' calls to extend the theory's translational value into intervention development (e.g., Hardeman et al., 2002). Insight garnered in Study 1 will comprise the content to be utilized in Study 2.

The second stage in this dissertation will consist of message design and experimentation utilizing inoculation theory, which has demonstrated effectiveness across wide ranging contexts (Bans & Rains, 2010). Content revealed through the formative research in Study 1, using the TPB, will serve as the basis for designing a series of inoculation messages in Study 2. As a part of this process, two theoretical nuances will be evaluated. First, as Gen Z is accustomed to—and shows a preference for—information presented in succinct formats (Twenge, 2017), terse inoculation messages will be developed and tested. As inoculation scholars traditionally have presented messages in lengthy formats, encompassing, at minimum, multiple paragraphs of text (e.g., 1,378 words in Parker et al., 2012), this represents the first investigation, to the author's knowledge, to explore the efficacy of inoculation via terse formats. Additionally, terse messages will be delivered over time, comprising a booster or reinforcement strategy—an area of inoculation research that has produced mixed results in the past (e.g., Ivanov, Dillingham et al., 2018). Further, this investigation proposes a

novel booster message design as well as a novel timeframe through which booster messages are delivered. Messages will be empirically evaluated and, if effective, incorporated into a comprehensive campaign, utilizing a social marketing framework in the final stage of this dissertation.

The third stage, the development of a social marketing plan, functions as the culmination and implementation plan for the knowledge garnered in the investigation's two component studies. Efforts in this step will build upon knowledge gained in Study 1, organized and collected in alignment with the TPB. It also will build upon evidence acquired through Study 2, in which messages designed according to inoculation theory will be tested. Findings from both studies will be coordinated and applied through a social marketing framework, culminating in a comprehensive, multi-channel social marketing plan.

Social marketing involves a methodical process by which scholars aim to influence behaviors, thereby delivering broad social benefits. It has been utilized across a variety of contexts, including civic, economic, environmental, health, and public safety (Parker et al., 2020a). The aims of this campaign will center upon influencing behaviors related to utilizing on-campus mental health resources for oneself and encouraging peers to do the same.

The following chapters provide a protocol for creating this campaign, which involves formative, qualitative data collection; empirically and theoretically driven message design; experimental design and quantitative message testing; and systematic campaign development, including implementation and evaluation plans. This protocol could and should serve as a model for how scholars and/or practitioners develop, test,

implement, and evaluate persuasive campaigns focused on mental health on college campuses.

Chapter 2 provides an overview of literature related to mental health among college students. Statistics related to anxiety, depression, and suicide position this investigation as a contribution to the clarion call that practitioners, policymakers, and the general public recognize and respond to the mental health crisis among this population. Additionally, this chapter provides in-depth insight related to the target audience: Gen Z college students. Finally, it presents an argument for college campuses as distinct, strategic environments for help-seeking interventions.

Chapter 3 provides a review of the TPB and inoculation theory, the theoretical foundations for the investigation and its two core studies, highlighting the compatibility of the two theories and exploring the relevant contexts in which they have been applied. Moreover, this chapter explicates the relevance of the theoretical nuances to be examined and situates this investigation within the gap of research utilizing both theory and empirical methods to design effective interventions.

Chapter 4 provides an explanation of social marketing, the approach guiding campaign development. It also includes an in-depth overview of the methodical process which has been extensively utilized to guide social marketing research (Lee & Kotler, 2015). Two case studies in this chapter serve as exemplars for successful social marketing campaign development, while Lee and Kotler's ten-step process for social marketing also is applied to the realm of help-seeking. As such, key areas of focus pertaining to help-seeking in the context of the ten steps are explored.

Chapter 5 provides an overview of the methods to be implemented throughout the investigation's two core studies. As previously mentioned, qualitative methods will be used in Study 1; quantitative methods and experimental design will be implemented in Study 2. Data collected from the first two studies will be systematically analyzed in Stage 3 of this dissertation, in alignment with steps established and proven effective in current social marketing research.

CHAPTER 2. ANXIETY AND DEPRESSION IN AMERICA

Mental health disorders rank among the most prevalent health challenges plaguing adults in the United States (Vos et al., 2016). In particular, anxiety and depression represent formidable illnesses, afflicting Americans indiscriminately across age, gender, geography, ethnicity, and socioeconomic status (National Institute of Mental Health, 2021). Stephen Ilardi, a clinical psychologist at Duke Medical Center, described depression as a “devastating illness” which “robs people of their energy, their sleep, their memory, their concentration, their vitality, their joy, their ability to love and work and play, and—sometimes—even their will to live” (Ilardi, 2009, p.vii). Depression in the clinical context differs considerably and materially from the word’s common usage; often people utilize “depression” as a synonym for sorrow or disappointment. Clinically, the term pertains to a debilitating mental condition that, over time and particularly if left untreated, can physically damage the brain (literally causing brain tissue to shrink, a process called cerebral atrophy) and impair the body (Ilardi, 2009).

Mental health practitioners diagnose depression, or major depressive disorder (MDD), via criteria established in the Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5; American Psychiatric Association, 2013), the most widely accepted taxonomy for mental condition classification. MDD diagnostic criteria include: depressed mood for the majority of the day; considerably diminished pleasure or interest in daily activities; large increases or decreases in body weight or appetite; hypersomnia (increased sleep) or insomnia; agitation or slowing of physical movements; energy loss or fatigue; feelings of excessive guilt or worthlessness; difficulty with concentration or decisiveness; and recurring suicidal ideation. As demonstrated by these symptoms and

precipitating effects, people who combat depression face much more menacing circumstances than sadness alone.

Similarly, anxiety poses a severe threat to those who endure its blows, *and* its meaning in American vernacular sharply differs from its clinical implications. Clinical psychiatrist Mark Cross asked the common observer to conceptualize anxiety as such: “Imagine you’re holding a device that’s sensitive to movement, and if dropped or even breathed on it will implode and cause the destruction of the entire planet. This is what it can feel like” (Cross, 2020, p. 25). According to the DSM-5, symptoms of anxiety include: persistent feelings of excessive worry; difficulty managing uncertainty or worry; feelings of restlessness or inability to relax; persistent fatigue; inability to concentrate; recurring irritability; persistent muscle tension; difficulty sleeping; and challenges in occupational, social, or other areas of functioning. As evidenced by the diagnostic criteria, anxiety, like depression, wreaks havoc on the mind and body if sustained over time, potentially diminishing immune function, generating flu-like symptoms and causing exhaustion, among other physiological effects (Cross, 2020). Unfortunately, both conditions are on the rise in the United States (Twenge & Joiner, 2020).

According to the Anxiety and Depression Association of America (ADAA, 2020), anxiety disorders—the most common mental health conditions in the US—affect approximately 40 million Americans, 18 or older, annually; this amounts to 18% of the U.S. adult population. Additionally, more than 16 million adults, or nearly 7% of the U.S. adult population, suffer from depression annually (ADAA, 2020). Apart from the obvious concerns for quality of life, these conditions also represent significant public health, moral, and economic challenges.

Anxiety and depression, particularly if left untreated, generate cascading implications for individuals' safety, economic success, and physical health. For example, in the United States, depression already is among the leading causes of disability (Mathers & Loncar, 2006). Both anxiety and depression are associated with negative outcomes in educational attainment (Breslau et al., 2008), future relationships (Kessler et al., 1995), employment (Ettner et al., 1997), and unplanned pregnancies (Kessler et al., 1997). Persistent anxiety and depression also are associated with substantial morbidity (Young et al., 2008). Moreover, scholars estimate the economic costs associated with depression alone to be between \$106-118 billion annually in the United States (Mrazek et al., 2014).

Despite these consequences, American social and political structures do not prioritize mental health, particularly in comparison to physical health. For instance, in a 2016 poll, 72% of respondents reported that mental health represents either a low- or no priority at all for the United States Congress (American Psychiatric Association [APA], 2016). In the same poll, nearly half of respondents said they either were not sure or did not know how to access mental health care, either for themselves or a loved one (APA, 2016). Moreover, treatment for mental health carries a well-documented stigma. Although surely no one would raise an eyebrow at the thought of an individual seeking treatment for a physical ailment such as cancer, Parcesepe and Cabassa (2013) in a systematic review, demonstrated that stigma associated with mental health care remains widespread among both adults and children. Again, though research suggests the stigma is improving, this lack of prioritization is alarming, given the severity and prevalence of anxiety and depression in America.

For all of these reasons—the damage mental health conditions inflict across varied dimensions of life, as well as negative perceptions of mental health treatment—experts across disciplines have emphasized the need for renewed scholarly, political, and public attention to mental health in America (Mojtabai et al., 2016). Indeed, Casados (2017) characterized mental health as “one of the most serious social, medical, and economic challenges” facing modern society and its future (p. 306). This is particularly true, when one examines current trends among America’s youngest generation of adults—Generation Z (Gen Z). The youngest generation of adults and near-adults, members of Gen Z were born between 1995-2012, with only its oldest members freshly out of college. Current data suggests that, if their experiences with—and patterns of—mental health represent a barometer for the future, the prospects for a mentally and emotionally healthy modern society are dreary.

2.1 Gen Z: At the Zenith of Crisis

An array of studies demonstrates rising levels of these conditions among American members of Gen Z over the past decade, specifically among adolescents (e.g., Twenge et al., 2018), college-aged students (e.g., Auerbach et al., 2016), and young adults (e.g., Mojtabai et al., 2016). That the levels are growing among members of Gen Z, of course, is heart-wrenching; however, the rate at which levels of anxiety and depression among young Americans have increased over the past decade is jaw-dropping.

2.1.1 Teens

The US Department of Health and Human Services began screening teens for clinical depression in 2004 via the National Survey on Drug Use and Health (NSDUH), an annual project which deploys trained interviewers, using the DSM, to engage with

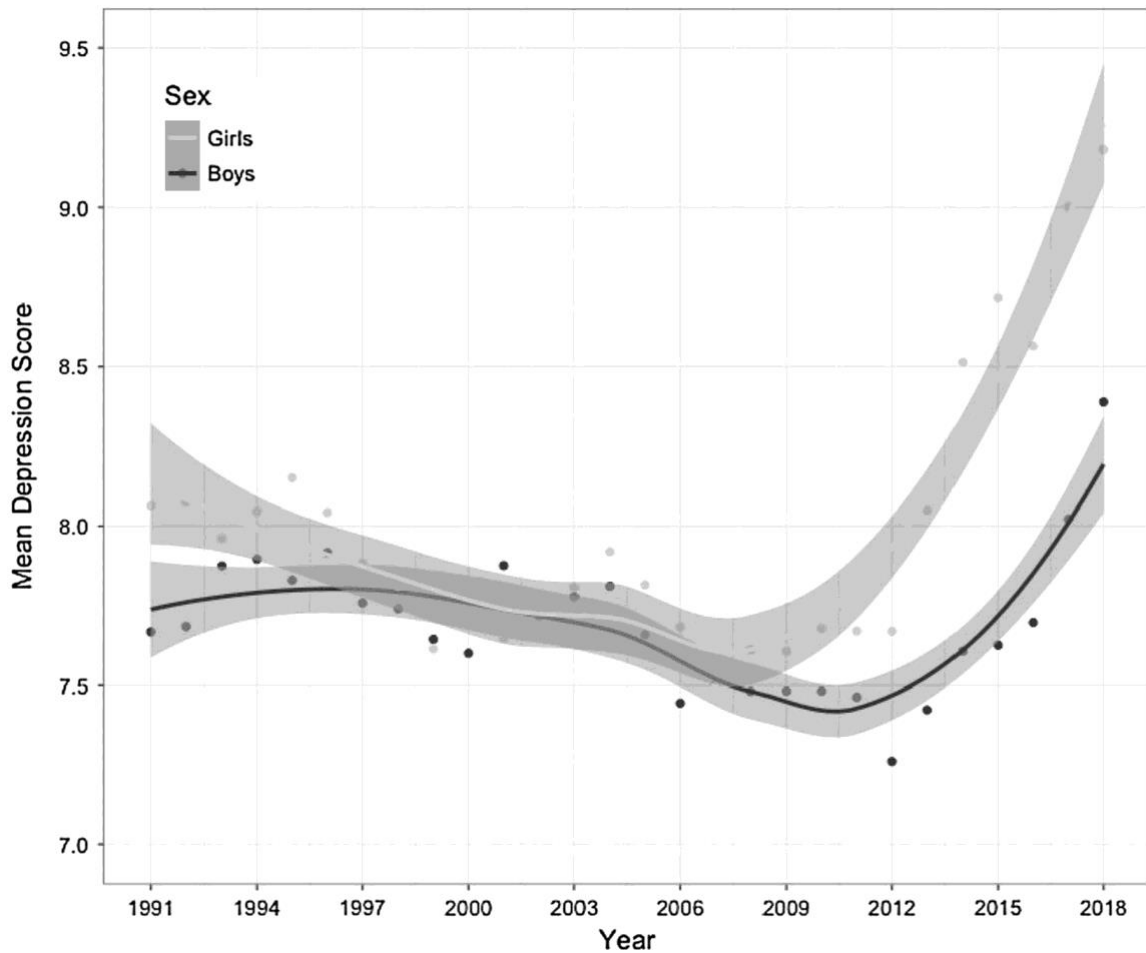
nearly 20,000 American teens, ages 12-17 (Substance Abuse and Mental Health Services Administration [SAMHSA], 2021). Results indicate that 15.7% of individuals in this age group experienced a major depressive episode in 2019, a significant increase over data reported a decade earlier (SAMHSA, 2009; 2019).

Additionally, the National Institute on Drug Abuse's Monitoring the Future (MtF) survey of 8th, 10th, and 12th grade high school students has, since 1975, drawn from a representative sample of American teenagers. Collected anonymously, it incorporates a measure of depressive symptoms consistent with the DSM-5. Between 2009 and 2015, a third more individuals reported high levels of depressive symptoms, largely driven by female adolescents, among whom 58% more scored high in symptoms of depression (Twenge, et al., 2018). However, males were not immune to this trend. Between 2012-2015, according to the same study, depression among male adolescents increased by 21%, while that of females increased by 50% over the same period. Moreover, the number of teenagers who reported "I feel like I can't do anything right" and "My life is not useful" hit all-time highs, among all three grades, in the last ten years. Importantly, these findings spanned demographics; across all six items in this survey, levels of depression surged among individuals in all regions of the country (urban and rural), across ethnicities, and amid all levels of socioeconomic status.

A review of these MtF data over a longer period of time also demonstrates a rise in acuity— meaning these conditions are becoming both more prevalent *and* more serious. Keyes et al. (2019), using the four-item scale in the MtF survey, analyzed the number of students at the 75th and 90th percentile of depressive symptom severity. Cataloging these figures over time, they reported that, among females, the number of

individuals at the 75th and 90th percentiles rose, respectively, from 20.8% to 36.7% and from 7.7% to 16.9% between 1999-2018. Among males, the number of individuals at those levels of severity grew from 19.8% to 30% and from 5.8% to 10.4%, respectively (Keyes et al., 2019).

Figure 1: Mean Depressive Affect Symptoms by Year Among US Adolescent Girls and Boys, 1991–2018



SOURCE: Soc Psychiatry Psychiatry Epidemiol. 2019 August

Importantly, a greater willingness to discuss mental health conditions represents another potential explanation for these increases, particularly among a generation with access to extensive communication channels. To that end, one could argue the actual occurrence of

anxiety and depression among this age group has not increased, but rather that the *reporting* of those occurrences rose, due to de-stigmatization. However, evidence reflecting suicide trends among Gen Z over recent years attenuates this possibility.

Per the CDC, among individuals aged 15–19, suicide rates, after a period of stability between 2000 and 2007, increased by 76% between 2007 and 2017, from 6.7% to 11.8% (Curtin & Heron, 2019). Significantly, the rate of increase associated with suicide-related outcomes also grew substantially over the latter part of the past decade, from 3% between 2007-2014, to 10% between 2014-2017 (Curtin & Heron, 2019). In 2018, high school students (ages 14-18) suicide represented the second-leading cause of death (n = 2,590; Ivey-Stephenson, 2019). According to the CDC Youth Risk Behavior Survey, 18.8% of American students reported seriously considered an act of suicide (Ivey-Stephenson, 2019).

These statistics punctuate Twenge’s (2017) argument— in a review of data, across demographics, describing the severity and prevalence of mental health challenges for Gen Z—that researchers and practitioners must address the impending crisis in earnest. “This isn’t just a wave,” of mental health issues, she implored. “it’s a tsunami” (p. 100; also see Eisenberg & Lipson 2020; Keyes et al. 2019; Lipson et al. 2019; Mortier et al. 2018). As Gen Z now represents the primary generation enrolled in post-secondary education, this tsunami is rippling across university campuses as well.

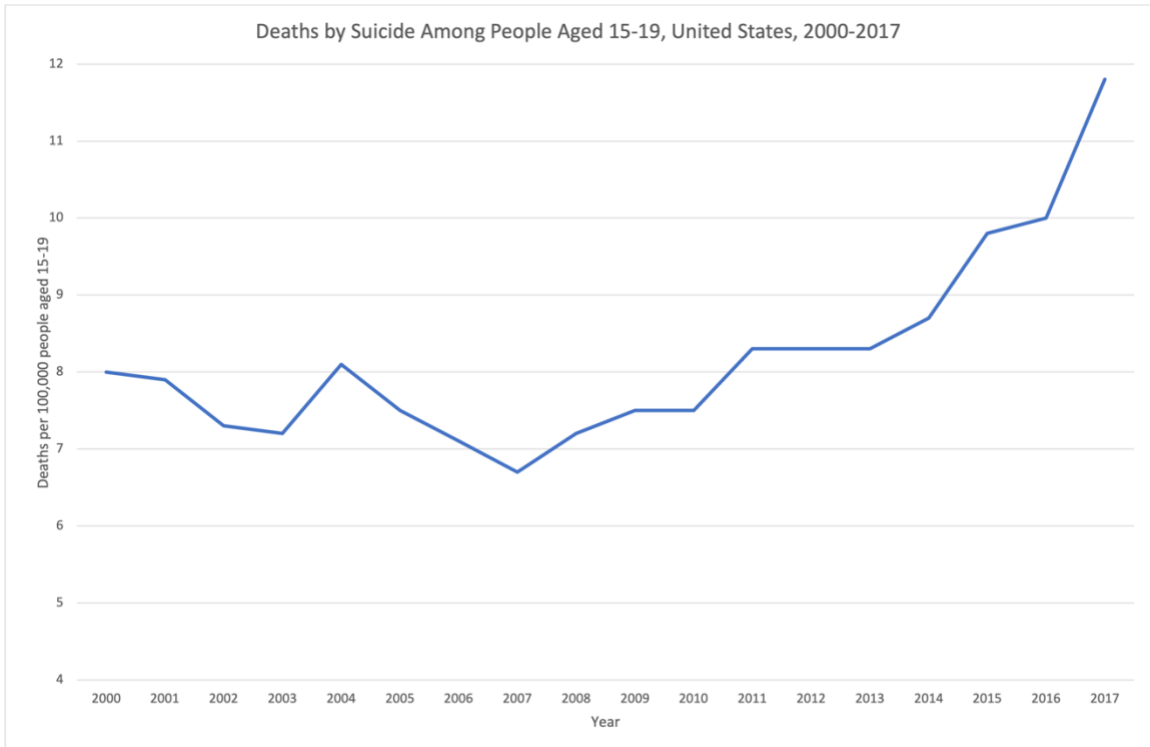
2.1.2 College Students

Lipson and colleagues’ (2019) longitudinal examination, involving more than 150,000 American university students from 2007-2017, showed the percentage of individuals with lifetime diagnoses of mental health conditions rising sharply— from

22% to 36% over the ten-year period, when Gen Z became the primary generation enrolled in postsecondary education. The prevalence of suicidality also increased (Lipson et al., 2019). These data illustrate similar patterns reflected in the National College Health Assessment (NCHA), administered by the American College Health Association (ACHA).

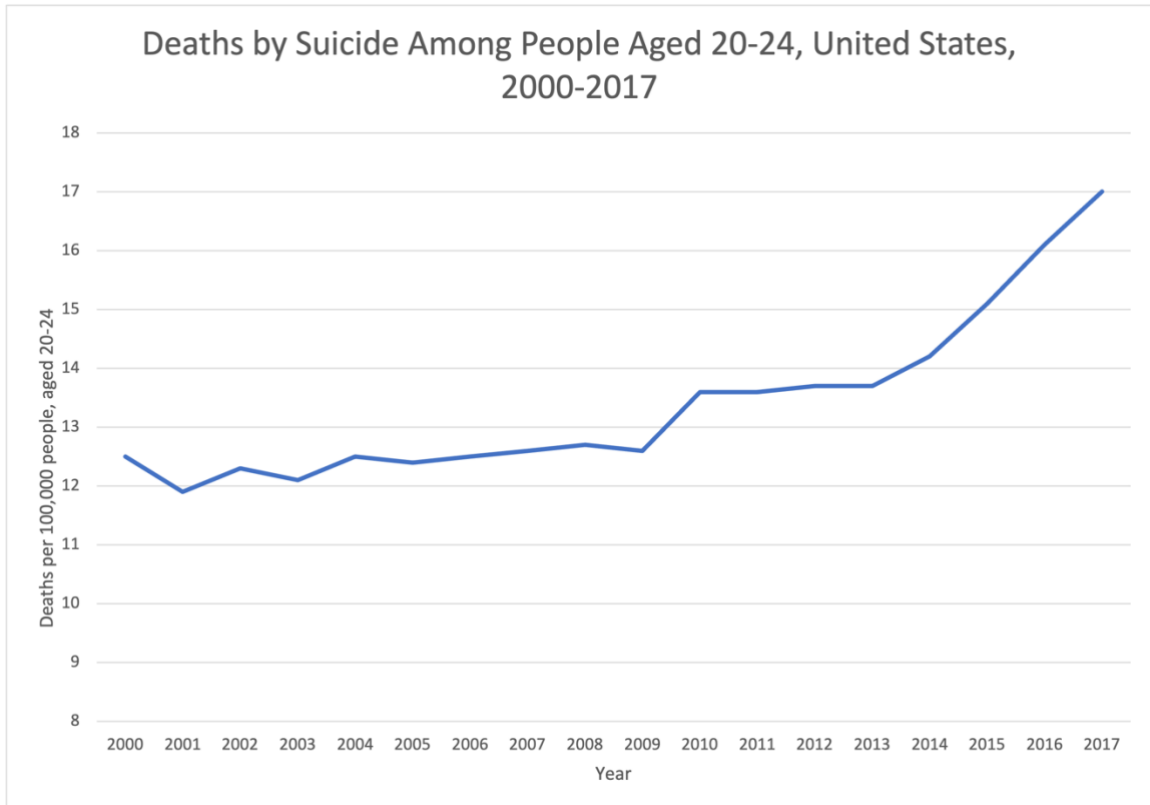
In the spring 2019 survey, 45.1% of students reported feeling “so depressed that it was difficult to function” in the 12 months preceding the survey, and 65.7% indicated they had experienced “overwhelming anxiety” (p. 14). Those rates grew from 30.7% and 49.1%, respectively, in the same survey conducted ten years earlier (ACHA, 2009). Perhaps most ominous, however, were the 13.3% who reported they had seriously considered suicide in the year preceding the survey, up from 6% in 2009 (ACHA, 2009; 2019). Following the same trend line, death rates from suicide increased 76% among individuals aged 15-19 between 2007 and 2017, with a greater rate of increase in later years: 10% annually, on average, from 2014-2017, compared to 3% annually, on average, from 2007-2014. Additionally, the death rates from suicide increased 36% from 2000-2017 among people aged 20-24, also with a greater rate of increase in later years: 6% annually, on average, from 2013-2017, compared to 1% annually, on average, from 2000-2013 (Curtin & Heron, 2019).

Figure 2: Deaths by Suicide Among People Aged 15-19, United States, 2000-2017



SOURCE: NCHS, National Vital Statistics System, Mortality

Figure 3: Deaths by Suicide Among People Aged 20-24, United States, 2000-2017



SOURCE: NCHS, National Vital Statistics System, Mortality

All of these data—numbers representing lives lost or severely damaged—illustrate a point Twenge (2017) articulated poignantly in her call for interventions: this generation “is crying out for help, and we need to listen” (p. 302). To that end, this investigation aims to address this call to both listen and, more importantly, to act.

2.1.3 Help-Seeking Among College Students

Ironically, while the data suggest this generation is metaphorically crying out for help, the rates at which they actually seek help—that is to say, pursue formal treatment—remain stubbornly low (Lipson et al., 2019). This parallels trends in help-seeking among

the general population; the majority of adults, across all adult age groups, with mental health conditions do not seek formal treatment, and those who *do* have been found to delay that pursuit (Wang et al., 2005). Annual national surveys completed by university students illustrate the depth of the problem.

In the spring 2019 NCHA, only 24.3% of college students were treated for anxiety (though 65.7% indicated they experienced anxiety at levels impacting their daily functioning), and 20.0% of students were treated for depression (though 45.1% indicated they experienced depression to an overwhelming degree). Only 16.5% of students were treated for both anxiety and depression concurrently (ACHA, 2019). This means that the vast majority of students struggling with these harrowing conditions were navigating alone.

Moreover, this gap between the number of students who have experienced mental health challenges and of those who seek treatment encompasses both individuals who have and who *have not* been formally diagnosed. For example, only about half of students with previously diagnosed depression sought treatment during the 2016-2017 academic year (Lipson et al., 2019). Ostensibly, many students may suffer from anxiety and depression without recognizing their challenge as a diagnosable disease. That so many students who are aware of their conditions still refrain from help-seeking further underscores the complexity of the problem and the substantial barriers hindering help-seeking behavior, irrespective of a previous diagnosis.

Because of this complexity, breaking this trend in help-seeking will require targeted interventions, tailored to the population. To that end, researchers and clinicians

point to college campuses as environments distinctly positioned to encourage help-seeking behavior.

2.2 The College Campus: A Place to Turn the Tide

College campuses represent prime environments for interventions for several reasons. Importantly, universities often offer mental health resources on campus, enhancing the access and affordability of treatment services—substantial barriers to care in other contexts (Eisenberg et al., 2007). Additionally, the transition from high school to college often represents a significant milestone—one in which attitudes, beliefs, and norms may be established or more easily influenced. As the various components of people’s lives—social, academic, professional, etc.—are intertwined into a single, novel setting, this presents a distinct opportunity to educate students about mental health, address subjective norms related to mental health and/or treatment, and encourage healthy behavioral changes, such as help-seeking. Moreover, that approximately 75% of all lifetime mental illnesses begin by age 24 (National Alliance on Mental Illness [NAMI], 2021), further positions university campuses as strategic environments for interventions. Nearly half of Americans aged 18-24 enroll in a postsecondary institution, meaning programs designed for college campuses would impact the most appropriate age group and have potential for significant reach (National Center for Education Statistics, 2021).

As more Gen Z students are entering college with pre-existing conditions of anxiety and depression, it is incumbent upon colleges to create cultures in which help-seeking is encouraged and in which mental health is destigmatized. To that end, extant

research on the impediments to help-seeking provides valuable insight into where intervention developers might begin.

2.2.1 Barriers to Help-Seeking

Scholars have invested significant time examining the reasons college students do not seek help for anxiety and depression. Horwitz et al. (2020), in a study involving more than 3,000 students with elevated risk of suicide from four American universities, identified a range of obstacles to help-seeking. Barriers inherent to the concept of treatment included the perception that treatment was not necessary, the notion that treatment was not effective or useful, and the stigma associated with mental health care. Further, Horwitz and colleagues found that perceptions rooted in practical considerations also represented barriers, such as the idea that counseling is prohibitively expensive and that students lack the time to pursue treatment.

These results align with findings across a breadth of studies spanning the past two decades. For instance, Lattie et al. (2019) in a review of challenges and opportunities for college student mental health reported that students often do not recognize a need for treatment (Eisenberg et al. 2007; Horwitz et al. 2020; Hunt & Eisenberg 2010); presume that significant symptoms of anxiety and depression are normal while in college (consistent with Eisenberg et al. 2012); assume that care is difficult to access (Eisenberg et al. 2007; Horwitz et al. 2020; Hunt & Eisenberg 2010), suppose that available care is inconvenient (Eisenberg et al. 2012; Horwitz et al. 2020; Hunt & Eisenberg 2010); perceive stigma associated with treatment (Pretorius et al., 2019); and believe that care is not efficacious (Eisenberg et al. 2007; Horwitz et al. 2020; Hunt & Eisenberg 2010). These obstacles, rooted in various attitudes, beliefs, perceptions, and experiences,

underscore the complexity of the issue. Interventions that would encourage help-seeking, of course, should address these barriers. However, an ad hoc approach to individual barriers would likely fall short of the sophistication needed to adequately address the problem.

Rather, the current investigation proposes a model for intervention development that meets this complex, intercorrelated problem with a sophisticated, integrated solution. This necessarily must begin with a collection of rich data related to the attitudes, beliefs, perceptions, and experiences that shape help-seeking behavior. It also should take into account the social environment in which it is situated.

2.2.2 Peers and Help-Seeking

Research demonstrates that having a friend or family member who has previously sought treatment represents a significant correlate of college students' help-seeking behavior (Eisenberg et al., 2012). This evidence adds to a volume of research demonstrating strong associations between social support and mental health among various audiences (Berkman et al., 2000) and revealing a higher likelihood of help-seeking among participants who were encouraged to do so by members of their social network (Delaney et al., 1998). Additionally, audience research among other populations demonstrates the value of understanding peer dynamics in the context of conversations about mental health. Clark-Hitt and colleagues (2012), for example, conducted a series of focus groups to understand how military service members discuss mental health and to examine message factors linked to persuading this audience to encourage help-seeking among their peers. Their findings reveal factors related to message content as well as the channel, source, and receiver that increased the likelihood of participants encouraging

their peers to seek help. Among college students specifically, Turetsky and Sanderson (2018) effectively implemented interventions using subjective norms, or social, peer-influenced standards of behavior (Ajzen, 1985), to destigmatize perceptions of mental health.

Together, these findings suggest that peers may influence college students' attitudes toward mental health and, by extension, help-seeking. As such, social influence may represent an important strategic objective. However, a better understanding of students' comfort, experience and skills related to conducting these conversations is necessary. Therefore, the current investigation will aim to both better understand and leverage peer influence, as it relates to help seeking. It also should build upon existing knowledge of successful interventions targeting Gen Z college students.

2.2.3 Gen Z Help-Seeking Interventions

Scholars, for years, have examined the challenges associated with mental health among college-aged individuals. However, few investigations—focused on Gen Z or previous cohorts—have taken the next step to systematically, empirically, and theoretically develop campus-wide strategic messaging—a finding which Hunt and Eisenberg (2010) lamented in their comprehensive review of scholarship on college student mental health. Eisenberg et al. (2012) argued that scholars should fill this gap through campus-level program evaluations incorporating “rigorous research designs...with randomized, controlled comparisons, with validated pre- and post-outcome measures” (Eisenberg et al., 2012, p. 228). More recently, a few randomly controlled trials have implemented and/or examined help-seeking interventions among Gen Z college students. However, none, to the author's knowledge, have translated

research findings into comprehensive, campus-wide campaigns or intervention proposals. Additionally, as Wiljer et al. (2020) emphasized, a dearth of investigations utilize user-centered design processes to develop interventions. As a result, the authors called on future studies to include, as a core component, insight from the target population in developing interventions.

A variety of recent meta-analyses and systematic reviews examined mental health help-seeking interventions among college students over the past 20-30 years (e.g., Sagar-Ouriaghli et al. 2019; Shahwan et al. 2020). However, the majority of the investigations comprising these reviews occurred before 2015, thereby restricting their focus to millennials, rather than to members of Gen Z. The handful of studies which utilize Gen Z college students as participants, however, provides valuable insight relevant to the current investigation.

Contemporary studies have responded to Gen Z's expanded use of technology. For example, Wiljer and colleagues (2020) examined the effectiveness of interventions delivered via a web and mobile app, finding the effectiveness of these digital strategies similar to that of handing out pamphlets, in terms of formal help-seeking. Similarly, King et al. (2015), evaluating an online intervention tool that offered personalized engagement and platforms for online therapy, found the tool effective in strengthening help-seeking intentions. Finally, Turetsky and Sanderson (2018) compared interventions utilizing normative vs. general education approaches among college students, finding that norms-based approaches decreased perceptions of public stigma and both types of interventions improved help-seeking attitudes for at least two months; they did not observe

improvements of actual help-seeking behavior. The current investigation will build upon these findings.

Moreover, the investigation aims to broaden the utility of research focused on interventions for mental health help-seeking. Against the background of an already smoldering mental health crisis, we can reasonably expect members of Gen Z to face additional, unforeseen hardship, outside the bounds of typical college stress. How can universities best support students when crises converge? This investigation aims to address this question by examining relevant attitudes and experiences related to mental health help-seeking both during periods of normalcy and in times of crisis.

2.2.4 Help-Seeking During a Crisis

For a generation already navigating high levels of anxiety and depression, crises, or unpredictable events posing threats and inciting negative effects if mishandled (Coombs, 2010), can be particularly damaging to students' psychological well-being. However, no studies to the author's knowledge have investigated interventions aiming to persuade college students to seek mental health services during a sustained crisis. The current investigation incorporates a specific focus on crisis messaging and persuasive appeals for help-seeking during a period of sustained crisis, the COVID-19 pandemic.

COVID-19 struck the United States during the spring 2020 semester, causing universities across the country to close their doors and swiftly transition to remote coursework. For the fall 2020 semester, institutions adopted a variety of restart plans, with some maintaining fully remote course delivery (e.g., Harvard University; Adams, 2020), some returning to in-person coursework briefly before shifting back to remote modalities (e.g., University of North Carolina; Feuer, 2020), and others continuing to

offer a residential experience and options for either in-person or online course delivery throughout the fall (e.g., University of Kentucky; Ellis, 2020). All approaches induced anxiety and frustration among student bodies, as students adjusted to new operating procedures and learning modalities. Even for the campuses offering traditional, face-to-face instruction, student experiences were transfigured by sweeping modifications to physical spaces; safety guidelines dictating behavior around the clock; new policies related to screening, testing and tracing; and widespread mid-semester transitions back to remote coursework, causing many students to lose physical interaction with the campus community (and, by extension, student support services) entirely (Ellis, 2020).

Although data describing the virus' toll on college student mental health continues to emerge, current research paints an unsurprising picture. According to a 2020 report by the ACHA, which only includes data collected after the onset of the virus in the U.S. in March 2020, a higher proportion of university students indicated that their mental health was negatively affecting their academic performance, relative to the fall 2019 semester. Additionally, in terms of psychological well-being, students reported lower levels than the previous semester (ACHA, 2020). Accordingly, researchers and practitioners have amplified their calls for properly developed campus interventions. Zhai and Du (2020), reflecting on these findings, argued that “university counseling centers and other departments should rally to develop and pass public health messaging onto students sharing coping resources and encouraging them to take action to protect their mental health” (Zhai & Du, 2020, p. 2). Indeed, public health messaging has arguably never been more important than in the current context of students already experiencing heightened mental health challenges, now navigating a global pandemic.

Researchers and practitioners should recommit to designing the most effective interventions possible. To do so, this investigation proposes an empirical, theoretically driven approach, grounded in formative research. This process of systematically gathering formative data and utilizing theory to drive message design, would create a road map for crafting help-seeking messaging in the context of any crisis. Essential to this process, however, is a firm theoretical foundation. Established and extensively tested theories of persuasion and message design provide a framework for crafting effective messages to serve as help-seeking interventions. The theoretical foundations of this investigation are discussed in the following chapter.

CHAPTER 3. THEORETICAL FOUNDATIONS OF BEHAVIOR CHANGE INTERVENTIONS

Effective behavior change interventions are rooted in audience insight and guided by theory (Parker et al., 2020a). Specifically, theories of persuasion, a branch of the communication discipline, are especially germane to behavioral change efforts, as persuasion scholarship focuses on attitudes and their formation, structure, and susceptibility to change (Brock & Green, 2005). While scholars in the early 20th century debated the utility of attitudes in predicting behavior (e.g., LaPiere, 1934), Albarracin et al. (2005) suggested “the field has known for some time that people’s attitudes and intentions serve as a basis for the behaviors they manifest” (p. 10). The current investigation utilizes two theories of persuasion in tandem to first understand and then influence mental health help-seeking behaviors among college students. The first, the theory of planned behavior (TPB; Ajzen, 1985), provides a framework for determining the optimal content and structure of messages that encourage help-seeking behaviors. The second, inoculation theory (McGuire, 1964) provides guidance, based on broad empirical support, for effective message design.

3.1 Theory of Planned Behavior

The TPB, (Ajzen, 1985), is among the most widely cited models for explaining and predicting human behavior (Stiff & Mongeau, 2016). An extension of the theory of reasoned action, or TRA (Fishbein & Ajzen, 1975), the TPB originated in the realm of social psychology—a field with a central focus on the attitude construct and the persuasion process (Petty & Cacioppo, 1986). Within the field of communication, the preponderance of persuasion scholarship has traditionally addressed attitudes and attitude

change, with fewer inquiries into behavioral responses (Stiff & Mongeau, 2016).

Accordingly, Stiff and Mongeau (2016) called for contemporary researchers to expand their focus on the attitude-behavior relationship. The TPB provides an avenue for this expansion; as such, it provides an appropriate framework for interventions focused on influencing attitudes to incite behavioral change.

The theoretical foundations of the TPB center upon an individual's intention to perform a particular behavior; generally, stronger intentions lead to a greater likelihood of behavior (Ajzen, 2011). Moreover, the TPB submits that three conceptually distinct determinants underscore intention, the first of which is the attitude toward the behavior—the extent to which an individual evaluates a behavior favorably or unfavorably (Ajzen, 1985, 1991). The second determinant, subjective norms, involves social standards or pressures related to the behavior (Ajzen, 1985, 1991). The third predictor, which extends and thus differentiates the TPB from the TRA, is perceived behavioral control, or the level of difficulty a person associates with a given behavior (Ajzen, 1985, 1991). The addition of the perceived behavioral control component addressed a key limitation of the TRA—the assumption that actions always fall under an individual's volitional (actual) control (Ajzen 1991; Kurland, 1995). Together, these factors—attitude toward the behavior, subjective norms, and perceived behavioral control—account for considerable variance in behavioral intention (Dillard & Pfau, 2002).

Empirical support for this variance stems from wide-ranging contextual applications, including commerce (Taylor & Todd, 1995; Yakasai & Jusoh, 2015), the environment (Chen & Tung, 2014; de Leeuw, Valois, Ajzen, & Schmit, 2015; Han, Hsu, & Sheu, 2010), safety (Collins & Carey, 2007; Parker, Manstead, Stradling, Reason, &

Baxter, 1992), and technology (Pelling & White, 2009). However, the TPB has been most widely applied to the health domain, producing a wealth of relevant evidence upon which to situate an examination of mental health behaviors. Health-related TPB investigations have focused on fertility (Ajzen & Klobas, 2013), condom use (Albarracin, et al., 2001; Boyd & Wandersman, 1991), low-fat diets (Armitage & Conner, 1999), binge drinking (Collins & Carey, 2007; Norman et al., 1998; 2007), physical activity (Hamilton & White, 2008; Norman & Conner, 2005), breast self-examination (Norman & Hoyle, 2004), weight loss (Schifter & Ajzen, 1985), healthy eating (Sparks, et al., 1992), and vaccination (Xiao & Wong, 2020). The theory also has been used to examine mental health specifically.

Within the realm of mental health help-seeking, several studies conducted among international populations have found the TPB effective in both explaining and predicting individuals' willingness to seek treatment for anxiety and/or depression (Chandrasekara, 2016; Mo & Mak, 2009; Schomerus et al., 2009b; Shi & Kim, 2020). The only investigation, to the author's knowledge, utilizing the TPB and focused on mental health help-seeking among American college students was conducted by Bohon et al. (2016), who found the theoretical model effective in predicting help-seeking intentions. Research focusing on the individual TPB mechanisms further justifies the theory's utility in this context.

3.1.1 Core Mechanisms

3.1.1.1 Attitude Toward the Behavior

An attitude is defined as a valenced or affective response directed at performing a behavior, rather than toward a generalized attitude object (Dillard & Pfau, 2002).

Additionally, Fishbein and Ajzen (1975) characterized the attitude as a function of the beliefs a person holds related to the behavior and its associated attributes. Consistent with the summative model of attitude (Fishbein, 1967), attitudes are conceptualized as the sum of one's belief evaluation and belief strength—where strength refers to the certainty with which one holds a belief (Dillard & Pfau, 2002), and evaluation refers to the degree to which the attributes associated with a specific behavior are judged as positive or negative (Stiff & Mongeau, 2016). Research focused solely on positively influencing attitudes toward mental health help-seeking have demonstrated promising results.

For example, Bonabi et al. (2016) found that stronger attitudes toward help-seeking were significantly predictive of treatment use among adults. Additionally, Taylor-Rodgers and Batterham (2014) found, among college students, that online interventions boosting attitudes toward help-seeking resulted in stronger intentions to seek mental health care. However, more research is needed to fully understand current college students' attitudes associated with help-seeking, both during periods of normalcy and crisis.

Evidence related to mental health stigma serves as a starting point, providing insight into attitudes toward help-seeking that may be strategically targeted through interventions. For instance, (Schomerus et al., 2009a) found that self-stigma, or “personal discriminatory attitudes” can inhibit help-seeking (p. 299), and research suggests this stigma remains pervasive (Kearns et al., 2015). In the same vein, general stigma toward mental health conditions may affect college students' attitudes toward recommending treatment to peers. This potential surfaces as a documented barrier to help-seeking—the notion that mental health is a sensitive, private issue (Hunt & Eisenberg, 2010). Thus,

these attitudes may serve as potential targets for interventions. Additional barriers to help-seeking for Gen Z (e.g., the belief that treatment is unnecessary) may serve as focal points for interventions as well (Horwitz et al., 2020).

However, additional formative data, collected through the lens of the TPB, can provide a more robust, nuanced understanding of the relevant attitudes associated with pursuing treatment for anxiety and/or depression, as well as the factors that shaped those attitudes. As such, the following research questions are proposed:

RQ1: During periods of normal campus operations, (a) what are students' current attitudes toward seeking mental health resources on campus and (b) what knowledge, beliefs, and experiences have shaped those attitudes?

RQ2: During periods of normal campus operations, (a) what are students' current attitudes toward recommending that peers seek mental health resources on campus and (b) what knowledge, beliefs, and experiences have shaped those attitudes?

Additionally, attitudes toward help-seeking may differ during—or be shaped by—periods of heightened anxiety deriving from crisis situations. As a result, formative research should reveal the knowledge, beliefs, and experiences associated with help-seeking attitudes specifically during a crisis. As such, the following research questions are proposed:

RQ3: During periods of crisis, (a) what are students' current attitudes toward seeking, mental health resources on campus and (b) what knowledge, beliefs, and experiences have shaped those attitudes?

RQ4: During periods of crisis, (a) what are students' current attitudes toward recommending that peers seek mental health resources on campus and (b) what knowledge, beliefs, and experiences have shaped those attitudes?

Just as formative research should reveal robust insight into attitudes, the first component of the TPB, formative data also can provide insight into the second mechanism of the TPB. A wealth of evidence supports the significance of subjective norms in explaining and predicting behavior.

3.1.1.2 Subjective Norms

Ajzen (1991) defines subjective norms as perceived social pressure either to perform or not perform an action. In a summative model, subjective norms are seen as a function of perceived social expectations and one's motivation to comply with pressure (imagined or actual) to align actions with expectations (Dillard & Pfau, 2002).

Research on Gen Z college students suggests that norms serve as predictors across a range of behaviors, including risky ones, such as alcohol usage (Hustad et al., 2014; Villarosa et al., 2016) and e-cigarette use, or vaping (Wallace & Roche, 2018), as well as non-risky ones, such as participation in entrepreneurial activities (Lingappa et al., 2020) and enrollment in education abroad programming (Whatley, 2018). Of course, social media's prominence in the lives of Gen Z also distinguishes their experience of conceptualizing and internalizing norms. Applied to the digital world, research has documented the impact of subjective norms on behavior; for example, Sherman and colleagues (2016) demonstrated that college students, when viewing photos via a platform resembling Instagram, were more likely to like images characterized by higher

numbers of peers' likes—ones more highly endorsed by others participating in the digital exchange. This held true for photos depicting both risky and non-risky behavior (Sherman et al., 2016). Scholars continue to investigate the role of social media in perpetuating and displaying subjective norms—a particularly important line of research for those investigating Gen Z, the heaviest users of social media (Perrin & Anderson, 2018).

Within the context of help-seeking behavior, current evidence underscores the power of subjective norms among this generation; however, results simultaneously suggest that this influence can pull in both directions. For instance, a meta-analysis by Wong et al. (2017) revealed that masculine norms have been linked to lower levels of help-seeking. More recently, Chang et al. (2020) found that many students hesitated to discuss mental health, thus underutilizing their social support, for fear of negatively impacting relationships, being perceived as a burden, or being judged by members of their social networks—concerns all tied to subjective norms. On the other hand, Turetsky and Sanderson (2018) found that interventions oriented around positive subjective norms toward help-seeking elicited positive attitudes toward treatment. This suggests that, in some cases, existing norms may constitute barriers, but that interventions can be effective if properly designed and implemented.

Moreover, this research suggests that university campuses should build and nurture cultures infused with positive norms toward help-seeking to replace existing, unhealthy patterns of behavior where applicable. This point further demonstrates the utility of conceptualizing interventions through the TPB framework; a focus on campus-wide attitudes related to mental health help-seeking, if successful and widespread, would

likely influence subjective norms. To that end, persuasive strategies should focus both on help-seeking for oneself, as well as advocacy or support for help-seeking among peers—the foundation of positive subjective norms. Correspondingly, research on college students' willingness to intervene with peers experiencing severe mental distress further demonstrates the significance of norms. Aldrich (2015) found that the TPB effectively predicted college students' intention to intervene with a suicidal peer, and, notably, that subjective norms accounted for the largest amount of unique variance explained. However, more research is necessary to better understand norms related to both intervention and help-seeking in general among Gen Z.

Specifically, interventions related to mental health help-seeking should be grounded in robust insight into normative influences around students' decision to seek treatment, as well as students' decisions to recommend treatment to peers during periods of normalcy. As such, the following research questions are proposed:

RQ5: During periods of normal campus operations, what (a) subjective norms exist related to seeking mental health resources on campus, and (b) what knowledge, beliefs, and experiences have shaped those norms?

RQ6: During periods of normal campus operations, what (a) subjective norms exist related to recommending that peers seek mental health resources on campus, and (b) what knowledge, beliefs, and experiences have shaped those norms?

More research also is necessary to examine the role of subjective norms in the context of a crisis. Turner and Killian's (1957) emergent norm theory holds that disasters or crises are extraordinary events, during which common norms may cease to apply and

for which new rules of conduct are developed and shared (Turner & Killian, 1972). Extant research examining crises—varied by classification and scale—suggests that norms forged during crises may incite both healthy and unhealthy behavior. For example, Kahlor et al. (2020) found that subjective norms of risk information evasion predicted intentions to avoid information related to an earthquake threat. Additionally, Drury et al. (2009), in a review of hundreds of survivor and witness accounts from the 2005 London bombings, described norms related to unity and shared identity, which led individuals to help others affected by the attack. And, most recently, Hagger et al. (2020) found subjective norms to be a significant predictor of intention to engage in physical distancing behaviors, as recommended by the Centers for Disease Control and Prevention to mitigate the spread of COVID-19. This array of evidence suggests that effective interventions should be predicated upon robust understanding of subjective norms and their relationship to the desired behavior, as developed and impacted by the crisis. As such, the following research questions are proposed:

RQ7: During periods of crisis, what (a) subjective norms exist related to seeking mental health resources on campus, and (b) what knowledge, beliefs, and experiences have shaped those norms?

RQ8: During periods of crisis, what (a) subjective norms exist related to recommending that peers seek mental health resources on campus, and (b) what knowledge, beliefs, and experiences have shaped those norms?

The most effective interventions also should incorporate insight stemming from the third mechanism, perceived behavioral control. Formative research is particularly important as it relates to volitional control, as campuses will naturally differ in terms of

available or accessible mental health resources, or lack thereof, both during times of typical campus operations and, perhaps especially, during a crisis.

3.1.1.3 Perceived Behavioral Control

External constraints—money, time, knowledge, assistance, etc.—can impede an individual’s actions, even under conditions of the strongest intention. The addition of perceived behavioral control to the TRA, creating the TPB, accommodates these nonvolitional factors undergirding behavior. Thus, perceived behavioral control is defined as a person’s subjective assessment of his/her faculties and capacity to perform a given behavior (Ajzen, 1985). In the same way that attitudes are depicted as a function of belief and strength evaluation, and just as subjective norms are theorized as a function of motivational and normative beliefs, perceived behavioral control is conceptualized as a function of perceived power and control beliefs (Dillard & Pfau, 2002).

As previously mentioned, research on barriers to help-seeking reveal a number of insights that may affect students’ perceived behavioral control, such as the belief that treatment is prohibitively expensive (Horwitz et al., 2020), or that available care is either difficult or inconvenient to access (Lattie et al., 2019). Formative research should seek to determine the accuracy of these assumptions, as well as the origin of—and the ways social networks perpetuate—these beliefs. Importantly, all campuses differ with respect to the resources devoted to mental health support and treatment. To the extent that real barriers (as opposed to perceptions of barriers) to behavioral control exist, intervention designers should recommend policy adjustments to university officials. To the extent that misperceptions related to these barriers exist among students, interventions should focus

on correcting those ideas, as inaccurate information would impact individual decisions to seek help, as well as peer recommendations related to seeking help.

Both of these notions are relevant in this context, as current evidence underscores the importance of perceived behavioral control with regard to peer intervention. Kuhlman et al. (2017) found that, among college students following a training course, perceived behavioral control was a significant predictor of suicide prevention behavior. Building upon these findings, Totura et al. (2019) focused on a different subset of Gen Z, high schoolers, and found perceived behavioral control to be the sole mechanism effectively predicting suicide prevention behavior following a similar training. Accordingly, interventions should focus on enhancing students' perceptions of volitional control with information specific to the resources available on campus. When necessary, messages should rectify inaccurate information that would constitute a barrier. Of course, the first step to designing these messages is understanding the perceptions (real or not) related to perceived behavioral control, as well as the sources through which students developed their perceptions. As such, the following research questions are proposed:

RQ9: During periods of normal campus operations, to what extent do students perceive (a) that they have the ability to seek mental health resources on campus and (b) what knowledge, beliefs, and experiences have shaped those perceptions?

RQ10: During periods of normal campus operations, to what extent do students perceive that (a) they have the ability to recommend that peers seek mental health resources on campus, and (b) what knowledge, beliefs, and experiences have shaped those perceptions?

The notion of correcting misconceptions is even more crucial in the context of crises—periods during which misinformation is more likely to spread rampantly (Hunt et al., 2020). Additionally, according to the Centers for Disease Control and Prevention (CDC), periods of prolonged crisis often evoke feelings of hopelessness, and, as a result, individuals in crisis may consider themselves less capable of helping themselves or others (2019). Stated differently, crises can diminish people’s perceived behavioral control.

Additionally, research demonstrates that the public’s trust in institutions—beliefs that institutions have the capacity and/or competency to serve them—is more likely to erode during periods of crisis (e.g., Ervasti et al., 2019; Johnsen & Sigurgeirsdóttir, 2018). As a result, current research focuses on persuasive strategies to build college students’ confidence in their universities’ ability to protect them during a crisis such as a potential campus shooting (Hester et al., under review). Because periods of heightened anxiety can undermine people’s trust in institutional services, it follows that students may perceive campus mental health resources as less accessible during these periods. In other words, students may estimate lower levels of perceived behavioral control related to accessing mental health resources. Against this backdrop, formative research can provide a more robust understanding of how college students’ perceived behavioral control related to mental health evolves during a crisis, as well as the relevant knowledge, beliefs, and experiences which shape those perceptions. As such, the following research questions are proposed:

RQ11: During periods of crisis, to what extent do students perceive (a) that they have the ability to seek mental health resources on campus and (b) what knowledge, beliefs, and experiences have shaped those perceptions?

RQ12: During periods of crisis, to what extent do students perceive that (a) they have the ability to recommend that peers seek mental health resources on campus, and (b) what knowledge, beliefs, and experiences have shaped those perceptions?

3.1.2 Extending the Utility of the TPB

Although research demonstrates the TPB's utility in explaining and predicting behavior, a dearth of research examines or utilizes the theory in a proactive way, as a framework to design strategic interventions. Rather, the theory has predominantly been used to evaluate or explain outcome variables and to predict behavioral intention or behavior change. Consequently, Hardeman et al. (2002), in a systematic review of the TPB, lamented its limited application, noting that "interventions were rarely designed on the basis of the theory" (p. 149). No studies, to the author's knowledge, in the realm of college student help-seeking have utilized the TPB to develop interventions targeting the theory's core mechanisms. Though Bohon et al. (2016) used the theory to explain the role of attitudes, norms, and perceived behavioral control on mental health help-seeking among this population, the authors called for future studies to examine the benefits of intentionally altering these factors through interventions, signaling the significance of this glaring gap in the research.

Another weakness of the theory's application lies in the paucity of studies employing formative research. Shemanski Aldrich and Cerel (2009) called for researchers to address both of these shortfalls in the use of the TPB, noting that formative data collection, which would provide robust insight into the relevant attitudes, subjective norms, and levels of perceived behavioral control is regularly "skipped" in extant

scholarship (p. 177). The authors further argued that the TPB could serve as the foundation for the content of strategic messages encouraging peer intervention for suicidal behavior—a different, but related, context in which applied research can address this gap.

The current investigation aligns with these calls. It utilizes the theory as a framework for gathering formative insight into the relevant factors undergirding Gen Z college students' help-seeking behavior, both in terms of seeking help themselves for heightened anxiety and/or depression and encouraging peers to do the same. Further, this study will utilize that insight to develop strategic messages, delivered over a range of communication channels, with the ultimate goal of promoting mental health help-seeking.

Accordingly, the TPB will serve as the foundation for message content and structure; it will be used to frame the formative research (Study 1) to determine the most salient, relevant, and influential factors that manifest college students' help-seeking behavior. The design of the messages—the architecture of the persuasive elements evoked through that content—will be guided by inoculation theory and empirically evaluated in Study 2.

3.2 Inoculation Theory

Inoculation theory, developed by McGuire (1964), has been characterized as the “grandparent theory of resistance to attitude change” (Eagly & Chaiken, 1993, p. 561). As reflected in this description, the theory prescribes a message design strategy to elicit attitudinal resistance, or to maintain an existing attitude, when faced with persuasion aiming to evoke attitude change. Traditionally, inoculation messages have been used to protect initial attitudes deemed positive or healthy—equipping those attitudes to repel

impending persuasive attempts. Importantly, however, the theory also has been shown to serve a traditional persuasive function among individuals with initially neutral or opposing attitudes—those deemed unhealthy or contrary to the desired position (Ivanov et al., 2017; van der Linden et al., 2017; Wood, 2007). This broad versatility underscores the theory’s practical and strategic value. Inoculation theory provides a framework for targeting all types of attitudes—positive, neutral, and negative—related to a target audience’s adoption of a desired behavior, in this case, those related to mental health help-seeking.

As such, irrespective of attitude valence revealed through the formative research, the theory provides an avenue for strategic messaging, either to protect attitudes positively related to help-seeking, or to influence and ideally alter attitudes negatively related to help-seeking. Further, the insight gained through the TPB framework will place those attitudes in a more complete context as it relates to other relevant influences (associated attitudes, subjective norms, perceived behavioral control) that may be targeted to ultimately influence behavior.

To that end, the theory prescribes a specific format for message design, anchored by a biomedical analogy. Inoculation theory holds that messages can simulate the function of a vaccine preemptively rebuffing a virus. Medical inoculation often involves the injection of a weakened virus strain, which empowers the human body to build immunity and repel the disease at full force. In parallel, attitudinal inoculation involves exposing an individual to a message composed of deficient arguments supporting the antithesis of a desired attitude. This weakened exposure allows an individual to build attitudinal immunity to future persuasion (Compton & Pfau, 2005). In other words,

mirroring the biological process, inoculation messages facilitate attitudinal resistance (i.e., immunity) in the face of attempted persuasion (i.e., infection).

Resistance is generated through the theory's two core mechanisms: threat and counterarguing, elicited through a methodical, sequential message design structure. To elicit the first mechanism, threat, inoculation messages begin by forewarning individuals of an imminent persuasive attempt—an attack message that will endeavor to change their existing attitudes. Threat manifests in individuals' heightened feelings of attitudinal vulnerability, as well as amplified motivation to defend their current attitudes (McGuire, 1964). Subsequently, messages are designed to evoke the second mechanism, counterarguing. To that end, messages provide poorly composed arguments advocating the opposite of the desired attitude, followed by refutations that discredit those weak arguments, a process termed refutational preemption (Pfau et al., 2003). As part of this process, refutations may include both logical assertions that refute the weakened points, as well as specific evidence suitable for contradicting those points, illustrating for individuals the act of counterarguing and displaying specific content that can be used during the counterarguing process (Compton & Pfau, 2009). Stated differently, refutational preemption offers both relevant information refuting the persuasive message, as well as practice in producing and presenting refutations. Returning to the biomedical analogy, Compton (2013) described this process as one in which “weakened viruses reflect weakened counterarguments; and antibodies that come to the rescue in medical inoculations mirror refutations during persuasion inoculations” (p. 223). Consequently, and sequentially, these components confer attitudinal resistance.

Since the theory's inception, scholars have sought to expand its translational value

and garner a deeper, more nuanced understanding of its mechanisms. Perhaps the most notable milestone in the theory's evolution involved a substantial expansion of its boundary conditions. McGuire (1964) originally conceptualized the theory as a means to build resistance toward cultural truisms, or beliefs that individuals had likely never questioned, such as the importance of brushing one's teeth. These "healthy" attitudes align with the medical analogy, as they were likely unchallenged, in the same way healthy bodies are free of disease. His work was the first to demonstrate inoculation's efficacy under these conditions compared to supportive (messages including only information aligned with an existing attitude) and control messages; however, scholars have since expanded the theory's boundaries to include non-truisms throughout a range of contexts. Banas and Rains' (2010) meta-analysis illustrated the superiority of inoculation messages in inducing resistance to persuasion, as compared to supportive messages, as well as control messages, across advertising, education, political, public relations, safety, and social issue domains.

Additionally, as previously mentioned, more recent inoculation studies have demonstrated the theory's capacity to persuade individuals with initially opposed (unhealthy or counter to the desired attitude) or neutral attitudes as well—another important expansion of the theory's original boundary conditions (Ivanov et al., 2017; van der Linden et al., 2017; Wood, 2007). These findings substantially broadened the theory's strategic value, rendering it useful for influencing individuals across the attitudinal spectrum, irrespective of initial valence.

In fact, building upon these findings, Compton (2019) further anchored the theory in its biological metaphor, terming inoculation delivered to individuals with initially

positive attitudes *prophylactic* inoculation and that delivered to individuals with initially neutral or negative attitudes *therapeutic* inoculation. Returning to the pharmaceutical realm, the majority of medical vaccines are prophylactic in nature; they are administered to individuals who have not succumbed to the disease. However, others, such as the hepatitis vaccine, are therapeutic, delivered to those already exposed to the pathogens and mitigating their effect (Sela & Hilleman, 2004). In the persuasion context, therapeutic inoculation would persuade an individual with an unhealthy attitude in the direction of the inoculation message. Ivanov and colleagues (2017) demonstrated that, when inoculated individuals with initially neutral or negative attitudes faced attack messaging, even if they did not adopt new attitudes, their stances shifted significantly closer to that of the inoculation message. Ostensibly, repeated doses of therapeutic inoculation might provide the persuasive force necessary to transform the attitude. Building upon these findings and explication, in the case of this investigation, the theory provides a framework for message design regardless of whether attitudes revealed through formative research are positive or negative/neutral, and thus would require a prophylactic or therapeutic intervention respectively.

Moreover, the current investigation builds upon an extensive range of inoculation studies applied to the health context. Specifically, inoculation has shown effectiveness in eliciting resistance with attitudes related to smoking (Banerjee & Greene, 2006, 2007; Pfau & Van Brockern, 1994; Pfau et al., 1992), marijuana use (Cornelis et al., 2013), adolescent and binge drinking (Cornelis et al., 2013; Godbold & Pfau, 2000; Parker et al., 2012; 2016; Richards & Banas, 2015), healthy eating (Mason & Miller, 2013), vaccination (Wong & Harrison, 2014; Wong, 2016), and condom use (Parker et al., 2012;

2016). The breadth and depth of successful inoculation studies across contexts underscores the theory's versatility. Its broad application in the health context suggests it is well-suited as a message design strategy targeting mental health behaviors.

3.2.1 Core Mechanisms

As the message design theory guiding this investigation, inoculation theory specifies a structure for presenting content acquired through formative research. As such, content—gathered through a TPB framework—will be presented to the target audience in a format eliciting the two core mechanisms of inoculation theory: threat and counterarguing.

3.2.1.1 Threat

McGuire (1964) conceptualized threat as an essential, fundamental element of the theoretical model—a stance which has held throughout the theory's progression and which Compton and Pfau (2005) affirmed, describing threat as “the key component of inoculation” (p. 100). The concept is inherently tied to individuals' motivation to defend their existing attitudes.

As such, motivation is theoretically central to the inoculation process—a proposition supported by meta-analytic evidence that inoculation messages confer resistance irrespective of whether attack messages include the same or novel arguments as compared to inoculation messages (Banas & Rains, 2010). Arguments proposed by McGuire's contemporaries demonstrate this point. Lumsdaine and Janis (1953) suggested that, rather than from threat, the efficacy of inoculation messages stemmed from selective exposure—the notion that individuals, after viewing an inoculation message, would avoid or ignore the counterattitudinal information to which they were exposed, having already

discounted it. However, if this were the case and inoculation's effectiveness were tied to specific content, resistance would be restricted to cases in which attack messages contained the same counterarguments as the inoculation messages. That inoculation messages confer resistance to attacks containing both familiar and unfamiliar arguments (Banas & Rains, 2010) indicates the effects cannot be bound to content or attributed to selective exposure; the efficacy is rooted in the motivation.

This assumption has held true throughout the lifespan of inoculation theory, even as the concept of threat has evolved over time. In the theory's infancy, McGuire (1961) conceptualized threat solely as an individual's abrupt recognition of an attitude's vulnerability; "inherent threat" was thought to be triggered by the shock value of arguments, presented through the inoculation message, that individuals had never before been compelled to consider (McGuire, 1970, p. 63). Additional theoretical development produced the concept of "explicit threat" (Szabo & Pfau, 2002), elicited by beginning an inoculation message with forewarning of an impending persuasive attempt. Inoculation research until recently operated under solely the *assumption* that forewarning generated threat; however, Compton and Ivanov (2012) isolated the experience of forewarning to measure it, consequently demonstrating that this message component does, in fact, evoke threat. As such, this work supported McGuire's argument that the combination of threat type—inherent and explicit—catalyzes the necessary processes that generate resistance, such as inciting individuals' motivation to defend their attitudes (Ivanov, 2017). Resistance is ultimately achieved jointly through threat and the second core mechanism: counterarguing.

3.2.1.2 Counterarguing

Inoculation scholars assert that, at its core, the theory's process "embodies the concept of counterarguing" (Pfau et al., 2005, p. 415). This perspective aligns with the medical analogy, as the process of generating counterarguments against persuasive messaging mirrors the body's deployment of antibodies to fight off a besieging illness. Indeed, counterarguing has been shown to play a mediating role in generating resistance largely conceptualized as a subvocal, or internal process, (e.g., Pfau et al., 1997, 2001, 2004) but also, in some cases a vocal process, as participants discuss counterarguments aloud with others (e.g., Ivanov et al., 2015). Moreover, inoculation research has demonstrated a direct association between levels of counterarguing output and resistance (e.g., Pfau et al., 1997, 2004, 2009).

Applied to the current context, inoculation messages should elicit refutations combatting arguments or information that may dissuade college students from seeking help or recommending that peers seek help; this information should be related to germane attitudes, beliefs, and misconceptions revealed through formative research. Counterarguments also should refute misinformation, dismantle barriers to treatment, and provide evidence, in alignment with the formative insight, of the benefits associated with seeking treatment for oneself and for recommending it to peers. A limited number of studies (e.g., Dillingham & Ivanov, 2017; Farchi & Gidron, 2010; Ivanov et al., 2016; Ivanov, Sellnow, et al., 2018; Jackson et al., 2015; Roozenbeek & van der Linden, 2019, 2020; van der Linden et al., 2017) already have demonstrated the utility of the theory in the relevant domains—the capacity for inoculation messages to elicit threat, counterarguing, and ultimately resistance—in both the context of anxiety and in the realm of crisis. As such, it is expected that traditional inoculation messages presented in the

current investigation will elicit resistance among individuals with positive attitudes and persuasion among individuals with neutral or negative attitudes.

H1: Individuals exposed only to traditional initial inoculation messages, as compared to those in the control group, will demonstrate higher message-congruent attitudinal levels.

3.2.2 Relevant Inoculation Applications

3.2.2.1 Inoculation Applied to Mental Health and Crisis

Inoculation has been used to a narrow extent in the mental health context, providing a modest foundation upon which the current investigation will build. Jackson and colleagues (2015) found that inoculation messages can effectively curtail anxiety related to public speaking, with inoculated respondents reporting significantly lower levels of anxiety prior to the speaking task, as well as lower somatic anxiety following the task, and noting that inoculation messages assisted them in conceptualizing their nerves as less debilitating. This evidence could be potentially useful in the current context, as it relates to overcoming barriers to help-seeking. Additionally, in a study overlapping both mental health and crisis contexts, (Farchi & Gidron, 2010) found inoculation to be effective in generating resistance to hopelessness among men suffering from continuous wartime threats. The ability to diminish hopelessness may be useful to help-seeking interventions. Together, these investigations represent the only studies, to the author's knowledge, employing inoculation in the mental health context; the current investigation would serve as the first, to the author's knowledge, utilizing the theory as a foundation for mental health help-seeking interventions. A wider array of evidence is available, however, detailing the theory's utility during periods of crisis.

Ivanov and colleagues (2016) and Ivanov, Sellnow et al. (2018) found inoculation messages to be effective as pre-crisis strategies designed to strengthen public trust in government protective agencies—specifically in the agencies’ ability to prevent and/or minimize the impact of terrorist attacks. Notably, inoculation messages reduced the intensity of participants’ experienced fear evoked by the threat of terrorism; the messages also bolstered individuals’ perceived ability to cope with negative outcomes of a crisis—findings that, if translatable to mental health attitudes during a time of crisis—have the potential for considerable positive impact (Ivanov et al., 2016). Additionally, Dillingham and Ivanov (2017) demonstrated the efficacy of inoculation messages in crises beyond physical health and/or safety threats, illustrating that messages could constitute preemptive strategies for novice investors ahead of financial market turbulence. The theory’s effectiveness beyond the realm of physical health underscores its potential to guide mental health help-seeking interventions. Inoculation research further demonstrates the theory’s efficacy in protecting against the spread of misinformation during a crisis (Roozenbeek & van der Linden, 2019, 2020; van der Linden et al., 2017); Against this backdrop, the theory’s strategic value as a crisis strategy represents an emerging and exciting branch of research. The current investigation aims to contribute to these efforts.

To that end, this investigation will merge the frameworks of inoculation theory and the TPB to develop strategic messaging interventions, applicable to times of crisis, as well as periods of normalcy. The theories contain overlapping constructs, and, as such, considerable evidence demonstrates the compatibility of the two theories, particularly when examining inoculation as it relates to the component mechanisms of the TPB.

3.2.2.2 Inoculation and the TPB: Attitudes Toward the Behavior

Inoculation theory's central focus on attitudes parallels the core role of attitudes within the TPB framework. Robust empirical support underscores the efficacy of inoculation theory in influencing attitudes across myriad contextual domains (Banas & Rains, 2010). That the TPB stresses the significance of attitudes in determining behavior, and that inoculation has demonstrated substantial capacity to affect attitudes in a desired direction, underscore the congruency between the two theories.

Importantly, and as previously discussed, inoculation messages are thought to induce both prophylactic and therapeutic processes, which influence attitudes irrespective of initial valence (Compton, 2019; Ivanov et al., 2017). Thus, the theory's ability to affect the full range of initial attitudes toward the behavior—positive, neutral, and negative—underscores its strategic value in the mental health context—a domain in which attitudes are unlikely to be homogenous and in which, per aforementioned evidence, attitudes play a significant role in help-seeking (e.g., Horwitz et al., 2020; Mojtabai et al., 2016;). This value is further bolstered by evidence related to normative influences.

3.2.2.3 Inoculation and the TPB: Subjective Norms

Inoculation scholars also have explored the power of norms, with particular focus on younger populations. Specifically, Godbold and Pfau (2000) found inoculation messages emphasizing normative factors to produce more accurate beliefs regarding peer alcohol consumption; this established a more stable base for withstanding peer pressure associated with drinking. In other words, the study used the theory to leverage healthy norms. Extrapolating these findings to the mental health context, one could assume that normative inoculation messages may have the potential to produce more accurate beliefs

about the prevalence (i.e., normalcy) of anxiety and depression.

Inoculation also has been used to combat unhealthy norms, such as adolescent smoking (Pfau et al., 1992). Pfau and colleagues, in fact, utilized natural peer influence in this study by monitoring attitudes over time without a defined attack treatment. Although traditional inoculation studies have presented individuals with artificial attack messages, the investigators relied on real-life peer pressure to serve as the unhealthy persuasive influence, finding inoculation effective in generating resistance. The ecological validity of these findings accentuates the theory's translational value, particularly when converged with formative insight garnered through a TPB framework. Formative research should reveal any unhealthy social pressures or norms that may deter a student from seeking mental health treatment.

Additionally, while not explicitly focused on normative influences, (Ivanov, Dillingham, et al., 2018), utilized artificial peer influence in both inoculation and attack messages. Materials in this study included excerpts from peer blog posts presented as counterarguments throughout the inoculation messages, along with peer blogs in their entirety serving as attack messages. In this case, too, inoculated individuals demonstrated higher levels of resistance, further illustrating the theory's strategic utility. In summary, extant research illustrates the ability of inoculation messages to create or raise awareness of healthy normative influences, *and* to protect against unhealthy normative influences.

This foundation of evidence is particularly relevant to Gen Z, an audience especially motivated by normative influences (e.g., Hagger et al. 2020) and increasingly exposed to content related to subjective norms, as the heaviest users of social media (Perrin, 2018). At the same time, healthy attitudes and norms only go so far when

audience members perceive low levels of volitional control.

3.2.2.4 Inoculation and the TPB: Perceived Behavioral Control

Extant inoculation scholarship provides a foundation of knowledge about the role of perceived behavioral control, also conceptualized as self-efficacy, or an individual's capacity to execute a recommended response (Witte, 1994). Self-efficacy elicited by inoculation messages mediates resistance in the inoculation model; in other words, inoculation can boost perceptions of volitional control (Pfau et al., 2009). Specifically, inoculation has been shown to boost self-efficacy in the crisis context (Ivanov et al., 2016) and in an intersection of the crisis and mental health contexts (Farchi & Gidron, 2010). Additionally, one's initial level of self-efficacy prior to receiving an inoculation message has been shown to moderate resistance, with inoculation messages that incorporate anger, rational, and happiness appeals producing the highest levels of resistance among individuals with initially high, moderate, and low levels of self-efficacy, respectively (Pfau et al., 2001). These findings may aid intervention developers in determining the ideal tone for inoculation message interventions, based on content and insight revealed through formative data collection.

Research also has examined how to boost self-efficacy in challenging environments, such as those engendered by crises. Jackson et al. (2015) specifically examined inoculation in the context of undermining task-efficacy. In this study, as a way to challenge self-efficacy, confederates presented negative feedback to participants related to their performance of a task. Controlling for germane psycho-social factors (self-confidence robustness and initial resilience), as well as task performance and pre-task self-efficacy, inoculated individuals reported greater confidence in their abilities than

individuals in the control condition (Jackson et al., 2015). This operationalization may parallel challenges in the mental health context related to stigma or other barriers to help-seeking; formative research will reveal this information, further demonstrating the advantage of merging inoculation theory and the TPB into a comprehensive strategy for intervention design.

3.2.2.5 Theoretical Integration

The compatibility of the two theories stems not only from their overlapping constructs, but further from their collective organizing power—the extent to which theories are useful in framing and explaining existing knowledge (Chafee & Berger, 1987). Moreover, the theories provide appropriate frameworks for the comprehensive, sequential intervention development process. The TPB affords a structure for gathering crucial formative insight related to existing attitudes, beliefs, knowledge, and experiences related to mental health help-seeking—insight that would form the content of intervention messages. Inoculation theory provides a blueprint for effective, persuasive message design, through which relevant insight can be formulated. In other words, the TPB will guide *what* information the messages confer, leveraging relevant attitudes, subjective norms, and perceptions of volitional control; inoculation messages will direct *how* that content is presented, in conjunction with language designed to elicit threat and formatting devised to facilitate counterarguing.

The current investigation is the first, to the author's knowledge, to utilize the two persuasion theories in an integrated model. Used together, they present a promising structure for detailed, comprehensive, and empirical intervention design, leveraging robust insight from the target audience and employing empirically tested principles of

persuasion. Moreover, the thoroughness of the process mirrors the complexity of the target issue. As the “tsunami” of mental health concerns among Gen Z continues to swell (Twenge, 2017, pg. 100), interventions should incorporate rigorous, theoretically driven and empirically based designs. This investigation proposes a detailed process for addressing a complex problem.

3.3 Extending Inoculation Theory to Target Gen Z

Experts suggest that the complexity of the mental health crisis is further exacerbated by various distinguishing characteristics of Gen Z. Generational trends such as increasing social media usage, attention spans, and preference for succinct content should be considered when designing inoculation messages. Additionally, the environment in which the interventions will be deployed—in this case, college campuses—merits contemplation. For instance, the institution’s capacity to deliver multiple messages, over various platforms, should also inform the design of inoculation messages, how they relate to each other, and the frequency with which they are distributed. In all cases, the characteristics that define Gen Z, or shape their experiences, should guide formative data collection as well as the message design process.

3.3.1 Terse Messages

Members of Gen Z were born with smartphone technology (literally) at their fingertips. As such, they represent the heaviest users of the internet broadly and social media platforms specifically. According to a Pew Research study, 89% of teenagers reported they use the internet, either via smartphone or computer, either almost constantly or multiple times a day (Anderson & Jiang, 2018). Notably, social media platforms have

become increasingly visual and less reliant on lengthy text (Leetaru, 2019). To illustrate, consider the character limits imposed by several popular platforms such as Twitter, which allows no more than 280 characters per post. Moreover, the top three social media channels utilized by this generation—YouTube, Instagram, and Snapchat, respectively—are inherently visual platforms, incorporating succinct text in the form of captions or short descriptions (Anderson & Jiang, 2018).

Evidence suggests the new media landscape has influenced Gen Z's attention span and lack of willingness to consume information presented in text-heavy formats. For example, while working on laptops, college students switch between tasks, on average, every 19 seconds, keeping more than three quarters of browser windows open for less than a minute (Yeykelis et al., 2014). Twenge (2017) attributes these platforms—and the patterns generated through their use—to Gen Z's considerably low levels of reading for pleasure, particularly when compared to previous generations. In the 1970s, for example, the vast majority of teenagers read magazines or books almost every day, while only 16% of teenagers in 2015 reported the same (Twenge et al., 2019). Twenge (2017) punctuated this point, noting:

Reading long passages of text and writing long reports will tax (Gen Z) more than it did Millennials and Gen X'ers. For their entire lives, communication has meant dealing with short snippets of information, not pages and pages of pure text. (p. 312)

It follows, then, that succinct or terse inoculation messages would stand the greatest chance of garnering attention from, and resonating with, this particular audience. However, this represents a gap in the inoculation literature. Traditionally, researchers

have used longer inoculation messages, comprising multiple paragraphs of text (e.g., 1,378 words in Parker et al., 2012). A landscape of shorter attention spans, preferences for succinct information, and experience with platforms delivering content in bite-sized snippets begs the question: Is it possible to inoculate in 280 characters or less?

Indeed, over the past decade, inoculation scholars have contemplated this prospect. Compton and Ivanov (2013) argued that inoculation messages could be considerably shortened without sacrificing the core mechanisms of the theory. Ivanov, Parker et al. (2018a), in a discussion of how terse messages could be constructed, presented a series of potential health promotion messages that aimed to generate resistance and prevent relapse among recovering addicts in 140 characters or less. Additionally, Parker et al., (2019), after conducting robust formative research, presented a series of terse messages also focused on relapse. However, to date, the effectiveness of terse inoculation messages has not been empirically tested. Nevertheless, the proposed messages from both studies may serve as exemplars for terse messages to be used in the current investigation. Accordingly, this investigation, to the author's knowledge, serves as the first to *measure* the effectiveness of inoculation via terse messages—an extension of the theory that parallels efforts in other theoretical realms of communication scholarship.

To be sure, persuasion via terse message formats represents an emerging interest for communication scholars generally and health and crisis communication scholars particularly (Head et al., 2013; Sutton, League et al., 2015). This increasing focus on succinct messaging is not surprising, given the trends of attention and information consumption among this population. Terse messages represent a compelling tool for

connecting with—and ideally influencing the attitudes and behaviors of—members of Gen Z. Evidence from both health and crisis communication scholarship provides a foundation for designing terse inoculation messages.

3.3.1.1 Terse Messages in Health and Crisis

Extant research, examining a range of communication platforms, suggests that health-related terse messages can effectively elicit persuasion. In a systematic review of literature on terse messaging in health communication, Moorhead et al. (2013) concluded that social media provides a powerful tool for communicating about healthy behaviors. Additionally, a meta-analysis of health promotion interventions delivered through text messaging revealed that such efforts are generally effective (Head et al., 2013). Together, these results indicate that, if properly designed and delivered, terse messages may be an effective strategy for improving mental health help-seeking behavior.

This broad evidence also reveals key insight for crafting the message components of terse, health-related communication. For example, personalization, such as including the recipient's name, increased effectiveness in several studies, according to the meta-analysis of text messages (Head et al., 2013). Further, messages tailored either to demographic variables or psychosocial factors were each significantly more effective than non-tailored messages, also across a range of health applications (Head et al., 2013). This evidence further underscores the importance of formative research in guiding message construction. As such, the current investigation will design a tailored intervention based on audience insights from the targeted student population.

A great deal of research also has focused on identifying the intrinsic features of terse messages that explain their effectiveness (i.e., rates at which posts are shared with

others). For example, characteristics of the sender, message style, and message content jointly impacted retransmission rates, or sharing, of official tweets immediately following the Boston Marathon bombing (Sutton, Gibson, et al., 2015). Accordingly, the appropriate message source for help-seeking messages represents a key question to be addressed in the formative stage of the current investigation. Additionally, entropy, or information noise, has been shown to significantly influence terse message sharing over Twitter during a crisis (Son et al., 2017). Son and colleagues (2017) operationalized entropy as a function of the number of topics incorporated into a message and each topic's proportion within the message, such that greater noise signified more entropic messages. The researchers demonstrated that, as a message's entropy increases, the rate at which individuals share the message decreases. This suggests that messages in the current investigation should refrain from addressing multiple topics within a single message.

At the same time, message designers need not refrain from integrating a range of content styles into a series of inoculation messages. Terse messages disseminated during a natural disaster demonstrated efficacy when including both instructional/imperative, as well as explanatory/declarative styles of content (Sutton, League, et al., 2015). These findings are particularly relevant to the theory's extension, as inoculation messages contain both styles of content. Forewarning language is imperative in nature, as it cautions individuals of impending persuasion and instructs them to defend their attitudes. Refutational preemption is inherently declarative, as it provides information to explain the basis of counterarguments. That both of these styles have been effectively operationalized in terse formats suggests that inoculation mechanisms can be triggered

within a limited wordcount. This foundation of knowledge will guide the development of inoculation messages focused on help-seeking behaviors during periods of crisis and non-crisis.

The current investigation also will answer the call from scholars to incorporate higher levels of methodological rigor in studies investigating terse messages (e.g., Head et al., 2013; Moorhead et al., 2013). The majority of investigations catalogued in the Moorhead et al. (2013) systematic review, for example, were exploratory or descriptive in nature. Head and colleagues (2013) further lamented the dearth of theoretical guidance or development in the terse message context. The current investigation aims to extend our knowledge of persuasion via terse messaging in both of these ways, methodologically and theoretically.

Accordingly, this investigation will—after gleaning insight grounded in the TPB and reflected through the preceding research questions—infuse that content into a terse inoculation design. Crucially, the terse messages, albeit more succinctly, will aim to elicit the two core mechanisms of inoculation theory: threat and counterarguing. Research on terse messaging suggests this is possible (Sutton, League, et al., 2015), and a wealth of inoculation scholarship has established that if these two mechanisms are activated, inoculation treatments demonstrate effectiveness (Banas & Rains, 2010). Given that formative research will likely reveal positive, neutral, negative attitudes, persuasion in this study's hypotheses and research questions will be conceptualized as attitude change in the direction of the inoculation message. As such, the following hypotheses are proposed:

H2: Individuals exposed only to terse initial inoculation messages, as compared to those in the control group, will demonstrate higher message-congruent attitudinal levels.

If inoculation messages do, as predicted, prove efficacious in terse formats, practitioners would add an additional tool, applicable to novel platforms, to their reservoir of persuasive strategies. However, the degree to which terse inoculation messages confer resistance, as compared to traditional inoculation messages, represents a logical next question, and one with compelling arguments on either side.

On the one hand, inoculation's function as a catalyst for threat and counterarguing suggests the traditional format should be more effective. Because longer messages can, by virtue of length, provide more detailed forewarnings, one could argue that traditional messages should be superior in generating threat. One could further suggest that lengthier messages are better equipped to facilitate the counterarguing process because they provide larger quantities of "material and guided practice" in the act of counterarguing (Ivanov, Parker et al., 2018, p. 2). On the other hand, research detailing Gen Z's attention span and preference for succinct information (e.g., Twenge, 2017; Yeykelis et al., 2014), suggests that audience members may pay more attention to a short message, likely finding the experience of reading it more palpable.

Moreover, meta-analytic evidence indicates inoculation's efficacy in withstanding attacks containing both familiar and unfamiliar arguments (Banas & Rains, 2010). Thus, inoculated individuals have demonstrated broad capacity to generate their own counterarguments, separate from those presented to them in the treatment message. This suggests that terse messages, though they provide fewer refutations than their traditional

counterparts, should nevertheless facilitate the production of additional counterarguments. This evidence, combined with findings that terse messages can effectively relay styles of content inherent to both threat (instructional/imperative) and counterarguing (explanatory/declarative; Sutton, League, et al., 2015), suggests that the conventional inoculation process can unfold after exposure to a terse message. For these reasons, one could argue that terse formats should be just as effective, or perhaps even more effective, than the traditional. Practically, it is helpful for researchers to understand the utility of a single terse message; if single doses of terse messages prove effective, this would represent a powerful strategic tool. Accordingly, the following research question is proposed:

RQ13: Will individuals exposed only to a single terse initial inoculation message demonstrate higher, lower, or similar message-congruent attitudinal levels, as compared to individuals who are exposed only to a single traditional initial inoculation message?

The terse message strategy presents, as a core advantage, the possibility for multiple messages to be distributed with significantly lower risk of inducing fatigue, dismissal, or other factors that inhibit the effectiveness of lengthy messages among Gen Z (Twenge, 2017). For that reason, it may be practical to present a series of terse inoculation messages over a very short amount of time, enhancing the ability of the treatment components, collectively, to elicit threat and counterarguing. Stated differently, if terse messages are delivered in bursts consisting of multiple iterations, this presentation may negate the aforementioned weaknesses of a single-dose terse strategy. A multi-dose approach also aligns with the biological analogy. A variety of medical vaccines, such as

the human papilloma virus (HPV) vaccine and, indeed, several versions of the COVID-19 vaccine, require multiple doses to deliver the full force of immunity.

Moreover, extant inoculation evidence provides theoretical grounding for such a technique. McGuire (1961) demonstrated that a combination of refutational messages and supportive messages (i.e., double dose) generated higher levels of resistance than refutational messages alone (i.e., single dose). The notion of providing multiple messages further complements assumptions advanced in advertising research (Krugman, 1965; McDonald, 1971; Tellis, 1988), suggesting that inoculation efforts may require as many as three exposures to reach their full effect. Accordingly, this investigation will test the efficacy of several terse messages transmitted over a short time of a couple days. Terse messages will be delivered in groups of three, in alignment with the evidence from the advertising realm. In conjunction with McGuire's findings, these studies indicate that a multi-dose exposure should outperform both a control group and its single-dose counterpart. As such, the following hypotheses are proposed:

H3: Individuals exposed only to three terse initial inoculation messages, as compared to those exposed only to a control message, will demonstrate higher message-congruent attitudinal levels.

H4: Individuals exposed only to three terse initial inoculation messages, as compared to those exposed only to a single terse initial inoculation message, will demonstrate higher message-congruent attitudinal levels.

Consistent with McGuire's (1961) findings, the predicted enhanced efficacy associated with multiple doses of terse inoculation messages should strengthen inoculation's ability to generate resistance. Additionally, the additional length provided

by three messages, and hence, the additional real estate, so to speak, to generate threat and counterarguing should bolster this strategy considerably. Further, as previously mentioned, audience members are more likely to pay attention and feel comfortable consuming terse messages that mirror the content they regularly absorb (Twenge, 2017). Thus, one could argue that the multi-dose terse inoculation message should prove more effective than traditional inoculation for this audience. At the same time, the traditional inoculation message maintains a greater capacity to present detailed arguments, offering more comprehensive information and guided practice in the process of counterarguing. Further, because this investigation represents the first inoculation study to examine terse messaging, the efficacy of multi-dose terse messages presentations remains unknown. For these reasons, the following research question is proposed:

RQ14: Will individuals exposed only to three terse initial inoculation messages, as compared to those exposed only to a single traditional initial inoculation message, demonstrate higher, lower, or similar message-congruent attitudinal levels?

If effective, terse inoculation messages would provide significant practical value to those who design interventions, both within and beyond the context of mental health help-seeking. Notably, if neither terse message—single dose nor multiple doses—is superior to a traditional long-form inoculation message, the results will still provide strategic benefit, particularly for planning interventions that target Gen Z. Terse messages may be relatively more effective because they are more likely to be noticed or consumed, even if they do not have superior efficacy in absolute terms. In other words, an advantage of terse messaging is the attention this strategy may draw, as well as the flexibility it

would afford to persuasive campaigns, implemented over time and involving multiple messages.

Importantly, terse messages have greater capacity to transcend messaging platforms favored by Gen Z—channels designed for succinct text and which this audience regularly uses, thereby affording opportunities to disseminate multiple iterations of messages over time. By contrast, traditional messages which often exceed 1000 words (e.g., 1,378 words in Parker et al., 2012), could not possibly fit the confines of a single tweet, a caption on Instagram, or a text box on Snapchat, the three most popular platforms for Gen Z (Anderson & Jiang, 2018). Thus, the terse format facilitates the use of more communication channels to *reach* audience members—and to reach them more than once.

Perhaps just as important, a terse inoculation approach may, by nature of the format, enhance the messages' capacity to *resonate* with audience members over time. According to Twenge (2017), Gen Z is already accustomed to consuming succinct snippets of content. As such, this audience may be more likely to absorb and to process information delivered in short, easily consumable portions over a strategic time schedule. A series of terse messages is less likely to invoke fatigue or deplete a reader's interest as time proceeds. For all of these reasons, terse inoculation messages offer immense potential for interventions presenting messages over time. That potential, however, remains untested. The current investigation will build upon previous inoculation scholarship, focused on traditional inoculation, to address this gap and further extend the theory.

3.3.2 Booster Messages

Terse messages delivered over time, in the lexicon of inoculation, would constitute a booster strategy, aligned with the theory's metaphorical roots. Like any message, the influence of inoculation decays as time proceeds (Insko, 1967; Pfau et al., 1997; Pryor & Steinfatt, 1978). Therefore, booster messages (also termed reinforcement or restoration messages; Ivanov, Parker et al., 2018) are conceptualized as vehicles to reinforce initial inoculation effects. Just as booster shots strengthen a vaccine's impact on the human immune system, booster messages are theorized to enhance attitudinal resistance conferred by inoculation messages (Compton & Pfau, 2005).

This expansion of the medical analogy dates back to the theory's early development. Tannenbaum et al. (1966) demonstrated that messages delivering a "concept boost" slightly increased resistance, with results only narrowly falling short of statistical significance. These results foreshadowed a series of uninspiring findings to come after a lull in booster investigations throughout the subsequent decades.

Pfau et al. (1990) revived the notion of examining booster messages, utilizing them in the form of printed political messages delivered through direct mail prior to the 1988 presidential election; participants in the reinforcement condition received multiple direct mail pieces. Results from this study, however, did not support the use of booster messages to enhance initial inoculation effectiveness. Similar results surfaced in later studies examining the use of restoration strategies (Pfau et al., 1992; 1997; Pfau & Van Bockern, 1994). More recently, Ivanov et al. (2009a) explored the efficacy of booster messages in an environment of multiple attacks, finding that conventional inoculation messages outperformed all other strategies, including reinforcement. On the other hand, booster messages have demonstrated effectiveness in prolonging counterarguing for

several weeks after initial inoculation exposure (Pfau et al., 2004; 2006), though not in ultimately increasing resistance (Pfau et al., 2004). Compton and Pfau (2005), however, argued that these lackluster findings may be attributable to flawed timing or ineffective message design, rather than inherent deficiencies with restoration strategies.

Given the speed with which information is distributed during a crisis, message delivery in this context would likely seem more natural if delivered on an abbreviated timeline, such as a 2-week delay between the initial inoculation message and the attack, with boosters delivered precisely in the middle, one week after the original message. This timeframe also is consistent with a range of extant inoculation research utilizing a 2-week delay between the initial message and the attack (e.g., Burgoon et al., 1995; Compton & Pfau 2004; 2008). Moreover, it aligns with the Banas & Rains' (2010) meta-analytic findings that effects of inoculation begin to wane around the two-week mark. Thus, the current investigation will evaluate yet another possibility for effective booster message timing—a factor which scholars have repeatedly elevated as a factor worthy of further exploration. It also will expand upon evidence related to message design.

The ideal message type and content for booster strategies remains a key question for inoculation scholars. As such, a number of investigations have explored the notion presented by Compton and Pfau (2005), that attacks may, in fact, serve boosting functions by generating additional motivation. The crux of this argument is that exposure to an attack message would validate the inoculation message's forewarning, rendering the possibility of additional attacks more real. However, Ivanov et al. (2009a) found no support for this conceptualization—findings that were later replicated in studies examining both conventional attacks (Ivanov, Parker, et al., 2018) and weakened attacks

(Parker et al., in press). The preponderance of evidence related to attack messages performing reinforcement functions suggests this strategy offers diminishing potential.

Alternatively, novel strategies for boosters, such as a series of different terse messages, merit further attention, particularly as the majority of studies have operationalized booster messages as a replication of the original message (Ivanov, Parker et al., 2018). This approach has, broadly, produced unsatisfying results. As an example, Ivanov and colleagues compared a variety of message combinations to comprise the booster strategy, including repeated presentation of the original inoculation message, the original message paired with an attack message, and two attack messages. The pattern of means indicated that the repeated inoculation strategy was the most effective of the three; however, differences fell short of significance. These findings suggest that booster strategies may benefit from a more creative approach—utilizing messages that differ from the original messages.

To that end, recent evidence illustrates the efficacy of booster strategies presenting a single inoculation component: forewarning (Parker et al., in press). In this case, reinforcement messages solely delivering forewarning actually strengthened the effect of inoculation over time. This finding is consistent with literature (outside of the booster context) demonstrating that forewarning presented in isolation—thus, not coupled with refutational preemption—has effectively generated resistance (e.g., Wyer, 1974). Thus, these results suggest that booster messages which restimulate motivation and defense building (the function of forewarning) increase the capacity to sustain the inoculation's effectiveness. The current investigation aims to build upon these findings related to message design, examining booster messages that deliver, in terse formats,

content and structures deviating from the original inoculation message and emphasizing forewarning.

Additionally, in alignment with the hypotheses outlined above, booster messages will be delivered in bursts of three messages, delivered over a period of three days. This, too, aligns with advertising research demonstrating that individuals may need exposure to as many as three messages to fully attend to and comprehend the information provided (Krugman, 1965; McDonald, 1971; Tellis, 1988). This research suggests that three messages constitute a “sweet spot” of sorts. At the same time, and importantly, the burst of booster messages is conceptualized as a single treatment, delivered over the course of three days. This conceptualization is distinct from the work of Parker et al. (in press), who evaluated both single- and double-booster strategies, delivered over different time frames. That is not the purpose of the current investigation. Rather, this study operationalizes the burst of terse boosters as a single treatment, delivered throughout three days. Stated differently, the burst of messages is operationalized as a single booster treatment, simply delivered over a longer period of time. Per the advertising literature (e.g., Krugman, 1965; McDonald, 1971; Tellis, 1988) these three messages may be necessary for the treatment to reach full efficacy.

Additionally, extant evidence demonstrating the efficacy of boosters (e.g., Ivanov, Parker, et al., 2018; Parker et al., in press), suggests the booster strategy has the potential to render higher levels of resistance (among those with initially positive attitudes) and persuasion (among those with initially neutral or negative attitudes) than a single dose of inoculation alone. As such, the following hypothesis is proposed:

H5: Individuals exposed to a single traditional initial inoculation message plus three terse booster messages will demonstrate higher message-congruent attitudinal levels than individuals exposed to (a) a control message (b) a single traditional initial inoculation message without boosters, and (c) a single terse initial inoculation message without boosters.

The same rationale suggests that booster strategies employed following a single dose of terse inoculation messaging should also enhance resistance among those with positive attitudes and strengthen the persuasive function among those with initially neutral or negative attitudes. Stated differently, one should expect similar findings for booster messages following a single initial inoculation message, whether traditional or terse.

H6: Individuals exposed to a single terse initial inoculation message plus three terse booster messages will demonstrate higher message-congruent attitudinal levels than individuals exposed to (a) a control message, (b) a single traditional initial inoculation message without boosters, and (c) a single terse initial inoculation message without boosters.

Again, the rationale supporting the previous two hypotheses provides direction for comparing three terse initial inoculation messages reinforced by boosters with terse inoculation delivered in single doses. As Ivanov, Parker et al. (2018) and Parker et al. (in press) demonstrated that booster messages can strengthen the effects of initial inoculation messages, and as a single terse message reinforced by boosters is already hypothesized to generate greater resistance than single doses of inoculation, it is predicted that three terse

messages combined with boosters should induce greater resistance than single inoculation doses alone. Accordingly, the following hypothesis is proposed:

H7: Individuals exposed to three terse initial inoculation messages plus three terse booster messages, will demonstrate higher message-congruent attitudinal levels than individuals exposed to (a) a control message (b) a single terse initial inoculation message without boosters, and (c) three terse initial inoculation messages without boosters.

The comparison between the single doses of inoculation (traditional vs. terse) and their ability to confer resistance was previously posed as a research question. To remind, one could argue that the volume of content provided by a traditional inoculation message would render it more effective in generating resistance and persuasion. At the same time, inoculated individuals have been widely shown to produce counterarguments not included in the treatment message; members of this target audience also are more likely to process information delivered in terse formats. Moreover, the influence of the original inoculation message will decay over time, (Insko, 1967; Pfau, 1997; Pryor & Steinfatt 1978), perhaps diminishing the importance of the initial message. Given this competing logic, it is appropriate to investigate the comparative effectiveness of traditional inoculation-plus-terse booster strategy and the terse inoculation-plus-terse booster strategy as a research question.

RQ15: Which combination yields higher message-congruent attitudinal levels: traditional initial inoculation plus boosters or terse initial inoculation plus boosters?

For clarity, all hypotheses and research questions pertaining to Study 2 of the current investigation, specifically focused on inoculation theory, (research questions 13-15 and hypotheses 1-5) are displayed in Table 3.1.

Table 3.1: Hypotheses and Research Questions Related to Study 2

TRADITIONAL VS. CONTROL

H1: Individuals exposed only to **traditional initial** inoculation messages, as compared to those in the **control** group, will demonstrate higher message-congruent attitudinal levels.

TERSE VS. CONTROL

H2: Individuals exposed only to **terse initial** inoculation messages, as compared to those in the **control group**, will demonstrate higher levels of resistance.

SINGLE TERSE INITIAL TREATMENT, NO BOOSTER VS. SINGLE INITIAL TREATMENT, NO BOOSTER

RQ13: Will individuals exposed only to a **single terse initial** inoculation message demonstrate higher, lower, or similar levels of resistance, as compared to individuals who are exposed only to a **single traditional initial** inoculation message?

THREE TERSE INITIAL TREATMENT, NO BOOSTER VS. SINGLE INITIAL TREATMENT, NO BOOSTER

H3: Individuals exposed only to **three terse initial** inoculation messages, as compared to those exposed only to a **control** message, will demonstrate higher message-congruent attitudinal levels.

H4: Individuals exposed only to **three terse initial** inoculation messages, as compared to those exposed only to a **single terse initial** inoculation message, will demonstrate higher levels of resistance.

RQ14: Will individuals exposed only to **three terse initial** inoculation messages, as compared to those exposed only to a **single traditional initial** inoculation message, demonstrate higher, lower, or similar levels of resistance?

SINGLE INITIAL TREATMENT + BOOSTER VS. SINGLE INITIAL TREATMENT,
NO BOOSTER

H5: Individuals exposed to a **single traditional initial inoculation message plus three terse booster messages** will demonstrate higher levels of resistance than individuals exposed to:

- (a) a **control** message,
- (b) a **single traditional initial** inoculation message without boosters, and
- (c) a **single terse initial** inoculation message without boosters.

H6: Individuals, after exposure to a **single terse initial inoculation message plus three terse booster messages** will demonstrate higher levels of resistance than individuals exposed to the:

- (a) a **control** message,
 - (b) a **single traditional initial** inoculation message without boosters, and
 - (c) a **single terse initial** inoculation message without boosters.
-

THREE TERSE INITIAL TREATMENT + BOOSTER VS. TERSE INITIAL
TREATMENT, NO BOOSTER

H7: Individuals exposed to **three terse initial inoculation messages plus three terse booster messages**, will demonstrate higher levels of resistance than individuals exposed to:

- (a) a **control** message,
- (b) a **single terse initial** inoculation message without boosters, and
- (c) **three terse initial** inoculation messages without boosters.

RQ15: Which combination yields a higher level of resistance: **traditional initial inoculation plus boosters** or **terse initial inoculation plus boosters**?

The focus on both terse messages and booster messages (as well as terse messages *as* booster messages) provides theoretical and practical utility. Findings will expand our knowledge of inoculation theory's boundaries, opening doors to new theoretical understanding and potential translational value. As such, the current investigation addresses an important gap in the inoculation literature. It also leverages this theoretical expansion in the context of a critically important domain.

To that end, the combination of the theory of planned behavior (TPB) and inoculation theory provide a blueprint for addressing the mental health crisis among Gen Z through a comprehensive, rigorous, and replicable process. The formative stage of this dissertation, Study 1, provides a mechanism to infuse the most relevant content, derived from the target population, into the messages. The message testing stage, Study 2, delineates a process for determining the most effective message design and delivery, by evaluating the efficacy of terse messages in general, as well as terse messages (delivered as a burst of three) serving boosting functions. Together, the two studies provide a foundation for successful intervention development. The following chapter outlines the process for integrating the insight garnered in these two studies into practical application through a widely cited, methodical and audience-focused approach termed social marketing.

CHAPTER 4. ELICITING POSITIVE BEHAVIOR CHANGE: A SOCIAL MARKETING APPROACH

Social marketing—a division of applied communication research—provides a detailed framework for developing and effectively implementing behavioral interventions. Fusing theories and methods employed in social science scholarship through the lens of traditional marketing techniques, social marketing researchers utilize an audience-centric approach to message development with the ultimate goal of evoking healthy behavioral change (Parker et al., 2020a). For these reasons, the most distinguishing feature of social marketing is its eventual and true beneficiary: society at large (Andreasen, 2002).

As previously discussed, the current investigation will utilize the TPB and inoculation theory as its theoretical foundations. The social marketing framework will serve as the basis for determining optimal methods for delivering the theoretically grounded messages through a multi-channel landscape. Interventions, strategically integrated into a comprehensive campaign, will ultimately aim to reverse the daunting patterns of mental health help-seeking for anxiety and depression among Gen Z college students, both during periods of normalcy and crisis. As such, the investigation's objective remains true to the core purpose of social marketing— behavior change that advances the public good. Moreover, it will add to the literature of efforts that have successfully executed the social marketing campaign development process.

Social marketing campaigns have been effectively designed and implemented in a variety of contexts including civic, economic, environmental, health, and public safety (Parker et al., 2020a), with foci on behaviors such as participation in the census (Andreasen, 2002), youth employment-seeking (Lee & Kotler, 2012), composting

(McKenzie-Mohr, 2011), opioid abuse disorder (Yanovitzky, 2017), and drinking and driving (Rothschild et al., 2006). As demonstrated by the varying nature of these issues, behavior change can take many forms. For example, a campaign may aim to persuade individuals to *adopt a new behavior* for the first time, such as getting a flu shot; to *reject a new behavior*, such as unprotected sex; to *modify an existing behavior*, such as more frequently exercising; or to *abandon a current behavior*, such as smoking (Lee & Kotler, 2015). While the topics vary substantially, the process for developing campaigns follow similar, sequential paths.

Social marketing scholars (e.g., Andreasen, 2002; French & Stevens, 2010) utilize a handful of intervention development procedures, or step-by-step processes, which vary slightly in terms of the numbers of steps, but which emphasize largely the same principles. The current investigation will utilize Lee and Kotler's (2019) model. The importance of each step is best exhibited through case studies; thus, the following section will detail two successful social marketing campaigns. Subsequently, Lee and Kotler's ten-step process for campaign development will be discussed, referencing the following case studies as exemplars at each step.

As demonstrated by both cases, the author cannot overstate the importance of formative research. As social marketing campaigns are inherently audience-centric, insights from target audience members should inform and drive all efforts. Lee and Kotler (2019) underscored this point, noting, "unless you are the priority audience, you probably don't know how they really feel about what you have in mind for them or what they may be thinking when approached to behave in (different) ways" (p. 542). In other words, audience insight reveals key information, experiences, barriers, and attitudes

related to the target behavior, which is crucial to developing effective strategies. In many cases, related (but, perhaps, previously overlooked) attitudes, beliefs, or experiences emerge during the formative research that indirectly affect the target behavior. Formative data collection allows researchers and campaign developers to focus on the appropriate factors influencing the target behavior.

To that end, information garnered in the formative research phase of the current investigation (Study 1) will illuminate existing attitudes, subjective norms, and perceived behavioral control, related to help-seeking, in alignment with the study's theoretical grounding. This evidence will guide the formation of objectives that undergird two ultimate behavior changes: (1) seeking help for oneself when necessary and (2) encouraging peers to seek help when necessary for anxiety and depression. This insight will serve as the foundation for the content to be designed into inoculation messages.

Moreover, just as the formative research stage is critical to strategy development, message testing (Study 2) will be equally instrumental in developing the social marketing campaign, as the empirical component of this investigation will determine the most effective timing and design of messages to be infused throughout the social marketing plan. This point also is illustrated in the following exemplar case studies.

4.1 Social Marketing Case Studies

The following case studies exemplify the process— and demonstrated outcomes— of social marketing campaign development. They serve as exemplars for the methodical approach to be used in the current investigation, guided by Lee and Kotler's (2019) ten steps of social marketing. Moreover, they illustrate the importance of

audience-centered insight, in terms of formative research, message testing, and strategic communication planning, all of which constitute pillars of the current investigation.

4.1.1 Encouraging Hand Washing Among Ghanaian Mothers

Practitioners aimed to increase rates of hand washing among Ghanaian mothers via a national social marketing initiative, analyzed by Curtis et al. (2007). The Truly Clean Hands campaign, launched in 2003, united three multinational soap manufacturers, along with one of Ghana's largest advertising agencies and a market research company. As in the current investigation, the effort commenced with formative market research, involving structured observations, as well as focus groups, in-depth interviews, and household surveys. Information gathered in this stage brought to light the key insight that formed the foundation of the campaign: "the central idea that there is something invisible on hands, and soap is needed to remove it" (p. 636). Consistent with traditional marketing practices, data gathered in this stage were translated into a series of pilot concepts as well as preliminary storyboards and visuals which were tested among audience members, building upon this key insight.

This thorough process for content development and message testing culminated in a mass-media campaign of television ads—featuring a woman leaving a restroom with a digitally imposed stain on her hands—along with radio ads complementing this message; district-level initiatives and activities in community health centers, community groups, and schools; and a traveling road show throughout rural areas, promoting events that facilitated direct community contact. All components of the campaign were rooted in the central insight—the goal to elicit an emotional response to hand contamination (as opposed to logical appeals about disease). Campaign developers evaluated these efforts

by comparing reported handwashing rates pre- and post-campaign; these rose by 13% among individuals after using the bathroom and by 41% among individuals prior to eating.

The cadence of this comprehensive campaign mirrors the proposed structure of the current investigation. As with the hand washing initiative, this investigation will begin with formative research, which will guide the development of several messages (Study 1). Those messages will subsequently be tested in terms of design and timing (Study 2). Results from Study 2 will determine strategies through which these help-seeking messages will be integrated into a comprehensive social marketing plan. As in the hand washing case study, the current investigation will prescribe a multi-channel approach, strengthened by its utilization of empirically evaluated messages.

4.1.2 Increasing Awareness of Heart Disease in American Women

The Heart Truth campaign emerged as the first federally sponsored campaign designed to raise awareness of the risk of heart disease among women throughout the US, as comprehensively outlined in a case study by Long et al. (2016). In 2000, less than a quarter of American women reported knowing that heart disease represented the leading cause of death among women, with a majority of women viewing the affliction as “a man’s disease” (AHA, 2000). Thus, the National Heart, Lung, and Blood Institute (NHLBI) adopted a social marketing approach, culminating in a national symbol for heart disease awareness among women—the Red Dress.

The campaign launched with a period of extensive formative research consisting of focus groups. This insight led developers to elevate, as the overall objective, the need to forge an emotional connection with the target audience. Building upon that goal, the

campaign incorporated three major components, all designed to strike an emotional reaction in women: media relations (partnering with then-First Lady Laura Bush to discuss the campaign on network television), partnership development (uniting with major corporations such as Johnson & Johnson to sponsor a Red Dress Collection show during Fashion Week), and community action (involving relevant national professional and voluntary organizations such as the General Federation of Women’s Clubs). In all of these initiatives, the campaign emphasized a series of core messages which included “putting a face” on the disease to emphasize that it could impact the target audience personally, as well as providing a sense of empowerment, hope, and tools related to women lowering their personal risks of contracting heart disease. Moreover, the creation and broad use of the Red Dress served to debunk the key misconception that heart disease primarily plagued males.

Just a year after the campaign’s launch, surveys administered by the American Heart Association indicated that awareness of heart disease as the leading cause of death among American women had increased from less than a quarter to nearly half. Two years after the launch, a Harris Interactive survey of a nationally representative sample of US women indicated that 60% of women agreed the Red Dress symbol inspired them to learn more about heart disease.

The multi-channel approach of this campaign provides an instructive precedent for the current investigation. As Gen Z college students engage on a variety of social media platforms, efforts should incorporate multiple social media channels into the plan as avenues for message distribution. Concurrently, college students are distinctive in that they share and traverse a campus—a distinct physical space—and regularly communicate

with a distinct community of individuals. This presents opportunities to disperse messages along more traditional platforms (email, face-to-face interactions with faculty and staff, outdoor advertising on campus, etc.). In summary, a multitude of avenues exist through which one could distribute and promote help-seeking messages. Just as The Heart Truth campaign evaluated the full scope of messaging platforms, in terms of media relations, partnership development, and community action, the current investigation should adopt a multi-platform approach.

The success of both The Heart Truth campaign and the Truly Clean Hands campaign emanated from a thorough, well-designed and meticulously implemented planning process of data collection, concept creation, and campaign strategy formulation. Lee and Kotler's (2019) ten steps of social marketing campaign development provide a framework for this work. These two studies will serve as exemplars for the ten steps, as explicated below.

4.2 Ten Steps of Social Marketing Plan Development

4.2.1 Step 1: Social Issue, Background, Purpose, and Focus

Lee and Kotler's (2019) ten steps have been utilized extensively as the backbone for social marketing efforts. In the *first* step, Lee and Kotler advised that researchers describe or define the social issue, along with any relevant background influencing the issue, the organization implementing the plan, the purpose of the plan, and the ultimate focus of the campaign. This involves gathering relevant information about the organization implementing the campaign, as well as clearly articulating the behavior of focus, pertinent information germane to the target behavior, and desired outcomes of the social marketing effort.

In doing so, campaign developers should create a *problem statement*, which may include scientific, epidemiological, or other data describing the scope of the behavioral issue. Additionally, the organization should develop a *purpose statement*, clarifying the benefits of an effective campaign. Both statements serve as guiding principles as the various components of a multifaceted campaign come to fruition, ensuring consistency and cohesion throughout the various stages of intervention development and implementation.

The Truly Clean Hands campaign demonstrated clearly defined articulations of the social issue (Curtis et al., 2007). Existing research portrayed the scope of the problem—only 4% of mothers washed their hands with soap after using the toilet; only 2% of mothers washed their hands with soap after cleansing a baby’s bottom. The campaign launched with the clearly defined purpose, or desired outcome, of increasing those rates of handwashing through a mass-media campaign approach. To that end, from its infancy, the campaign hinged upon buy-in from large organizations, including multinational soap manufacturers such as Unilever, as well as large advertising and market research firms, united around this common purpose.

The current investigation also has a clearly defined purpose: to increase rates of help-seeking among college students, as well as to increase the rate at which college students recommend their peers seek help for anxiety and depression. The problem statement should be defined and more clearly articulated with existing research related to current help-seeking rates (such as aggregate data from campus counseling centers or other campus mental health resource centers). Additionally, the campaign’s core partner organizations—those who would unite to implement this campaign, such as the central

campus public relations office or senior administrators with established communication channels—should be defined and unified behind a common purpose statement. This foundational step leads naturally to more thorough descriptions of the target issue, revealed through step 2.

4.2.2 Step 2: Situation Analysis

The *second* step recommended by Lee and Kotler (2019) involves conducting both primary and secondary research to understand the strengths, weaknesses (internal attributes) and opportunities and threats (external factors) associated with the organization carrying out the campaign, in relation to the target behavior. This is commonly known as a SWOT analysis (CDC, 2015a). Social marketers, at this stage, create an inventory of current capacities and categorize them as strengths (e.g., strong brand awareness) and weaknesses (e.g., understaffed). Additionally, this stage represents an opportunity to understand the landscape in which the organization operates, as it relates to the purpose of the campaign, rendering opportunities (e.g., particular times of the year when individuals are more engaged with the organization) and threats (e.g., proposed state budget cuts for the organization). Researchers also should review similar campaigns or interventions at similar organizations and evaluate what can be gleaned from those efforts, with a continuous focus on the target audience and the elements of the marketing mix: product, price, place, and promotion, which manifest as components of the SWOT process (Parker et al., 2020a).

The Heart Truth campaign launched with a notable area of strength—sponsorship from a federal funding agency, the NHLBI, which rendered credibility and provided a large budget for campaign development and implementation (Long et al., 2016). At the

same time, as with all federal grants or contracts, funding sources can expire after a period of time, rendering issues with sustainability as a potential weakness. To ascertain the scope of external factors—opportunities and threats—the campaign also began with a period of extensive research, termed the “environmental scan” (p. 6), during which time organizers reviewed newspaper coverage of heart disease’s impact on women, as well as other health campaigns. This research revealed that only 30% of the 6,000 articles published over six months referenced cardiovascular disease as an important women’s issue. As an external factor influencing (or, rather, failing to influence) women’s knowledge, this lack of media attention represented an opportunity. A threat, in this scenario, may have manifested as a different campaign focused on other health issues that could potentially distract women from messages related to heart disease.

The current investigation also will include a robust internal and external evaluation, or SWOT analysis, incorporating rigorous secondary research. Potential strengths may include high levels of following and engagement on social media channels operated by the institution’s central public relations office; target audience members already have established patterns of interacting with or viewing information from the institution. At the same time, weaknesses may include factors related to the product (mental health support), if, for example, budget restraints render university counseling centers unable to maintain a sufficient number of staff members, resulting in long wait times. In terms of external factors, a potential opportunity may lie in partnerships with other campus offices or influential members of the campus community. Threats may manifest in competing initiatives or programming on campus. As students have referenced a lack of time as a key barrier to receiving care (Horwitz et al., 2020), other

time-consuming activities may represent external obstacles to the target behavior. A thorough understanding of the target audience helps further crystallize the foundation upon which the campaign will build.

4.2.3 Step 3: Target Audiences

In the *third* step, Lee and Kotler (2019) direct researchers to properly identify the target audience. This involves describing the primary target audience(s) in terms of problem incidence, size, severity, and composition (e.g., demographic and other characteristics). At this stage, researchers should also strive to identify influential others, or individuals who may be in a position to impact behavior among the target audience (Parker et al., 2020a), as well as the organization's ability to reach the audience, the audience's readiness to act, and the extent to which the selected target audience aligns with the expertise and mission of the organization eventually implementing the plan. Additionally, a thorough understanding of the "stage of change," or the process through which an individual may progress in adopting the desired behavior can be particularly instructive. This process refers to the transtheoretical model of behavior change (Prochaska & DiClemente, 1983), which defines specific psychological steps through which individuals advance as they change their behaviors: These include precontemplation, contemplation, preparation, action, maintenance, and termination.

The Heart Truth Campaign, after employing a thorough review of risk factors associated with different female age groups, selected women between the ages of 40 to 60 as the target audience (Long et al., 2016). This period represents the age at which women's risk of heart disease dramatically increases, in terms of problem incidence and severity (Lloyd-Jones et al., 1999). Following this selection, campaign developers

reviewed a range of data sources to better understand the characteristics of this segment, including information on heart disease risk factors; demographic, geographic psychographic (lifestyle-related), and socioeconomic factors; media preferences; and current attitudes, knowledge, and behaviors related to cardiovascular health. For example, the understanding of media preferences later resulted in the partnership with the First Lady who appeared on several network morning shows donning a red dress pin. This example illustrates how the creation of an audience profile helped guide later formative research as well as future campaign strategies.

The current investigation will conduct a thorough review of the target audience, also resulting in an audience profile. Relevant information will include a description of problem incidence (e.g., number of students who have reported feeling anxiety and depression), size (e.g., the number students enrolled at the institution), severity (e.g., future consequences of not treating mental health issues), and composition (e.g., demographic, geographic, psychographic, socioeconomic and behavioristic characteristics of Gen Z college students). As previously stated, extant knowledge of stages of change models also provide a more thorough understanding of the target audience. Fortunately, such a model exists with regard to mental health help-seeking.

Rickwood and colleagues' (2005) widely cited conceptual model of help-seeking was the first to outline a cognitive process through which individuals advance in their decisions to seek formal mental health treatment. Though the model has been utilized to explore help-seeking behavior among a range of age groups, scholars have extensively employed it when researching young adults. For example, the model served as a focal point to gauge the effectiveness of online mental health interventions among adolescent

males (Best et al. 2014), to examine help-seeking behaviors among university students reporting suicidal ideation (Arria et al. 2011), to evaluate online help-seeking interventions targeting young adult athletes (Gulliver et al. 2012), and to assess the effectiveness of personalized emails as help-seeking motivators for young adults battling depression (Costin et al. 2009).

The model outlines a series of sequential states, similar to the transtheoretical model of change (Prochaska & DiClemente, 1983), through which a person progresses on a journey to seek help. These include: 1) gaining awareness of mental health symptoms and assessing when peers may require help; 2) articulating those symptoms and need for support; 3) becoming aware of available resources designed to provide help; and 4) generating willingness to disclose their condition to the selected source (Rickwood et al., 2005). This process provides a foundation upon which researchers can identify, but more importantly examine and clarify, various barriers to help-seeking, understanding where the obstacles are ingrained in the different stages of the conceptual model. This framework, along with the range of information compiled related to incidence, size, severity, and composition will fuel the development of behavior objectives and target goals related to help-seeking.

4.2.4 Step 4: Behavior Objectives and Target Goals

The *fourth* step, per Lee and Kotler (2019), involves establishing strategic objectives and target goals. Objectives in social marketing campaigns take three forms. The first, *behavioral objectives*, include items behavioral in nature; this is straightforward, as behavior embodies the ultimate focus of the campaign. Behavioral objectives specify what the campaign aims for the audience to *do*. At the same time,

behavior is predicated by knowledge and beliefs (Ajzen & Fishbein, 2004); thus, researchers should, at this stage, consider *knowledge objectives* and *belief objectives* as well, representing what the campaign strives for the audience to, respectively, *know* and *feel/believe*. These objectives form the basis of more narrow target goals.

All target goals should be stated specifically and include empirical indicators that will allow campaign developers to measure success. Of course, it is important for the social marketer to ensure goals are realistic and achievable, given the available resources, time constraints, and challenges associated with developing the campaign (McKenzie-Mohr et al., 2011). Additionally, objectives should include time components to indicate when certain goals are meant to be achieved. These features of sufficient objectives are commonly known as SMART characteristics: specific, measurable, achievable, realistic, and time-bound (Centers for Disease Control and Prevention, 2015).

The objectives of The Heart Truth campaign were explicitly stated. They included “increase awareness among women that heart disease is their #1 killer” and “encourage women to talk to their doctors, find out their risk, and take action to lower it” (Long et al., 2016. p. 5). The first is a knowledge objective, rooted in the finding that less than a third of women reported having this knowledge. The second is a behavioral objective; it relates to actions campaign developers aim to elicit from the target audience. Importantly, these objectives are broad; many underlying factors may influence whether an audience member acquired this knowledge or adopts this behavior. Thus, distilling the objectives further into target goals, with specific empirical indicators, supports the various components of knowledge, belief, and behavior required to achieve the overall campaign objectives. For example, a target goal underscoring the knowledge objective may have

been to reach a percentage of women recognizing the red dress as a symbol for heart disease awareness.

The research questions outlined in the preceding chapter are oriented around behavior, knowledge, and beliefs related to each component of the TPB, as it relates to help-seeking. Thus, the formative research stage of the current dissertation will facilitate the articulation of these objectives. Subsequently, these objectives, once expressed, will serve as the basis for target goals, as well as all campaign strategies and tactics, which will be developed, guided by inoculation theory. Research on help-seeking barriers provides some insight into the types of objectives that may arise. For example, Gen Z college students have reported that counseling is too expensive (Horwitz et al., 2020). Particularly on campuses that offer mental health resources at no cost, this misconception would constitute the foundation of a knowledge objective; one would strive to inform students that services can be accessed without cost. Additionally, students have articulated the idea that treatment is not needed (Lattie et al. 2019). Reversing this assumption would represent a belief objective. Finally, as utilizing messages emphasizing subjective norms has demonstrated effectiveness with regard to destigmatizing mental health (Turetsky & Sanderson, 2018), behavioral objectives related to peer encouragement of help-seeking may also prove important to overall campaign development. The formative research stage of this dissertation should provide the foundation for objective formulation. It also will reveal key insights related to external factors influencing audience members' willingness or ability to adopt the target behavior.

4.2.5 Step 5: Target Audience Barriers, Benefits, and Motivators; the Competition; and Influential Others

The *fifth* step in social marketing campaign development, according to Lee and Kotler (2019) directs strategists to identify barriers, competition, benefits, motivators, and influential individuals in the target audience's social network. Notably, barriers can take a variety of forms, including economic, psychological, and geographic (Parker et al., 2020a). Additionally, an understanding of barriers can shine light on competition. For example, it may not be the case that audience members have negative perceptions of the target behavior; it may simply be the case that they prioritize other behaviors over the target behavior (e.g., spending spare time with friends, rather than exercising). Additionally, researchers should identify any audience-perceived benefits associated with the behavior, along with motivators that would evoke adoption of the desired behavior (McKenzie-Mohr, 2011). They also should consider costs associated with the behavior and influential others who could affect the target audience member, positively or negatively, in terms of adopting the desired behavior.

The Truly Clean Hands campaign, because developers first engaged in a period of extensive formative research, identified key barriers and disproved barriers that may have been assumed to exist in the absence of baseline research. The key barrier in this case manifested in a "lack of sensory cues of contamination on hands" (Curtis et al., 2007 pp. 636). Importantly, the availability of soap and water *did not* represent a barrier; research revealed that these items were almost universally available, and thus did not represent a cost. As such, it was unnecessary (and would have been a waste of effort) for the campaign to focus on resource availability. Additionally, based on formative insight, the strategists articulated a range of key motivators in the case, including social acceptance, a

desire to be viewed as clean, fear of contamination, disgust, and the commitment to do anything for one's child. These insights also elevate peers as potential influential others. All of this information formed the scaffolding for campaign strategies and tactics.

Formative research related to help-seeking also will reveal key insight in the form of benefits associated with the behavior. For example, research demonstrates that lower levels of anxiety and depression generally lead to enhanced academic performance (DeRoma et al., 2009). Interactions with the target audience will illuminate whether that information constitutes a sufficient benefit to inspire behavioral change. Additionally, research will reveal motivators that would evoke adoption of the desired behavior. For example, because Gen Z students were raised in the digital age, one may assume that an expansion of mental health services over a more convenient platform, (i.e., telehealth) may provide additional motivation to seek help. Costs associated with the behavior may take non-monetary forms, such as the time commitment associated with receiving mental health treatment, which students have reported as a significant obstacle (Horwitz et al., 2020). Finally, formative research will provide insight into influential others who could affect the target audience member, positively or negatively, in terms of adopting the desired behavior (e.g., family members, faculty, advisors, peers). Taken together, this foundation of information allows the author to establish, in an informed way, the direction for the campaign.

4.2.6 Step 6: Positioning Statement

The *sixth* step, per Lee and Kotler (2019) involves developing a clearly articulated positioning statement, which identifies the organization, target audience, and specific behavioral objectives, while also demonstrating the benefits of the target behavior in

comparison to competition. Advertising experts have described the positioning statement as “what you do to the mind of the prospect. That is, you position the product in the mind of the prospect” (Ries & Trout 2001, p.2). As such, the ultimate goal of a positioning statement is to distinguish the product or behavior.

The Truly Clean Hands campaign developed a concise and succinct central idea, which fueled a campaign with complex and multifaceted outreach (Curtis et al., 2007). In this case, the goal was for mothers in Ghana to feel as though their hands were contaminated, translating to a desire to engage in hand washing. Thus, the behavior (washing hands with soap) was positioned as a way to remove the invisible contamination from one’s hands. This positioning, articulated as the campaign’s “key insight” was summarized thus: “hands are not truly cleaned until washed with soap” (Curtis et al., 2007, pp. 638), It served as the foundation for all campaign efforts.

The current investigation will aim to uncover key insight as well, which will guide the development of a clear positioning statement. Information on barriers provides a starting point for understanding the behavior and anticipating potential themes that could serve as central guideposts; however, formative research will provide the robust insight that will eventually evolve into the positioning statement. This positioning will further drive the development of marketing mix strategies.

4.2.7 Step 7: Marketing Mix Strategies

4.2.7.1 Product

The *seventh* step of Lee and Kotler’s (2019) model for social marketing campaigns instructs researchers to devise strategies from the marketing mix (product, place, price, and promotion) and in alignment with the positioning statement. As part of

this process, Lee and Kotler advised campaign developers to construct a platform encompassing the different dimensions of the “product,” including the *core product*, a major benefit(s) tied to the target behavior; the *actual product*, any tangible benefit(s) that may materialize as a result of adopting the behavior; and the *augmented product*, any tangible services or goods that would assist the target audience member in performing the target behavior.

In the case of the Truly Clean Hands campaign, all iterations of the product were tied to the key insight and motivators (Curtis et al., 2007). For instance, the core product was better hygiene and lower likelihood of contracting illness. The actual product manifested peace of mind that mothers were engaging in behavior to protect their children, as well as acting in ways that were socially desirable. Had the campaign discovered that availability of soap or water represented a barrier, they would have created initiatives or other mechanisms to improve accessibility. Nevertheless, soap and water represented augmented products, as they were necessary to perform the desired behavior.

Similarly, the current investigation will articulate the various types of products associated with help-seeking among college students. While lower rates of anxiety and depression among Gen Z college students will represent the core product, formative research will provide the foundation for determining the actual products—benefits associated with seeking help or encouraging a friend to do so, and the augmented product—any tangible items, or initiatives, programs, or other forms of outreach that may assist the target audience in adopting the behavior.

4.2.7.2 Place

Importantly, the product only represents one of the four Ps that constitute the marketing mix. Lee and Kotler (2019) describe “place,” as the time when, and location where, the product or service is offered to the audience, as well as when and where the audience has opportunities to perform the target behavior. Additionally, Lee and Kotler emphasize the need to identify others in the distribution channel who may influence the audience’s decision-making.

The Truly Clean Hands campaign utilized community partnerships to discuss the target behaviors in the very places where the desired behavior occurred and where their motivation to protect their children was most relevant—in schools (Curtis et al., 2007). In addition to school-based programming, the campaign also launched events in community centers where audience members went to gain information and services—and also where norms of socially acceptable behaviors were relevant. Additionally, the campaign’s outreach in local communities created buy-in among community members and leaders. These individuals could serve as influential others, given their roots in local social networks. Utilizing a broad array of distribution channels, or places, undergirded the campaign’s success.

Similarly, the current investigation will utilize existing distribution channels, such as current campus resources focused on mental health. At the same time, to the extent that these resources may be delivered via more technologically advanced or novel channels, the social marketing plan should include recommendations for new platforms to disseminate services or make it easier for individuals to seek help. This goal—of increasing convenience associated with help-seeking—is inherently connected to the idea of price.

4.2.7.3 Price

Indeed, the third P, “price,” per Lee and Kotler (2019), is rarely conceptualized as solely financial, as the authors referred to both monetary and non-monetary factors (incentives and disincentives), as well as fees, tied to the desired behavior. Fees represent financial costs directly tied to the behavior; non-monetary incentives and disincentives can include positive recognition, accomplishments, and opportunities (incentives) as well as, alternatively, negative recognition, lack of accomplishment or missed opportunities (disincentives; Parker et al., 2020a).

In the Truly Clean Hands campaign, monetary factors would include the literal cost associated with purchasing soap (Curtis et al., 2007). Non-monetary prices may include the extra time it takes to wash one’s hands, the effort it may take to break a habit of not engaging in handwashing, among other factors. Alternatively, the incentives associated with handwashing provide a platform for avoiding unpleasant costs. In other words, because formative research revealed that social acceptance represented a key motivator for handwashing, one could conceptualize a maintenance of social acceptance as an incentive—a way to avoid the cost of diminishing one’s social standing.

Research on barriers to help-seeking suggests that both monetary and non-monetary prices, or perceptions of price, will likely come into play. For example, students have reported the perception that mental health treatment is too expensive (Horwitz, 2020). With regard to non-monetary factors, students also have reported issues related to time commitments and inconvenience of accessing care, establishing time and convenience as “prices” inherent to the process of seeking help (Eisenberg et al., 2012). Strategies should focus on overcoming these costs; formative research should focus on

uncovering attitudes, knowledge, or behavior that might illuminate incentives as well as disincentives for accessing mental health care.

4.2.7.4 Promotion

Finally, per Lee and Kotler (2019), researchers should, based on insight gleaned from previous steps, devise a plan for “promotion,” including key messages, communication platforms, messengers, and creative strategies and tactics that will shape the campaign’s execution. This includes determining the creative expression of the messages (graphics, logos, design, etc.) as well as the avenues for disseminating those messages (paid media, earned media, owned media). Essentially, researchers, at this step, should determine and articulate what message should be delivered to whom, by whom, over what platform, at what time (McKenzie-Mohr, 2011).

The Truly Clean Hands campaign utilized strategies rooted in mass media, district-level programming, and direct consumer/community contact (Curtis et al., 2007). Their mass media strategies included two television advertisements, delivered in two different languages during peak viewing times; two radio advertisements, delivered in ten languages, across 18 different radio stations; and 132 billboards erected in urban areas. Their district-level programming involved live events, launched in all ten of Ghana’s regions, and in all 110 district centers. Their direct consumer/community contact strategies facilitated 128 events, which reached nearly 12,000 mothers and more than 100,000 school children, educators, and food vendors.

The current investigation also will utilize a comprehensive approach to communication platforms and messaging outlets. Because Gen Z students are active on a range of social media platforms, the campaign likely will incorporate a robust social

media strategy. Additionally, because students regularly traverse the same physical spaces—the university campus—outdoor advertising, as well as signage in facilities may also prove relevant or appropriate. Information related to how students receive and engage with information, as well as which platforms would be most appropriate for this type of messaging, represent key questions on which to focus during the formative research stage.

4.2.8 Step 8: Plan for Monitoring and Evaluation

The *eighth* step recommended by Lee and Kotler (2019) involves developing protocols for monitoring and evaluating the campaign. Ideally, these plans are interwoven, as best practices involve evaluating campaign efforts throughout the implementation process, rather than solely at the campaign’s conclusion. This allows for readjustments to be made in terms of strategy and resource allocation if necessary. Evaluation plans are categorized in terms of input, output, outcome, and impact measures, in which inputs refer to resources allocated for the campaign; outputs refer to activities launched as part of the campaign; outcomes represent audience responses, such as changes in behavior, beliefs, or knowledge; and impacts represent progress made toward the purpose of the work.

For The Heart Truth campaign, inputs refer to the amount of funding allocated toward the project by the federal funding agency, the NHLBI, as well as assets attained through the campaign’s multifaceted partnerships (Long et al., 2016). Output measures refer to, as examples, the number of corporate partnerships attained, the number of branded products created through those partnerships and the number of advertisement placements. Specifically, efforts resulted in more than 40 corporate partnerships, branded

cereal and beverage product packages (displaying partnership via the Red Dress) on 2.65 million products, newspaper advertisements in newspapers with circulations totaling nearly 600 million, magazine advertisements valued at approximately \$4 million.

Outcome measures refer to the actual changes among the target audience, such as the rate of awareness that heart disease represents the leading killer of women in the US or the connection between the Red Dress and the disease it represents. With respect to the former, awareness levels grew from 34% in 2000 to 57% in 2006. Regarding the latter, 25% of women were aware of the Red Dress' meaning in 2005; more than 61% reported awareness in 2008. These efforts culminated in impact measures—the rate at which women addressed the risk factors associated with heart disease. The evaluation of the campaign revealed that individual actions associated with increased awareness *did* translate to risk mitigation in the form of decreased rates of unhealthy food consumption, increased physical activity, and increased visits to family doctors for heart related check-ups.

The current social marketing plan also will include an evaluation plan, organized in terms of input, output, outcome, and impact measures. Input measures may take the form of time commitments from existing staff members at the university as well as budget allocations from institutional funding sources. Output measures would include campaign activities, such as social media content distribution, events, or programming, depending on insight gathered during the formative research phase. Outcome measures will relate to attitudes, knowledge, and behavior, organized through the framework of the TPB. Impact measures, ideally, will come to fruition in the form of increased levels of

help-seeking and decreased levels of anxiety and depression among Gen Z college students.

4.2.9 Step 9: Budget

To accomplish the *ninth* step, researchers should establish a project budget and identify funding sources (Lee & Kotler, 2019). Budgets should take into account costs associated with the strategies outlined in steps seven and eight, related to the strategic marketing mix as well as the monitoring and evaluation plans. Both The Heart Truth campaign and the Truly Clean Hands campaign established budgets for the array of campaign activities, including media buys, event planning and operational costs associated with community outreach.

The current investigation also will involve the development of a budget once input measures—the resources allocated toward the campaign—are understood. Information gathered throughout the preceding steps will drive the allotment of resources and the weight of funds appropriated toward various efforts.

4.2.10 Step 10: Plan for Implementation and Sustaining Behaviors

The *tenth* step, as outlined by Lee and Kotler (2019), culminates in an implementation plan—a protocol establishing who is responsible for completing the tasks outlined in the plan, a timeline for disseminating messages, a guideline for use of communication platforms, and an overview of costs associated with each component within the plan. The implementation plan guides the overall execution of the campaign. Both The Heart Truth campaign and the Truly Clean Hands campaign both involved carefully coordinated efforts spanning media advertising buys, coordination with nonprofit organizations, event planning, community organizing, and face-to-face

consumer interaction. A thorough implementation plan, delineating these responsibilities, was certainly necessary to integrate and harmonize these activities.

The social marketing plan targeting help-seeking also will define and coordinate campaign activities and responsibilities. These efforts will likely be dispersed among staff members employed at the institution's central public relations office as well as at the institution's mental health resource or counseling centers. In this case too, evaluations should take place throughout the campaign's implementation to allow for readjustments or course corrections, should circumstances necessitate them.

In summary, the two case studies demonstrate how proper planning—guided by extensive formative research—position a social marketing campaign to achieve its overall objectives. Lee and Kotler's (2019) ten-step model provides a basis for ensuring all of these important efforts are completed. The two studies comprising this investigation—formative research and then message testing—equip the author to develop an audience-centric, theoretically driven, and empirically informed social marketing campaign, aimed at increasing rates of help-seeking among Gen Z college students.

Sufficiently completing these ten steps is contingent upon rigorous and thorough data collection throughout the current investigation's component studies. These data will serve as the basis for all campaign activities. The following chapter provides a detailed overview of the methods that will guide these studies.

CHAPTER 5. A MIXED METHODS APPROACH TO SOCIAL MARKETING CAMPAIGN DEVELOPMENT

This study occurred in three stages: (1) the formative stage (qualitative focus groups), (2) the message development and evaluation stage (experimental procedures), and (3) the social marketing plan development stage (final recommended interventions). This chapter provides an overview of methods applied to the investigation's two component studies, which were sequentially conducted during Stages 1 and 2. Consistent with research in message design and strategic social marketing campaigns, the interpretation of data throughout this investigation was cumulative in nature. Content used in Stage 2 built upon insight gathered at Stage 1. The ultimate social marketing plan, developed at Stage 3, emerged from the scaffolding established by insight gathered in Stages 1 and 2.

In Study 1, the researcher employed qualitative methods, specifically focus groups, to gain crucial formative insight. These methods were executed in alignment with the theory of planned behavior (TPB). In Study 2, the author utilized quantitative methods to assess message design and timing, while also extending existing knowledge of nuances related to inoculation theory. This chapter describes in detail the methods underscoring these processes.

5.1 STUDY 1: Formative Insight, Applying the Theory of Planned Behavior

Study 1 involved formative data collection, with questions guided by the TPB. Focus groups were utilized to understand student's attitudes, knowledge, and experiences both associated with personal mental health help-seeking and the idea of encouraging peers to seek care. This method of qualitative data collection provided an advantage over

traditional self-report measures or in-depth interviews, as focus groups reveal insights from dynamic group interactions and engagement (Morgan, 2019). At the same time, as described below, participants also were asked to submit information individually via a filter survey provided to them in advance of the conversation and through questions answered individually and privately in a waiting room immediately before the focus groups began.

5.1.1 Participants

Undergraduate students between the ages of 18-26 ($n = 35$) attending a large southeastern university were targeted to participate in this study and recruited through convenience and snowball sampling. The age parameters for participation ensured that all subjects were members of Gen Z (i.e., born between 1995-2012; Twenge, 2017). Each focus group included between 8-12 participants, in alignment with best practices for such discussions (Morgan, 2019). Participants were assigned to focus groups based on the number of years they had been enrolled at the institution, with first- and second-year students assigned together and students in their third year or beyond assigned together. Additionally, participants were placed in gender-homogenous groups within those categories, which also is consistent with established best practices (Nyumba et al., 2018). Initially, 2-3 focus groups were targeted per age category, with the recognition that additional discussions may be necessary until a point of saturation was reached. This saturation point was achieved after two focus groups were completed for each age group (four total).

The rationale for bifurcating the groups by age was related to the crisis component of this study. For students in their first or second years, the majority, if not

all, of their college experiences had been colored by the COVID-19 crisis. Thus, their experiences with any anxiety and depression deriving directly from this ongoing crisis differed, in meaningful ways, from those of their upperclassmen counterparts. Members of the upperclassmen group were able to reflect on their college experiences—and attitudes, knowledge, and behaviors associated with help-seeking—during pre-crisis times.

All focus group subjects were compensated with a \$5 gift card, as a token of appreciation for their participation. These gift cards were donated by the Office of Public Relations and Strategic Communication at the author's institution.

5.1.2 Procedures

Prior to initiating the focus groups, participants completed a brief questionnaire, in which they provided consent, reported demographic information, and answered questions related to current course modality (in-person or entirely online—both of which deviate from normal experiences due to health and safety protocols associated with the crisis). They also, as part of this questionnaire, provided information related to their existing knowledge of mental health resources on their campus. After submitting the questionnaire, students were contacted to schedule their focus groups, all of which took place over the video conferencing platform, Zoom.

A research assistant was trained to assist the focus group moderator (i.e., taking notes, managing technical issues with the Zoom platform, and supporting a smooth discussion overall). The research assistant also provided instructions to participants when they entered the Zoom room. At this stage, before the focus groups began, participants were placed in individual Zoom breakout rooms and were given a link to a survey with

open-ended introductory questions related to the COVID-19 crisis and its impact on students' mental health. These prompts included questions such as "how are your friends handling this unconventional semester?" and "how are you feeling, in general?" These procedures were more practical to employ outside of a group setting, where social norms may have influenced individuals' responses. Participants were instructed to spend, approximately, the first five minutes of the session answering these questions via the survey platform, Qualtrics, which allowed them to submit information privately, without other participants viewing their responses. After participants completed this step, they had the ability to admit themselves back into the group Zoom room where the author moderated the discussion.

The focus group protocol consisted of a semi-structured series of open-ended questions, developed through the framework of the TPB, and thus incorporating questions related to attitudes, subjective norms, and perceived behavioral control. These questions were designed to prompt engagement, dialogue, and elaboration among participants. Participants were asked to keep their cameras on to facilitate a more natural conversational setting. Protocols for the focus group discussions are provided in the list of additional files.

5.1.3 Analysis

Following the focus groups, the author and research assistant identified thematic concepts, utilizing a recursive process that involved discerning patterns and classifying repetitive commonalities (Braun & Clarke, 2006). More details on this analysis are provided in the next chapter. Following that process, the author and research assistant re-examined the transcripts, finalized the themes, and coded 20% of the content to establish

inter-coder reliability, per established best practices (Riffe et al., 2019).

Recurring themes revealed through the framework of the TPB (attitude toward the behavior, subjective norms, perceived behavioral control) were evaluated and organized to provide a snapshot of the most relevant, audience-generated information related to help-seeking for oneself or encouraging help-seeking to others. As such, these data allowed researchers to discern the most meaningful ideas that could be infused into a future messaging strategy. In other words, this information formed the basis of the inoculation messages evaluated in Study 2.

5.2 Inoculation Messages Derived from Study 1 Insight

Following analysis of this insight, two themes related to each of the three TPB categories (two related to attitude toward the behavior; two related to subjective norms; and two related to perceived behavioral control, for a total of six themes) were selected as target attitudes—the foci of the inoculation messages presented in Study 2. Importantly, the focus group insight revealed that most students' existing attitudes toward seeking on-campus mental health treatment were negative, as demonstrated in Table 5.1. (The next chapter provides an in-depth analysis of this insight; however, Table 5.1 provides a high-level summary). These themes represented barriers to both help-seeking for oneself and to the idea of recommending mental health care to a peer.

Table 5.1: Themes by TPB Category, Foundation for Inoculation Messages

ATTITUDE TOWARD THE BEHAVIOR

1. Other people need mental health services more than I do.
2. Services are not sufficient in terms of availability or quality.

SUBJECTIVE NORMS

1. It's normal for students to be stressed in college.
2. Everyone is stressed during COVID.

PERCEIVED BEHAVIORAL CONTROL

1. The campus counseling center is prohibitively expensive.
 2. My insurance won't cover a visit to the campus counseling center.
-

Because the target attitudes were negative, inoculation messages were designed as part of a therapeutic inoculation strategy, a deviation from the traditional, prophylactic inoculation approach. Importantly, and as previously stated, modern research indicates that inoculation messages effectively induce both prophylactic and therapeutic processes, rendering significant influence on attitudes across the full range of initial attitude valence—whether attitudes are initially positive, negative, or neutral (Compton, 2019; Ivanov et al., 2017, 2021). As such, the therapeutic approach represented an appropriate application of the formative data; it also aligned with extant findings in inoculation theory literature.

The six themes—two related to attitudes toward the behavior, two related to subjective norms, and two related to perceived behavioral control—formed the foundation of six individual terse inoculation messages. Each message was rooted in one theme. The six themes also were used to draft a traditional (i.e., lengthy, in comparison) inoculation message and a traditional attack message. The attack message, consistent with previous inoculation literature (e.g., Parker et al., 2019), included “same” and

“novel” counterarguments, where “same” refers to information related to the six themes, and “novel” refers to new information—arguments not rooted in the six themes. All messages are provided in the list of additional files.

5.3 STUDY 2: Message Evaluation, Extending Inoculation Theory

Before launching the main study, the investigator conducted a pilot study to evaluate the capacity of the experimental inoculation message to perform the intended functions. In other words, the pilot study served as a manipulation check for the traditional inoculation message—to estimate its effectiveness—before the main study commenced. The terse messages were not evaluated in the pilot test, as they served as the focal point for the main study.

5.4 Study 2 Pilot Study

5.4.1 Participants

Undergraduate students between the ages of 18-26 ($n = 36$) at a large southeastern university were targeted to participate in the pilot study. These individuals were not the same people who participated in Study 1. The age criteria, as in Study 1, were designed to disqualify individuals who were not members of Gen Z (those not born between 1995-2012; Twenge, 2017). Participants were recruited through convenience sampling.

5.4.2 Procedures

Research participants completed an online, mobile-optimized questionnaire in which they consented to participate and provided demographic information (gender, age, number of years enrolled at the institution, and ethnicity). Additionally, participants were randomly assigned to one of two conditions, through which they: 1) received a single

traditional inoculation message, or 2) served as a control group member and received no initial message at all.

For participants in Condition 1 (the treatment group), a traditional inoculation message was delivered via Qualtrics, the same platform through which they completed the survey measuring their initial attitudes. Subsequently, these participants completed measures for perceived threat.

Participants in Condition 2 (the control group) received no treatment message after completing the initial attitude survey. Rather, they completed threat measures immediately following the measures for baseline attitudes.

5.4.3 Dependent Variables

Manipulation checks for inoculation messages traditionally encompass measures for threat and counterarguing (Compton & Pfau, 2005). This pilot study solely measured perceived threat, using two scales.

5.4.3.1 Threat

The first scale (traditional threat) operationalized threat as an apprehensive reaction, assessed using a 6-item semantic differential scale with bipolar adjectives (i.e., not dangerous/dangerous, non-threatening/threatening, calming/anxiety provoking, not scary/scary, not risky/risky, and not harmful/harmful; see Burgoon et al., 1978). This instrument required participants to respond to each item indicating their position on a 7-point bipolar continuum. The scale was preceded by a stem asking participants to indicate how they felt about the possibility of coming into contact with arguments contrary to their position that may cause them to rethink their current position.

The second scale (motivational threat) operationalized threat as a sense of motivation to defend one's attitude. Developed by Banas and Richards (2017), this motivational threat scale was adapted to address the specific context of this study. Participants were asked to indicate their level of agreement on a 7-point Likert-type scale (1 = *strongly disagree*; 7 = *strongly agree*). The four-item scale was preceded by the following stems: "I want to defend my current attitudes on...," "I feel motivated to think about why I hold the beliefs I do about...," "I feel motivated to resist persuasive messages about...," and "I want to counterargue statements made about..."

5.5 Study 2 Main Experiment

Stage 2 of this dissertation involved an empirical evaluation of inoculation messages incorporating different message lengths, frequencies, timeframes for delivery, and reinforcement efforts in the form of booster messages. As such, this investigation employed a 7 x 1 between-subjects factorial design, see Table 5.2.

5.5.1 Participants and Procedures

Undergraduate students between the ages of 18-26 ($n = 387$) at a large southeastern university were targeted to participate in the investigation through convenience sampling and in exchange for required research credit. This sample size was selected to achieve adequate power and taking into account standard levels of attrition. The age parameters, as in Study 1, ensured that all subjects were members of the target generation, Gen Z (i.e., born between 1995-2012; Twenge, 2017). Participants completed three experimental phases.

5.5.1.1 Phase 1

Phase 1 consisted of baseline measures, random assignment, initial message presentation, and threat assessment. In this phase, participants completed an online, mobile-optimized questionnaire through the survey platform, Qualtrics. Through this process, they consented to participate; provided demographic information (sex, age, ethnicity; number of years enrolled at the institution, and graduate vs. undergraduate status); indicated their ability and consent to receive SMS/text messages as part of their participation; and provided their mobile phone numbers. Individuals who did not meet the criteria for the investigation (those outside of the target age range, who were not undergraduate students, or who could not/did not want to receive SMS/text messages) were informed that they did not qualify and thanked for their interest.

Participants then completed baseline measures gauging, first, their levels of involvement with college students seeking mental health services. Subsequently, participants indicated, through a series of measures, their attitudes and attitude certainty associated with 1) the idea of them seeking mental health treatment for themselves and 2) the idea of them recommending those services to a peer.

After they completed these initial measures, participants were randomly assigned to one of seven groups (see Table 5.2). As evident in the table, the seven conditions can be broadly organized into three types: 1) one control condition; 2) three conditions, each receiving a distinct initial treatment *without* booster messages, and 3) the previous three conditions *with* booster messages.

Table 5.2: Experimental Conditions

| <u>No Message</u> | <u>Treatment Message, No Booster</u> | <u>Treatment Message + Booster</u> |
|-------------------|---|---|
| 1. Control | 2. Single Traditional Message 3. Single Terse Message 4. Three Terse Messages | 5. Single Traditional Message + Booster 6. Single Terse Message + Booster 7. Three Terse Messages + Booster |

In alignment with this random assignment, participants in the experimental groups (not control) received one of the following Phase 1 treatments: (1) a single traditional inoculation message consisting of 591 words, presented through Qualtrics (Conditions 2 and 5); (2) a single terse message consisting of 280 characters or less, which was texted to them (Conditions 3 and 6); or (3) a series of three terse messages, each consisting of 280 characters or less, delivered via SMS/text message over the course of three subsequent days (Conditions 4 and 7). For all non-control conditions, the first treatment message (or sole treatment message, for conditions only receiving one message in Phase 1) was delivered immediately after completion of the baseline attitude survey (on Day 1). For Conditions 4 and 7, the other two messages were texted to the participant on the next two subsequent days (Days 2 and 3, resulting in one message per day, for three days). Thus, Conditions 2, 3, 5, and 6 only received a Phase 1 message on Day 1, operationalized as the day they completed the attitudinal survey. Conditions 4 and 7 received Phase 1 messaging on Days 1, 2, and 3, which is cumulatively conceptualized as their initial, Phase 1 treatment. The control group received no initial message.

After individuals received their *entire* Phase 1 treatments, participants received a text/SMS message asking them to complete measures assessing perceived levels of threat tied to the prospect of encountering counter-attitudinal messaging. Again, it is important to note that, for two groups, the Phase 1 treatment was operationalized to transpire over the first three days. Thus, all participants except those in conditions receiving terse messages on Days 1, 2, and 3 (Conditions 4 and 7), completed the threat measures on Day 1. Participants in Conditions 4 and 7 completed these measures on Day 3, after receiving their third terse message via text/SMS.

Importantly, as participants began the study on different dates, a software solution was developed to ensure participants received messages at the correct time intervals. For this reason, Day 1 was operationalized as the day a participant began the study. Thus, Day 1 (and, by extension, Days 2-14) constituted different dates for individuals enrolling at different times. Integration between the Qualtrics survey software and a mass-texting software allowed individuals to be randomly assigned to conditions and to receive the appropriate messages on the correct days, per their starting date, even as individuals joined the study on a rolling basis.

Messages were delivered via these two software platforms, both of which were accessible on a variety of technological devices, including mobile phones, tablets, and laptops. As previously stated, traditional messages were delivered through Qualtrics and were seamlessly incorporated into the steps of completing the attitudinal questionnaire. Terse messages were delivered via SMS/text messaging to the individual's phone number. Notably, it is possible for individuals to connect their SMS/text messaging functions to all of the types of technology noted above. As such, it is likely that different

participants engaged with the text/SMS messages via different types of devices. The ability for participants to receive the messages over their preferred device enhanced the ecological validity of the investigation.

5.5.1.2 Phase 2

In Phase 2, half of the participants who received treatment messages in Phase 1 were exposed to a booster treatment. Accordingly, individuals in Conditions 1-4 received no reinforcement inoculation messaging. Only individuals in Conditions 5-7 received boosters in Phase 2. In other words, each condition aside from the control group had a counterpart; while they were identical in Phase 1, one counterpart condition received booster messages in addition to the Phase 1 treatment.

Phase 2 involved the presentation of these booster messages. This phase commenced on Day 8, exactly one week after the first day of Phase 1 (or the exact date that a participant completed the initial attitude survey). On Day 8, participants in the booster conditions (Conditions 5-7) received a series of terse messages over the course of three days. These were delivered on Days 8, 9, and 10, mirroring the 3-message cadence of the terse message bursts that occurred in Phase 1; see Table 5.3.

Table 5.3: Timeline for Message Distribution

| Condition | Inoculation Message(s) |
|-----------------------|-------------------------------|
| 1. Control | N/A |
| 2. Single Traditional | Day 1 |
| 3. Single Terse | Day 1 |
| 4. Three Terse | Day 1, 2, 3 |

| | |
|------------------------------------|-------------------------------|
| 5. Single Traditional + Booster | Day 1 Days 8, 9, 10 |
| 6. Single Terse + Booster | Day 1 Days 8, 9, 10 |
| 7. Three Terse + Booster | Days 1, 2, 3 Days 8, 9, 10 |

5.5.1.3 Phase 3

In Phase 3, attack messages were presented, and final attitudes were assessed. Participation in this phase transpired for members of all seven conditions on Day 14, exactly oneweek after the first day of Phase 2 and exactly two weeks after the first day of Phase 1. This two-week interval between initial treatment messages and attack messages is consistent with previous inoculation research, (e.g., Burgoon et al., 1995; Compton & Pfau 2004; 2008). On Day14, all participants received a text/SMS message asking them to complete the final task of the study via a Qualtrics link. The link directed them to a survey that presented a written attack message—persuasive language in opposition to the idea of seeking mental health treatment for oneself or recommending it to others. All groups received the same message.

The attack message was designed to appear as a letter to the editor of the student newspaper, written by an anonymous fellow student. Immediately after the presentation of theattack message, participants were directed to a series of measures assessing counterarguing output, final attitudes, and final attitude certainty. The three-phase study design is illustrated in Table 5.3.

Table 5.4: 7x1 Between Subjects Factorial Design

| <u>Phase 1</u> | <u>Phase 2</u> | <u>Phase 3</u> |
|-------------------------|-------------------------|----------------|
| 1. Control (No Message) | | Attack |
| 2. Single Traditional | | Attack |
| 3. Single Terse | | Attack |
| 4. Three Terse | | Attack |
| 5. Single Traditional | + Booster (Three Terse) | Attack |
| 6. Single Terse | + Booster (Three Terse) | Attack |
| 7. Three Terse | + Booster (Three Terse) | Attack |

5.5.2 Experimental Materials

5.5.2.1 Treatment Messages (*Independent Variables*)

The traditional inoculation message consisted of 591 words, and it was informed by prior inoculation research (e.g., Parker et al., 2019). Accordingly, the message began with a paragraph explicitly intended to provoke threat, by forewarning participants of imminent persuasive attacks on pro-mental health help-seeking attitudes (the target attitudes). Importantly, participants included individuals with positive, neutral and negative initial attitudes. As such, the forewarning component was expected to perform its traditional inoculative function among those with positive attitudes—those for whom an attack on pro-mental health help-seeking attitudes would constitute an attack on their existing beliefs (such an “attack” would actually be *consistent with* existing beliefs among those with initially negative attitudes). Notably, research has demonstrated that forewarning does not induce any undesirable effects among audiences with neutral or

opposing attitudes (Ivanov et al., 2017, 2021).

The message then provided the second component of inoculation, refutational preemption, by offering weakened forms of arguments advocating that individuals neither seek help for themselves nor encourage help-seeking to others. Subsequently, the message offered refutations to those weakened arguments. The message concluded with language designed to mitigate reactance in the form of two rhetorical questions: *Why not give mental health the proper attention? Why not recommend that your friends do the same?*

Additionally, the message incorporated the key themes identified in the formative research, which represented content from all three components of the TPB. The message was designed to present weakened forms of arguments tied to these themes and, then, to offer strong, data-driven refutations to those arguments. For example, one target attitude that arose in the formative research was the idea that other people may need mental health services more. Students believed they were part of the larger majority that should not take an appointment time away from peers who were truly struggling (for an in-depth analysis, see next chapter). The traditional inoculation message presented this argument in a weakened form and then countered it with a well-formed rebuttal, as evident in the excerpt below:

Some students believe that only a tiny percentage of college students actually stand to benefit from counseling services such as those offered at the (name of institution) Counseling Center. They assume that most students fall into the large majority of individuals who do not experience any stress, anxiety or depression. But here's the thing: the idea that only a small percentage of college students need mental health resources is clearly debunked by research. According to the National College Health Association, in 2019, 65.7% of college students reported feeling overwhelming anxiety, and 45.1% of college students reported feeling so depressed it was difficult to function. This shows that the majority of

college students could benefit from mental health resources—that the majority of students experience anxiety and can truly benefit from services designed to support them. This may be true for you; it also may be true for your friends. These services are not designed just to support a small population of students. They are designed to support you, your classmates, and your friends as students navigate a stressful time in their lives.

The design of the terse inoculation messages also was informed by extant inoculation research (e.g., Ivanov et al., 2009b). Messages were designed to invoke both core mechanisms of inoculation theory: threat and counterarguing. Similar to the traditional inoculation design, messages included a forewarning component delivered in a concise fashion, as well as succinct refutation. All terse messages consisted of less than 280 characters, modeling character limitations imposed by the popular social media platform, Twitter. Specifically, the message ranged from 48-58 words and from 244-280 characters.

In alignment with the theoretical foundations of Study 1, six terse messages were designed in total: two for each of the three TPB components. Each burst of three terse messages, (delivered to Condition 4 in Phase 1 and to Conditions 5-7 in Phase 2) contained one message per TPB category. Stated differently, each burst included one message each related to attitudes, one message each related to subjective norms, and one message each related to perceived behavioral control. This ensured that each participant receiving a burst of terse messages (whether as an initial treatment or as a booster) was exposed to messages rooted in all three TPB components.

For the two conditions that only received a single terse message on Day 1 (Conditions 3 and 6), the text/SMS message delivered on this date was randomly selected from the pool of six terse messages. As an example, the following message was designed

to address the subjective norm that college is supposed to be difficult for students. The message succinctly presents and refutes that argument.

Your friends may think anxiety/depression are parts of college life. Some say they lead to greater success. Unfortunately, that's not accurate. Research shows anxiety/depression lead to worse job prospects & damaged relationships. They can physically affect your body. So why not choose to care for your mental health?

Members of the control group did not receive any treatment messaging as part of Phases 1 or 2. Prior to Phase 3, the only text/SMS communication they received included a message confirming their phone number was able to receive texts and a message with a link to the threat measures survey (delivered on Day 1). All participants, including those in the control group, received an identical final message on Day 14 encouraging them to complete the final step of the study; the link in this message directed them to Qualtrics, where they viewed the attack message and completed the final attitudinal measures.

5.5.2.2 Attack Message

A traditional attack message consisting of 275 words was utilized in this study. In line with previous inoculation research (e.g., Parker et al., 2019), the traditional attack message included arguments designed to challenge the desired or “healthy” attitude—in this case, the idea that one should seek help for oneself and/or recommend help-seeking to others. This message included counterarguments that were both the same and novel: arguments referenced in treatment messages as well as those not mentioned in treatment messages, respectively. As an example, one of the arguments included in the attack message—the subjective norm that college is supposed to be a stressful time—was also embedded in the inoculation messages. As such, this counterargument can be labeled as “same.” This language is provided in the excerpt below:

College students are supposed to be stressed. That is what it means to be a college student. Keeping up with school work, trying to find internships, and preparing for a career is an experience that inherently will cause slight levels of anxiety and even, at times, depression.

Additionally, the attack message includes an appeal, in opposition to help-seeking, that was not addressed in the inoculation messages: a “novel” counterargument. This argument suggests that the experience of receiving mental health care is inherently and inevitably uncomfortable, as the following language reflects:

Why would students subject themselves to the incredibly uncomfortable and vulnerable setting of therapy...

As previously mentioned, the attack message was designed to appear as a letter to the editor of the student newspaper, written by a peer—a platform on which students could reasonably expect to engage with ideas surrounding campus resources and one entirely managed by their peers. This attack message format enhanced the ecological validity of the study.

5.5.3 Covariates

5.5.3.1 Involvement

To control for possible effects of involvement with the topic (college students seeking mental health resources for anxiety and/or depression), the investigation utilized Zaichkowsky's (1985) PII scale. As in previous inoculation studies which analyzed involvement as a covariate (e.g., Ivanov et al., 2009a), the scale was simplified to include the bipolar adjectives: unimportant/important, irrelevant/relevant, nonessential/essential, of no concern/of concern to me, does not matter/matters to me, useless/useful, and trivial/fundamental. Participants completed this measure during Phase 1. ($\alpha = .84$)

5.5.3.2 Number of Years Enrolled at the University

Participants in Study 1 were divided into two categories based on age, because of the vast differences in their college experiences—the younger group of first- and second-year students having essentially only experienced college during periods of crisis, and the older group of third year students and beyond having some college experience in periods of normalcy. Because these experiences were distinct, and because individuals communicated different attitudes, beliefs, and experiences during the formative stage (Study 1), it was possible that this factor could impact the efficacy of the inoculation messages. Thus, this factor was assessed as a covariate. Participants provided this information during Phase 1.

5.5.4 Manipulation Checks

Consistent with previous studies (e.g., Ivanov, 2006) manipulation checks were conducted to ensure the messages evoked the two core components of inoculation theory: threat and counterarguing.

5.5.4.1 Perceived Threat

Perceived threat was evaluated at the end of Phase 1, after the complete presentation of the treatment messages, with two scales utilized in previous inoculation research. The first measured threat conceptualized as apprehension, assessed using the 6-item semantic differential scale with bipolar adjectives (i.e., not dangerous/dangerous, non-threatening/threatening, calming/anxiety provoking, not scary/scary, not harmful/harmful, not risky/risky; see Burgoon et al., 1978). Participants responded to each item indicating their position on a 7-point bipolar continuum. The scale was preceded by a stem asking participants to indicate how they felt about the possibility of

coming into contact with arguments contrary to their position that may cause them to rethink their current stance. ($\alpha = .88$ for first issue; $\alpha = .94$ for second issue).

A second scale measured perceived threat conceptualized as motivation to defend one's attitude. This motivational threat scale developed by Banas and Richards (2017) was adapted to address threat levels related to the target attitudes. Participants were asked to indicate their level of agreement on a 7-point Likert-type scale (1 = *strongly disagree*; 7 = *strongly agree*). The four-item scale was preceded by the following stems: "I want to defend my current attitudes on...", "I feel motivated to think about why I hold the beliefs I do about...", "I feel motivated to resist persuasive messages suggesting...", and "I want to counterargue statements suggesting..." ($\alpha = .44$ for first issue; $\alpha = .58$ for second issue).

5.5.4.2 Counterarguing Output

Participants' levels of counterarguing was assessed at the end of Phase 3, after the presentation of the attack message, with an instrument used in previous inoculation research (e.g., Miller et al., 2013). Subjects self-assessed the extent to which they engaged in counterarguing via single-item, 7-point scale with statements ranging from (1 = I accepted a lot of the arguments offered to 7 = I thought of a lot of arguments against them).

5.5.5 Dependent Variables

5.5.5.1 Attitude Certainty

Attitude certainty was evaluated using a single 100-point probability continuum, used in previous inoculation research (e.g., Parker et al., 2019), which directed

respondents to report how certain they felt about their attitude. In this case, 0 represents “no certainty,” and 100 represents “absolute certainty.” This measure was completed during Phases 1 and 3.

5.5.5.2 Attitude Change

Attitudes toward the relevant behaviors were measured using a 7-item 15-point scale (1 =most negative, 15 = most positive). The items in the instrument also have been used in previous inoculation research (e.g., Parker et al., 2019) and are bound by the following bi-polar adjectives:negative/positive, dislikable/likable, bad/good, unfavorable/favorable, unacceptable/acceptable, undesirable/desirable, and all wrong/all right. This scale was used to evaluate attitudes toward the issues in Phase 1 (baseline attitudes) and immediately following Phase 3 (final attitudes) for both issues ($\alpha = .94$ for initial attitude for first issue; $\alpha = .95$ for initial attitude for second issue; ($\alpha = .94$ for final attitude for first issue; $\alpha = .95$ for final attitude for second issue).

An index score was computed by subtracting the initial attitude levels (captured during Phase 1) from the final levels (captured during Phase 3), consistent with previous inoculation studies (e.g., Dillingham & Ivanov, 2017). Positive index scores would imply an attitudinal boost, while negative index scores would suggest a decline. An index score of zero would suggest no change in attitudes.

5.5.6 Statistical Analysis

The investigator employed a 7 x 1 one-way analysis of covariance (ANCOVA) to determine the impact of the experimental conditions on the dependent variables. Omnibus results were followed by univariate tests and planned comparisons using Dunn’s multiple comparison procedure (see Kirk, 1995) were computed on the predicted outcomes.

Unpredicted outcomes resulting from research questions proposed in this study were assessed using Sheffe's post hoc tests, which are considered the most conservative (Hair, Anderson, Tatham, & Black, 1995).

CHAPTER 6. ANALYSIS OF STUDY 1 FORMATIVE DATA, FOUNDATION FOR STUDY 2 MESSAGES

A convenience sample of undergraduate students ($n = 35$) was recruited. Four focus groups were conducted: two groups including first- and second-year undergraduate students and two groups including undergraduate students in their third year or beyond. Participants were further divided into same-gender groups for the discussions, in alignment with established best practices (Nyumba et al., 2018). Recruitment proceeded on a rolling basis until responses achieved a point of saturation, which occurred after four discussions (Morgan, 2019). The author moderated the focus groups with aid from a graduate student research assistant.

A semi-structured interview protocol guided the focus groups, a process grounded in extant literature and best practices (Morgan, 1997). The four discussions ranged from 43 minutes to 96 minutes ($M = 59$ minutes). The participants ranged in age from 18-23, with an average age of 19.7.

Due to health and safety concerns associated with the COVID-19 pandemic, focus groups were conducted over the video conferencing platform Zoom. Discussions were video recorded with participant consent and transcribed verbatim. Following the focus groups, the author and research assistant created a codebook, which was developed inductively from the data. The author and a research assistant coded the first transcript independently and achieved 90% average inter-rater agreement. After establishing an acceptable level of reliability, the remainder of the transcripts were coded separately.

Throughout this process, the author applied Braun and Clarke's (2006) six-step process for inductive thematic analyses. This includes: 1) familiarity with the data, 2)

generating initial codes, 3) searching for themes, 4) reviewing themes, 5) defining and naming themes, and 6) producing the report. This process focused on identifying patterns that addressed the research questions presented in Chapter 3.

6.1 Findings

In alignment with the research questions, focus group questions and protocols were oriented around the three components of the theory of planned behavior (TPB): attitudes toward the behavior, subjective norms, and perceived behavioral control. Additionally, because focus groups were segregated by the number of years students had been enrolled at the institution, students who matriculated prior to the COVID-19 pandemic were able to reflect back upon their experiences during periods of normal campus operations. Thus, these individuals were able to provide insight relevant to RQ1, RQ2, RQ5, RQ6, RQ9, and RQ10. All participants were able to provide information germane to the remaining research questions (RQ3, RQ4, RQ7, RQ8, RQ11, and RQ12), which pertained to periods of crisis.

The discussions yielded several themes embedded in each component of the TPB. Related to attitudes toward help-seeking (oneself or others), participants expressed the perception that *on-campus mental health resources are not high-quality*; the observation that *on-campus resources are not well known or understood*; and that the prospect of *help-seeking is unpleasant and/or intimidating*. Additionally, the focus group participants discussed several behavioral norms associated with on-campus mental health resources. These included the belief that on-campus resources are utilized only by those with severe mental illness conditions—the idea that *other people need it more than I do*. Participants also expressed subjective norms such as the idea that *college is supposed to be stressful*;

the notion that *anxiety induced by the global pandemic is something everyone shares*; the feeling that *mental health resources are stigmatized*; and the observation that *influential others do not value or recognize the importance of mental health*. With regard to perceived behavioral control, participants expressed two main themes: the idea that *on-campus mental health services were prohibitively expensive* and the perception that *on-campus mental health resources were difficult to access in other ways*, unrelated to the cost.

Each of these insights is discussed in more detail throughout this chapter. Within each section, the themes are discussed as they pertain to the four research questions related to each TPB component—questions which focus on 1) the current state of participants' attitudes, perception of norms, and beliefs regarding behavioral control and 2) how those were shaped. Interestingly, in the vast majority of cases, the insight applied to both periods of crisis and periods of normalcy. Additionally, in the majority of cases, the insight was relevant to both target behaviors (seeking help for oneself and recommending help seeking to others).

6.2 Attitudes Toward the Behavior

The first four research questions focused on undergraduate Gen Z students' attitudes toward two behaviors: seeking on-campus mental health services for themselves (RQ1 and RQ3) and recommending that peers seek on-campus mental health services (RQ 2 and RQ4). Specifically, all research questions first focused on what attitudes students held (RQ1a, RQ2a, RQ3a, and RQ4a) and then, how those have been shaped (RQ1b, RQ2b, RQ3b, and RQ4b). The research questions further probed the differences between these attitudes during times of normalcy and during periods of crisis, where RQ1

and RQ2 focused on periods of normalcy and RQ3 and RQ4 focused on periods of crisis. See Table 6.1.

Table 6.1: Research Questions: Attitude Toward the Behavior

RQ1: During periods of normal campus operations, (a) what are students' current attitudes toward seeking mental health resources on campus and (b) what knowledge, beliefs, and experiences have shaped those attitudes?

RQ2: During periods of normal campus operations, (a) what are students' current attitudes toward recommending that peers seek mental health resources on campus and (b) what knowledge, beliefs, and experiences have shaped those attitudes?

RQ3: During periods of crisis, (a) what are students' current attitudes toward seeking, mental health resources on campus and (b) what knowledge, beliefs, and experiences have shaped those attitudes?

RQ4: During periods of crisis, (a) what are students' current attitudes toward recommending that peers seek mental health resources on campus and (b) what knowledge, beliefs, and experiences have shaped those attitudes?

Three major, recurring themes related to attitudes emerged from the focus group conversations. These themes materialized in all four focus groups and are described in greater detail, with explication related to the four research questions, below. Notably, for insight underscoring attitudes specifically (as opposed to, for example, subjective norms), participants did not distinguish key differences related to seeking services themselves vs. recommending the services for others. Additionally, the attitudinal themes were relevant to both periods of crisis and normalcy.

6.2.1 Attitude: On-Campus Mental Health Resources Are Not High-Quality

The first components of RQs 1-4 (RQ1a, RQ2a, RQ3a, and RQ4a) served to uncover what attitudes currently existed among the target audience, related to seeking help for oneself and to recommending help-seeking to peers. In response to both target

behaviors, participants expressed a variety of issues underscoring their perceptions that on-campus mental health resources were of low-quality caliber. They anticipated that, if they or a peer did seek treatment, their experiences would be negative. Participants in both the younger and older groups expressed these perceptions, signaling that these attitudes persisted across years of experience at the university as well as in both periods of crisis and periods of normal operations.

For example, one upperclassmen participant noted, *“I don't have any personal experiences with going to the Counseling Center or anything, but I wouldn't know, like... there's just an overwhelming sense that they're unaccommodating, I guess.”* He clarified that this perception existed before the onset of the pandemic and persisted during the crisis. Additionally, an underclassman student expressed, though she had never accessed the services, that she assumed the experience would be impersonal and ineffective: *“It can be less personal and more like pushing prescriptions or something. I wouldn't really want to seek help for just that reason.”* Participants also communicated negative attitudes related to accessing mental health services specifically in a COVID-19 environment, as this young lady expressed:

“I would say one of the big ones for me is Zoom. Like I don't want... I would rather meet with someone in person, and with COVID it's kind of hard. I'm a very... I'd rather have social interaction when talking to someone. Zoom just wouldn't feel as real.”

This insight reflects negative attitudes toward the on-campus resources, colored by assumptions or experiences related to the services themselves.

6.2.1.1 Factors Shaping the Attitude Toward Both Target Behaviors

The second component of RQs 1-4 (RQ1b, RQ2b, RQ3b, and RQ4b) addressed the factors that have influenced the formation of participants' current attitudes. Several individuals noted their conversations with peers as crucial to shaping their perceptions. For example, another upperclassman participant who, notably, had never sought services herself articulated,

“I feel like my attitude toward the Counseling Center is negative because I haven't experienced anything with the Counseling Center. I haven't actively sought them out, but, at the same time, I only hear negative things about the Counseling Center, and that's kind of become my perception of it: that if I were to turn for help, it wouldn't be to the Counseling Center because I've heard so many people have negative experiences with it.”

Additionally, a younger male student noted, *“The only person that I know who's ever tried it would be my girlfriend, and her experience was negative, so that's the only kind of basis, but I have to go off of.”* As demonstrated by the previous two excerpts, participants who had never utilized mental health resources themselves, described peer experiences as very important in shaping their attitudes toward these services, as this participant shared: *“It's probably pretty powerful. I mean it's not, like, an online review where you're going to, like, review a product. It's a first-hand experience, and if I'm trusting a friend, I'd probably take it as law.”*

In the same vein, for many participants, attitudes toward seeking services and recommending them to others were shaped by personally navigating a negative experience with the on-campus mental health center. These perceptions also spanned both the younger and older groups. An older female student shared,

“It could have just been an off day. It could have been a lot of things, but it was just not comforting at all, and I was very hesitant to go back, but I did it and it was fine. But that could have been because it was online. It could have been... I don't know. I don't know why it was so bad the first time. I remember, like, texting my parents after, and I was, like, ‘I'm never going back ever again.’”

This perception was consistent across genders. An older male student shared, *“I had a similar experience...I think it was last year when I tried to go...and it was, like, awful. Like, it was just not good.”* These reflections indicate that attitudes toward the target behavior, related to the quality of mental health services, were shaped by both personal experiences and peer accounts of experiences. These were overwhelmingly negative.

6.2.2 Attitude: On-Campus Resources Are Not Well Known or Understood

A second theme that emerged from all four groups—related to attitudes toward the target behaviors—was the notion that, for participants who lacked personal experience with mental health resources, there was a dearth of knowledge about the on-campus services, beyond simple name recognition (RQ1a, RQ2a, RQ3a, and RQ4a). Stated differently, participants without first-hand knowledge of available services possessed scant additional information—beyond what they heard from peers—upon which to base an attitude. This participant summed up this lack of knowledge, noting, *“I know people have done counseling before. I have no idea where it is. I know you can, like, look up ‘UKY mental health,’ and things will pop up online, but I don't know where it is on campus.”*

Interestingly, even a participant who had explored the campus counseling center's

website before still claimed to possess scant knowledge. She noted,

“When I was a freshman I was, like, looking for counseling services, and I remember going to their page, but I don't know if I couldn't get an appointment, or what happened, but I didn't end up going, and that's, like, really my only experience with it.”

This lack of knowledge permeated both genders and years of enrollment, suggesting that it pertained to attitudes that existed both prior to and during the period of crisis.

6.2.2.1 Factors Shaping the Attitude Toward Seeking Help for Oneself

Taking this lack of knowledge into account, it is reasonable to suggest that students' existing attitudes were not formed or shaped by a great deal of existing knowledge (which, perhaps, further leverages the importance of peer experiences). This insight addresses RQ1b and RQ3b, as the fact that many students *“don't know much about”* the actual services suggests that their attitudes either may not have been fully formed or were shaped by influences other than specific knowledge about campus resources.

As examples of this insight, most participants noted that they had simply heard the names of the mental health resources at large university events, mostly geared toward first-year students, such as new-student advising conferences or university orientations. Importantly, however, the participants emphasized that this depth of knowledge ended at simple name recognition, if that. One participant summarized this experience, sharing:

“I'm sure, like most people, I remember I heard about it during orientation week. I'm sure I've heard all the resources at least a couple times, but, like, I didn't

really hear anything more than, like, baseline. So, I don't really remember any of them. I couldn't name one off the top of my head."

Participants further expressed that they felt capable of finding information about the services by searching for them on the internet, but they lacked top of mind awareness regarding the spectrum of available on-campus mental health services. This participant summed up this perception, noting, *"I went to the website just now, and it seems like there's a lot of resources that I didn't even know existed. So, it seems like communicating is a big problem."* As these comments spanned both the underclassmen and upperclassmen groups, the insight explained the ways attitudes have (or have not) been shaped during periods of both normalcy and crisis. They underscored attitudes toward seeking help for oneself (RQ1b and RQ3b).

6.2.2.2 Factors Shaping the Attitude Toward Recommending Services to Others

Specifically related to RQ2b and RQ4b, students cited a dearth of knowledge as a significant barrier to recommending their peers seek help. As such, participants' lack of knowledge manifested differently with respect to the two target attitudes. With respect to the first (toward help-seeking for oneself), their lack of knowledge suggested that their attitudes were shaped by other factors (such as peer accounts). In contrast, participants expressed their lack of knowledge as a direct cause of their negative attitudes toward recommending services to their friends. Stated differently, in the first case, the lack of knowledge represented a potential missing factor in the attitude's formation; in the second case, lack of knowledge constituted the source of the attitude's valence. Students did not feel comfortable endorsing something about which they did not possess significant knowledge.

Because they felt they lacked information about, experience with, or even education on the campus services, students felt ill-equipped and out of place in recommending them. One upperclassman participant shared her thought process for a hypothetical scenario in which a friend demonstrated signs of anxiety:

“If I didn't think I had the right information to give—which, personally I don't really think that I do because I haven't been to any sort of counseling or therapy myself—but I would be, like, more likely to pass that along to the Community of Concern...or just someone else that maybe might be able to give more knowledge or support for the situation better.”

As demonstrated by this comment, participants believed that other people were more knowledgeable and therefore better equipped to recommend these services to a peer. This was the case for periods of normalcy and crisis.

6.2.3 Attitude: Help-Seeking is Unpleasant And/Or Intimidating

A final attitudinal theme emerging from the focus groups, which addressed the first component of the first four research questions (RQ1a, RQ2a, RQ3a, and RQ4a) was the notion that mental health help-seeking would represent both an uncomfortable experience personally as well as a distressing topic of discussion with others. In other words, participants indicated that the experience of seeking help, (i.e., being vulnerable in a counseling setting), was intimidating and/or undesirable and that pursuing campus mental health services would constitute an awkward, unpleasant subject to discuss with others. This was the case for both times of crisis and normalcy.

For instance, one participant shared, emphasizing that her feelings applied to both pre-COVID and pan-COVID times, *“I just think being vulnerable is just really hard*

sometimes.” Another participant, also reflecting upon feelings that existed before the pandemic echoed the sentiment that seeking help represented a daunting task,

“I’ve never gotten counseling services because, for me at least, it’s kind of intimidating to be, like...I’m going to be that vulnerable with somebody, because I tend to be more of an independent person. So for me, it’s just the intimidation factor. I don’t even want to try, because I’m scared that I won’t get the resolve that I want...I feel more intimidated to even look at the Counseling Center and try and go.”

These feelings shaped attitudes toward both of the target behaviors: seeking help for oneself and recommending it to others.

6.2.3.1 Factors Shaping the Attitude Toward Help-Seeking for Oneself

Participants attributed these attitudes to general assumptions related to counseling that existed before enrolling in college (RQ1b and RQ3b). Rather than pointing to specific experiences, they noted that, generally, the idea of becoming vulnerable and “opening up” with a mental health provider was simply not a feeling they desired. Students purported that they were more comfortable minimizing feelings of anxiety and/or depression through humor than by seeking out help. One participant noted,

“I think right now, and just in college in general, some people have a really hard time opening up. Especially, I feel like our generation is just always trying to, like, make a joke out of everything and laugh about everything.”

6.2.3.2 Factors Shaping the Attitude Toward Recommending Services to Others

Participants’ perceptions of mental health services (as inherently uncomfortable) shaped their attitudes toward recommending help-seeking to their friends (RQ2b and

RQ4b). They repeatedly referenced the idea of feeling vulnerable in a mental health care setting as something that would inhibit them from recommending services to a friend; they felt uncomfortable recommending an experience they viewed as uncomfortable. In the same vein, they felt it was too “big” of a step for them to actually recommend help-seeking, as one student expressed,

“You definitely have to be very vulnerable in order to talk about your own feelings and your own mental health and that kind of thing. And you have to really just dive into it with someone and put a lot of trust into someone that they're not gonna, like, you know, make fun of you or whatever because, whether you like it or not, there's a certain stigma around it, and there is certain anxiety around sharing about your mental health. So, I just think it's really big...it's kind of, like, a big step if you will. And just, like, a lot of trust and just I don't know, a lot of vulnerability.”

Participants further noted that they knew their friends well enough to assume they would not want to experience the vulnerability they associated with mental health care. This assumption about their peers' willingness to seek this kind of treatment shaped their attitudes toward recommending help-seeking, as this participant articulated:

“I would add that I think a lot of people are scared...just, you know, like therapy or counseling or anything like that is very much of a team effort. You know, you don't have someone sit there and understand all your issues. You have to put a lot of work into it, and I've had a lot of friends who just really wouldn't want to have to do that emotionally.”

As characterized by these excerpts, participants' discomfort with the idea of vulnerability

fundamentally shaped their feelings toward recommending mental health services to others. It represented a key barrier for this target behavior.

6.2.4 Summary of Findings: Attitude Toward the Behavior

These three themes pertained to existing attitudes and the factors shaping those attitudes toward the two target behaviors, both before and during the crisis. Attitudes toward help-seeking for oneself were mostly negative, shaped by personal or peer experiences, and minimally influenced by knowledge. Additionally students believed that, if they were to seek help for themselves, it would be unpleasant. Attitudes toward recommending that peers seek help also were negative because students viewed their lack of knowledge as a reason they should not recommend services. Additionally, negative personal and peer experiences with the campus resources influenced students' negative attitudes toward endorsing them, as did their assumption that the experience of seeking help, or opening up, would be uncomfortable for their peers.

6.3 Subjective Norms

The second set of research questions (RQ5-8) focused on established subject norms, recognized by undergraduate Gen Z students, associated with the two target behaviors, as well as how those norms were shaped. The research questions further probed the differences between the perceived norms during times of normalcy and during periods of crisis. See Table 6.2.

Table 6.2 Research Questions: Subjective Norms

RQ5: During periods of normal campus operations, what (a) subjective norms exist related to seeking mental health resources on campus, and (b) what knowledge, beliefs, and experiences have shaped those norms?

RQ6: During periods of normal campus operations, what (a) subjective norms exist related to recommending that peers seek mental health resources on campus, and (b) what knowledge, beliefs, and experiences have shaped those norms?

RQ7: During periods of crisis, what (a) subjective norms exist related to seeking mental health resources on campus, and (b) what knowledge, beliefs, and experiences have shaped those norms?

RQ8: During periods of crisis, what (a) subjective norms exist related to recommending that peers seek mental health resources on campus, and (b) what knowledge, beliefs, and experiences have shaped those norms?

Five major, recurring themes grounded in subjective norms emerged from the focus group discussions. These first five themes materialized in all four focus groups and are described in greater detail below. Additionally, one theme emerged that was distinctly different for males vs. females. This theme also is described in greater detail below.

6.3.1 Subjective Norm: Other People Need It More Than I Do

The dominant theme among all focus groups was the notion that on-campus mental health resources were primarily designed to serve students with severe mental health challenges. In both upperclassmen and underclassmen groups (reflecting perspectives from both pre-crisis and pan-crisis times), participants articulated that their problems were not serious enough to merit a visit to one of these resources; it was “normal” for them to forgo mental health services on campus if they self-assessed as experiencing stress levels that were not severe, compared to others.

Importantly, when discussing this dimension of what constituted acceptable behavior, participants focused on one of the two target behaviors: seeking services for themselves (rather than on the idea of recommending it to others; RQ5a and RQ7a). This was the case both before and during the crisis. One participant noted,

“People think that their problems might not be as serious because, you know, you go there and, obviously it's a Counseling Center. But at the same time, it's like, you might just be struggling with class, but somebody else can be going through a tough time at home or whatever, and that's all contributing to what they're going through. So, then, they have this thought in their head like, ‘oh I shouldn't waste other people's time because they're having it worse than I am.’”

Another participant echoed this sentiment, saying,

“I would definitely agree that other people might need help more than me. That would be an excuse that I could see people using if they were...if they needed help and, like, they thought that their problems weren't as big as other people's problems, maybe.”

Importantly, participants communicated that they did not want to take an appointment away from another student who needed help more than they did; that was considered a violation of what they considered acceptable, normal behavior. As discussed in more detail in the perceived behavioral control section, participants perceived the resources as limited in terms of availability. As such, students were hesitant to fill an appointment slot—which was viewed as difficult to secure—when someone else could conceivably benefit more from that appointment. One participant shared,

“I also don't go to the Counseling Center because I think there's other people who need it more than me, especially because I hear about how long the waitlist can be. I remember talking to an RA, and she was going to go, but her appointment wasn't until October, and it was in August, or something like that. So, I don't want to take someone's spot.”

Another participant noted concerns related to a student's “severity” and its relationship to the number of appointments one can schedule. She speculated that this concern likely impacted norms surrounding who is “supposed” to access these services:

“I think they said something like depending on your level, like severity, is like how many appointments you get. So that might make people not want to go in because they're like, oh people probably have it worse than me, I don't want to go in.”

Another participant referenced severity as an important factor in deciding to visit the counseling center, expressing that students still did not understand the circumstances that would merit a visit, (i.e., “*what the Counseling Center is for*”):

“Someone mentioned putting (mental health resources) in the syllabus and stuff like that...it doesn't necessarily reframe the perception of what the Counseling Center is for. I think we are still stuck on the 'do you go to the Counseling Center if you're experiencing a very severe issue, and that's not necessarily for me,' or whatever.”

This theme constituted the most recurring comment throughout the four focus groups, representing a core subjective norm associated with the behavior of seeking help for oneself (RQ5a and RQ7a).

As demonstrated by their comments, nearly all participants who had not previously sought mental health services expressed the assumption that they fell into a majority of students who did not experience severe “enough” distress. This belief, of course, conflicts with national data. College students in 2019, even before the onset of the COVID-19 pandemic, reported stress so acute that it interfered with everyday functioning (e.g., 65.7% indicated they had experienced “overwhelming anxiety”; American College Health Assessment, 2019, p. 14). As discussed in greater detail below, students throughout all four focus group discussions shared that they, too, experienced anxiety and depression on occasion. Most simply failed to meet a self-assessed threshold for help-seeking—a point at which they believed themselves to be anxious or depressed enough to pursue treatment.

6.3.1.1 Factors Shaping the Subjective Norm of Seeking Help for Oneself

When discussing the norm that only students with “severe” struggles should seek help, participants repeatedly referenced peers who had experienced scenarios such as a death in the family or their parents’ divorce as factors shaping their perceptions. These examples constituted the more serious circumstances, in their views, that may merit help-seeking. They downplayed anxiety or depression associated with what they considered more routine challenges, such as navigating coursework (RQ5b and RQ7b).

Thus, the comparisons they employed between those who did and did not need help shaped their viewpoint of whether they would be violating norms by seeking help. One participant articulated the reasons a student like himself may not seek help, even if he or she needed it:

“...if they needed help, and they thought that their problems weren't as big as other people's problems, maybe. Maybe it's like...some people may think that, you know, someone's mother died, or their parents may be going through a divorce.”

Participants also recognized that students, in some cases, may have experienced suicidal ideation. They used that as a bar to contrast their circumstances, fearing they may take an appointment away from someone truly in crisis, as this participant expressed:

“Maybe it's just kind of comparing things. Maybe I'm just really upset because I have three exams in a week, and I don't really feel like I can get over that, versus someone else who might be truly suicidal and not feel any hope at all. I feel like my problems would be lesser than theirs.”

Participants further noted that the COVID-19 pandemic exacerbated these norms, insight which specifically addressed RQ8b. Given the detrimental impacts of the crisis, the students expressed that they had witnessed pain and hardship around them. This further solidified ideas surrounding who might have it worse than them, as this participant shared, *“I think that during COVID, a lot of people have seen other people suffering from either losing someone from COVID or losing a job or what have you.”* This made self-assessing oneself as experiencing severe symptoms even farther outside the norm.

6.3.2 Subjective Norm: College is Supposed to be Stressful

RQ5a and RQ6a pertained to subjective norms impacting the target behaviors during periods of normalcy. The older students who matriculated before 2020, and thus before the onset of the COVID-19 pandemic, described the college experience, pre-crisis,

as one that naturally generated stress. As a result, they questioned whether their anxiety and/or depression levels necessitated help-seeking. In other words, they believed that college is supposed to be stressful; to them, it was normal to experience anxiety and/or depression.

Importantly, they did not connect the experience of feeling anxiety and depression to a need to seek help, as articulated by this upperclassman participant who reflected on conversations she has had about the experience of feeling stressed from normal college experiences—dialogues that never resulted in discussions of help-seeking:

“I guess we’ll just push through. I guess we’ll just figure it out on our own, and we’re all here together as a group of college students who don’t know what’s going on.” But that never transpires back into, like, (name of institution) Counseling, ever.”

Another student reflected,

“We’re all saying how normal this is. A lot of people are throwing around words, all the time, like ‘I’m so depressed. I’m so stressed out. I’m so tired all the time,’ that, I think you’re kind of in your head, like, ‘what college student isn’t?’”

These beliefs impacted their decision to (or not to) seek these resources as well as conversations with peers that could otherwise result in a recommendation to engage in help-seeking.

Older participants, with perspectives spanning the college experience before the crisis and during the crisis, noted that the pandemic exacerbated these existing norms, or the accepted notion that one’s university experience is supposed to invoke some level of anxiety and/or depression. These reflections provided insight into RQ7 and RQ8, which

focus on subjective norms associated with the target behaviors during a crisis. As one participant noted, the pandemic further ingrained these norms in students' minds:

“Everyone's struggling. College is already hard. COVID makes it worse. You know, now it's just kind of generally accepted that everyone's going through something pretty major. How it's affecting people is different, obviously, but now it's kind of like...it's raised awareness of these mental health issues, because a lot of people who haven't had that before are now experiencing all these things because of lockdowns and not seeing their families, not seeing their friends...all these new stressors. So, I feel like it's normalized even more, honestly, because of COVID.”

Notably, participants emphasized a key disconnect between experiencing mental health issues and the norms associated with addressing that experience, (i.e., seeking out mental health services). Given that stress is “*normalized*,” many students articulated that they had not engaged in efforts to address these mental health struggles—or even to consider how one might address them. Accordingly, this participant expressed:

“I see a lot of people in my friend groups and just online...a lot of people...it's normal to talk about mental health in a way that's romanticized. Like, ‘I'm so stressed. I am tired all the time...exhausted...my anxiety is terrible’...But no one really normalizes how to actually fix that.”

Importantly, the notion of exploring potential ways to “actually fix that” together with peers constituted a violation of social standards for the vast majority of participants—a clear out of bounds topic for peer-to-peer conversations. This perspective corresponds with RQ6a and RQ8a, as the beliefs related to this norm demonstrably

impacted students' perspectives surrounding discussions with peers—both during times of normalcy and crisis. One participant articulated that, given the normalcy associated with feelings of stress, recommending mental health treatment may insult a peer's autonomy as a fellow adult:

“Everyone's transitioning from my high school life to college life, so everyone's got all these freedoms and responsibilities, so they're kind of an adult now...As an adult, you should probably just...you know, just not comment. You can't force someone to, like, go to the hospital.”

This same participant, when referencing the idea of recommending that a friend seek mental health resources, emphasized that these conversations were so out of bounds, that initiating such a discussion could compromise the relationship. Because anxiety is so normalized, the conversation would feel abrupt and inappropriate; he said, *“It would be too blunt to do that...it might sever the friendship completely.”* As such, the normalization of anxiety represented a formidable barrier for recommending help-seeking.

6.3.2.1 Factors Shaping the Subjective Norm Toward Both Target Behaviors

Participants referenced conversations with peers and observations of other college students' expressions of stress and anxiety (but without references to help-seeking) as important factors in shaping the norms they perceived (RQ5b, RQ6b, RQ7b, and RQ8b). Additionally, social media played an important role. Participants expressed that they regularly saw peers using humor to downplay their issues on social media in a way that felt relatable to and/or generalized to describe all college students. For example, one participant shared:

“I’ve seen a lot of people not necessarily joke around about it but throw around the concepts of depression or anorexia or skipping meals, things like that. And you’re like, ‘oh haha...’ So, I think social media plays a lot into that because you see people, you know, throw it around as a joke.”

Participants expressed that throwing the idea around as a joke further ingrained the idea that all college students are supposed to be stressed. This made them less likely to view help-seeking as a normal behavior for themselves or one that they should recommend to a friend.

6.3.3 Subjective Norm: The Anxiety From the Global Pandemic is Something Everyone Shares

Nearly all participants, including those who were enrolled before the crisis began *and* those who had only known college during COVID-19, expressed the idea that everyone was stressed from the demands imposed by the ongoing global crisis (insight related to RQ7a). This finding is similar to the previous theme regarding perceptions of college being inherently stressful; however, while insight categorized within the previous theme emphasized the pandemic exacerbating existing perceptions, comments within the current theme revolved around COVID-19-specific norms, which did not previously exist, that became ingrained in lives of participants throughout the extended period of crisis.

Specific stressors included Zoom fatigue, exhaustion from social distancing restrictions, fear of being infected, and other anxiety-inducing issues surrounding COVID-19. Participants articulated that heightened levels of anxiety and depression were perceived as normal because of the length of the pandemic and the pervasiveness of its

impacts on everyday life. One participant reflected on her own anxiety during the crisis, sharing,

“I think, since COVID, my anxiety has gotten worse, and I’m also overwhelmed and feeling burnt out, especially because last semester, when it first started, a lot of the teachers, kind of, were doubling the work amount because everything at once went online.”

Another participant offered a parallel assessment, articulating that, *“someone said that professors were giving a heavier workload because of the pandemic, and, oh my goodness, do I feel that.”* Several participants visibly and audibly agreed with this statement.

Moreover, participants shared examples of new stressors that emerged during the COVID-19 crisis—experiences they described as the new norm for students, from evolving academic expectations among faculty members to the feeling, engendered by the expansion of technology during the pandemic, that students must always be available. For example, the previous participant noted, *“None of my classes have excused absences anymore.”*

Against that backdrop, participants referenced that they felt the constant availability offered by Zoom caused them to consciously reevaluate tending to their most basic needs. In other words, they struggled to navigate situations that would have previously been “no-brainers” for missing class or restricting their availability. One participant expressed:

“A lot of my classes, I’ve said, like, ‘hey, I’m sick. Hey, my car slid out on ice, and I’m unable to make it home.’ But (the instructors) are like, okay we’ll just

drop in on the Zoom. No. I'm not going to do that. I'm going to take care of me... I'm going to take care of myself and my low hanging fruit on my Maslow's Hierarchy of Needs, before I worry about jumping into your Zoom call. That's been incredibly frustrating in creating boundaries between work in my personal life or school and my personal life.”

Importantly, participants expressed—similar to the previous theme—that this normalized, accepted experience of navigating anxiety and depression induced by the pandemic did not translate to shared conversations about seeking help (RQ8b). Students commiserated, as demonstrated above, about the experience of feeling stressed; *however, they did not take the next step to contemplate or explore potential solutions, such as on-campus resources.* Because stress was perceived as normal, it did not necessarily trigger any conversations or recommendations tied to help-seeking behavior.

6.3.3.1 Factors Shaping the Subjective Norm Toward Both Target Behaviors

Participants across all four focus groups shared that they perceived the universal, COVID-related stress among their peers in their interactions and conversations; those observations shaped their perceptions of norms (RQ7b and RQ8b). The nature of the crisis impacted their lives in nearly every way—from their course modality to their living conditions, and from their ability to gather in large groups to new requirements to stay on campus, such as ongoing COVID-19 testing. Participants expressed that these circumstances created stress for everyone, as this student said, *“now, it's not just some people struggling. Everyone's struggling. College is already hard, and COVID makes it worse. You know, now it's just kind of generally accepted that everyone's going through something pretty major.”* Importantly, this realization appeared to strengthen the notion

that other people may need mental health services more. Because the crisis moved the threshold of what constituted severe stress for everyone, many participants articulated that they still felt hesitant to either seek help themselves or recommend it to others.

6.3.4 Subjective Norm: Mental Health Resources Are Stigmatized

Interestingly, despite the participants' acknowledgment that anxiety and depression, associated with both the typical college experience and the crisis, were pervasive, they nevertheless perceived a clear and obvious stigma associated with help-seeking for mental health. This constituted another important theme relative to subjective norms, which impacted both target behaviors (RQ5a, RQ6a, RQ7a, RQ8a). Students said they associated a feeling of embarrassment or shame with seeking treatment during periods of crisis or normalcy. For example, one participant noted,

“I would say there's definitely a stigma even though it has become a lot more normal to talk about mental health. There's still just, kind of, different connotations associated with mental health that are just like...I don't know. So, I know for other people that's probably intimidating too.”

Participants further described two sides of the stigma—the judgement they could imagine from peers for needing mental health resources, but also the idea that peers may assume they were exaggerating their mental health needs as a way to seek attention or to be dramatic. One participant described this as *“the fear of people thinking you're just wanting attention, or you know, something like that. So I think that is part of the problem.”*

Again, participants noted it was normal to talk about general, normalized feelings of stress; however, taking the next step to discuss help-seeking was not. The line they

perceived between what was and was not socially acceptable was firmly fixed. One participant expressed that discussing these feelings in detail—or admitting that formal treatment might be necessary—would likely result in becoming an “outcast,” noting:

“Things like depression and anxiety and stuff like that, maybe not everyone feels that. There is a social stigma. You're kind of an outcast. You're kind of different because, ‘Oh, you're depressed. You have anxiety. That is different from me.’ So, I also feel like it's easier to talk about it when it's a shared feeling, rather than just you yourself explaining it to someone who doesn't have it and doesn't understand it.”

This perception of social stigma among members of their social network influenced decisions both to seek help for oneself and, more directly, decisions related to recommending resources to friends. These norms existed for both upperclassmen and underclassmen students, suggesting that, while the crisis may have created additional opportunities to commiserate about anxiety, it did not shift existing norms related to the stigma associated with mental health help-seeking.

6.3.4.1 Factors Shaping the Subjective Norm Toward Both Target Behaviors

Participants lamented the existence of the stigma surrounding mental health care, submitting that it likely inhibited individuals from seeking help when and if they needed it. Interestingly, they further noted that the stigma was largely perpetuated by peers who had never experienced therapy; students who knew people with positive mental health care experiences viewed those individuals as the avenues for positively addressing the stigma (RQ7b and RQ8b). An older female participant summarized this perspective accordingly:

“You have people who still kind of subscribe to the stigma of therapy and professional help, and I think I’ve learned a lot throughout college that it takes almost, like, those influencing people who have experienced therapy...have experienced professional help...to guide people on board when they know they need it.”

Thus, while participants’ experiences in their overall social networks shaped their perceptions of the stigma in a negative way, their interactions with mental health care ambassadors—students sharing positive experiences—shaped their perceptions of the stigma in a healthy direction.

6.3.5 Subjective Norm: Influential Others Don’t Value Mental Health

Participants described interactions with older generations (their parents, their faculty members, etc.) as discouraging in terms of valuing mental health (RQ5a and RQ7a). These interactions shaped their perceptions of the norms they associated with older individuals and the environments in which older individuals exercised authority. Participants communicated that these individuals created a setting in which participants did not feel comfortable discussing or seeking support for mental health concerns. Several participants described unpleasant experiences with faculty members when they disclosed sensitive matters related to their mental health. For example, one participant shared,

“I had a family member pass away my freshman year, and it was a really tough time for me, and I went and visited. One of my professors made me send them an obituary and also a full pamphlet from the funeral before they would even believe me and give me an extension of my work. It was just, kind

of like, really? I don't know. It just seems like, if there's not trust in the faculty, then you're not going to come forward and talk about it anymore, because it's like no one wants to hear it."

While the requirement for documentation represents university policy, the participant emphasized that the feeling that the faculty member did not believe him was the most unsettling part of this exchange. When he approached the faculty member during a time of vulnerability and fragility, he was met with, what he described, apathy and distrust. The student indicated that this influenced his future willingness to discuss sensitive matters, such as ones related to mental health, with faculty members.

Moreover, participants stated that these types of interactions created expectations of how other university representatives (other faculty or staff members) would handle discussions related to mental health; these expectations were considered the norm. Another participant echoed this belief:

"If I email my teacher, and I say, 'I've had a lot of anxiety lately, can I get an extension for my paper?' and they say, 'No. I don't believe in anxiety. You don't have an extension,' I can kind of see that being, like... 'Okay, well if the teacher doesn't, believe me...the teacher isn't taking me seriously, then the person that's at the Counseling Center isn't either.'"

These observations spanned beyond faculty members. Participants broadly agreed that members of older generations generally placed less value on the idea of caring for—or talking about caring for—one's mental health. They commonly referenced their parents and grandparents' attitudes toward therapy, referencing the stigma and discomfort associated with discussing mental health. Further, some participants expressed frustration

with the generational differences related to mental health, such as the participant who said,

“Our parents don't understand, and a lot of the times, the people that we work with...our bosses, our parents...they're older than us, and they haven't grown up in this culture of talking about mental health. And so, when we try to start the conversation and be truthful and honest about what's going on in our lives, there's a lot of, like...I don't wanna say consequences because I believe that's too strong of a word...but not a lot of understanding that surrounds that.”

Specifically, participants expressed that members of older generations viewed mental health challenges as character flaws and help-seeking as manifestations of fragility rather than growth, as this participant noted,

“They do see that as a weakness, and so when we are trying to kind of open this conversation about mental health and really, like, destroy the stigma around it, we're constantly pushed back on being told that that mental health is a weakness, for us...and, knowing ourselves and knowing where we're at in our lives is a weakness instead of a strength for ourselves.”

Participants also shared discouraging conversations they had experienced with influential individuals from older generations. These stories were presented as exemplars for the norms they expected when engaging with these populations. To that point, one participant shared the following anecdote,

“I am really close to my parents, and I had mentioned, ‘Maybe I should go to counseling or something.’ And, you know, it's one of those things, like, I love my mom, and she didn't mean it, in a bad way, but she was just like, “No. You

don't need to do that.” I feel like their generation sees it as, like, almost like a weakness...like, “Oh you can't get through it, so you went to counseling...”

And I think our generation is doing a better job.”

Another participant expressed that her parents had quickly disregarded her mental health needs when she confided in them. She noted,

“I came from a place where, like, we mentioned before...like, parents don't really understand the whole mental health thing. Very much, like, ‘suck it up. This is life.’ And I feel like that’s the response that I've gotten.”

As this comment suggests, as students discussed this theme, they reflected on experiences they had personally navigated, rather than stories they had heard from friends. In other words, the participants were inwardly focused when discussing these struggles; they shared these thoughts in the context of barriers to seeking help for themselves. At the same time, they also expressed that these negative personal experiences influenced their willingness to recommend that peers discuss mental health issues with authority figures as well. These comments related to both times of crisis and non-crisis. Thus, this insight addresses RQ5a and RQ7a.

6.3.5.1 Factors Shaping the Subjective Norm

As demonstrated by the anecdotes and excerpts above, these norms were shaped through personal experiences with influential others, which occurred in conversations via email or in person. For the most part, these conversations occurred with authority figures (faculty members, parents, or older family members), who may have had a more significant impact on students’ perceptions of what constitutes normal behavior.

6.3.6 Gender Differences in Subjective Norms

6.3.6.1 *Discussing (or not) Mental Health Challenges, But Never Help-Seeking*

Interestingly, an additional recurring theme emerged from the focus group discussions, which was bifurcated by gender. This theme specifically refers to the subjective norms associated with discussing mental health with peers, the foci of RQ6 and RQ8.

For male participants, individuals expressed that discussing mental health (beyond the typical, “normal” stress of college) is uncomfortable, full stop. It was not something they would perceive as a normal topic of conversation because they did not want to be perceived as “weak,” and neither would their friends. Moreover, they expressed that telling a friend he needs to seek help would likely damage their friendship. Thus, for males, conversations about mental health challenges did not venture beyond discussions of “normal” stress.

Female participants, on the other hand, stated that they often talked about deep levels of stress, anxiety, and depression—beyond the normal stress associated with “normal” college stress—in their social circles. This topic was normal. In fact, several female participants submitted that discussing the experience of anxiety or depression could constitute a type of bonding experience. However, it is important to underscore that participants also expressed they never took the next step into discussing help-seeking specifically. For females, conversations about mental health challenges ventured well beyond discussions of “normal” stress, but never broached into discussions of potential solutions.

Males. Male participants regularly voiced concerns about being seen as weak, as

this participant shared, *“For guys, they don't want to be seen as mentally weak, and so they don't want to be seen, like going to a counselor when all their friends aren't going to counselors. Why are they different?”* Because of these norms, male participants expressed extreme discomfort at the notion of recommending a peer seek help for mental health challenges. Associating the topic of mental health with weakness, they conveyed that making such a recommendation to a friend would be tantamount to slandering him. One participant maintained, *“I think if you tell someone that they should go see someone, they're going to take that as more of an insult than, like, an actual suggestion.”* Another participant agreed, saying *“I feel like they would just take it the wrong way or something,”* while another participant speculated that such a bold recommendation could *“sever the friendship entirely.”*

In addition to concerns about a friend's reaction, participants mentioned that recommending mental health services would constitute a breach of acceptable boundaries within their relationships. For example, one participant noted, *“I really don't think it's your place to, like, tell someone else that they need to go see therapy. I think that's just kind of an awkward conversation to have, especially with people.”* They also expressed that this overstep could backfire and have a harmful, rather than helpful, effect, as this participant shared, *“I feel like being told that you can visibly see a difference in someone so drastic that you tell them to go see a therapist would probably discourage them, or they could have the inverse effect.”*

Females. Female participants, while recognizing a stigma associated with help-seeking, described a very high level of comfort discussing and consoling each other about acute anxiety and/or depression. They expressed no fears about being perceived

as weak; on the contrary, they actually described these discussions as opportunities that brought them closer together—using the term “trauma bonding,” as this participant shared,

“I think that it's kind of a weird trauma bonding thing that is really normal. It's kind of normalized in our generation, right now...in a weird way, a thing of pride. We kind of wear it as a way to bond with other people, which gives us a reason to never want to fix it because it's kind of like a personality trait. It's something that helps you bond with other people; it's something that connects you. And it's something that's like, validly imperfect. And I think that's something that a lot of people want to hold on to.”

Other participants echoed this sentiment, further specifying that the experience of struggling with mental health concerns can constitute both part of one’s identity as well as a crucial connection to others experiencing similar challenges. Another participant expressed,

“How she was saying, trauma bonding and people don't want to get rid of their issues...it's kind of become like a thing where people...it really becomes part of their identity, and then it's like you don't want to fix it because you don't want to lose part of your identity, even though it's bad. People know it's bad, but they're bonding with other people over it, and if they fix it, then they're not going to have that connection any more.”

Female participants speculated that this “normalization” of anxiety and depression may be at the root of their hesitancy to discuss help-seeking with friends. One participant explained,

“I think a lot of people are—at least in my experience with my friends and my experience with myself—are pretty open about feeling like they have depression or anxiety, some of those pretty common issues. But because of how normalized we've made it, it kind of makes it feel like it's invalid to seek help or like if you need help, like you could be taking away from people who actually have depression when... What is actual depression, you know? So, I feel like a lot of people don't feel like they're valid in seeking help, or that it won't change anything, because it is so normal.”

With regard to crisis periods specifically, female participants explained that the COVID-19 crisis intensified the disconnect between expressing feelings of anxiety and depression and seeking help (RQ7 and RQ8). Specifically, one participant noticed that individuals were more frequently using stronger language to describe their experiences with mental health, but that the prospect of seeking resources to address these challenges became less of a priority as the pandemic progressed. She shared,

“We're all saying, like, ‘we're stressed out. We're emotional. This is traumatizing.’ Like, we're all saying it. But getting to that next step is, like, a low priority right now, because we're all literally trying to survive, which sounds super apocalyptic but, that's kind of how I've felt too.”

These comments demonstrate key differences between males and females, not necessarily in terms of experiencing mental health challenges, but in how they communicate with each other about them. For both groups, despite the different norms related to discussing these challenges, the practice of discussing help-seeking was not the norm.

6.3.7 Summary of Findings: Subjective Norms

The students expressed several subjective norms that influenced their decisions to (or not to) seek help for themselves or recommend it to others. The idea that others may have experienced more severe challenges (that other people need help more than I do) represented the most common theme across both genders and age groups. Additionally, students articulated that both the normal, anticipated stress of college as well as the ubiquitous stress imposed by the crisis had further normalized the idea of everyone experiencing stress to some degree. This made them further question whether their stress levels, or that of their friends, merited formal treatment. Moreover, participants perceived a stigma associated with seeking help, which represented an additional barrier to both target behaviors. Finally, the two genders differed with respect to their comfort levels in discussing mental health, such that females felt comfortable with more detailed discussions related to anxiety and depression, while males felt much less comfortable. Neither gender, however, reported comfort with discussing help-seeking specifically, due to the subjective norms they associated with that target behavior.

6.4 Perceived Behavioral Control

RQs 9-12 focused on perceived behavioral control, recognized by undergraduate Gen Z students, associated with the two target behaviors, seeking on-campus mental health services for themselves and recommending that peers seek on-campus mental health services. The research questions further probed the differences between these attitudes during times of normalcy and during periods of crisis. See Table 6.3.

Table 6.3: Research Questions: Perceived Behavioral Control

RQ9: During periods of normal campus operations, to what extent do students perceive (a) that they have the ability to seek mental health resources on campus and (b) what knowledge, beliefs, and experiences have shaped those perceptions?

RQ10: During periods of normal campus operations, to what extent do students perceive that (a) they have the ability to recommend that peers seek mental health resources on campus, and (b) what knowledge, beliefs, and experiences have shaped those perceptions?

RQ11: During periods of crisis, to what extent do students perceive (a) that they have the ability to seek mental health resources on campus and (b) what knowledge, beliefs, and experiences have shaped those perceptions?

RQ12: During periods of crisis, to what extent do students perceive that (a) they have the ability to recommend that peers seek mental health resources on campus, and (b) what knowledge, beliefs, and experiences have shaped those perceptions?

Two major, recurring themes related to perceived behavioral control emerged from the focus group discussions. These themes materialized in all four focus groups and are described in greater detail below.

6.4.1 PBC: On-Campus Mental Health Services Are Prohibitively Expensive

Participants questioned whether they could afford to avail themselves of on-campus mental health resources, (insight which addresses RQ10a, RQ10a, RQ11a, and RQ12a), as it influenced both target behaviors, both before and during the crisis. They discussed whether their insurance would cover their sessions along with other financial concerns related to accessing these services. With regard to recommending resources to peers, one participant expressed, *“It’s also difficult to recommend any type of resource, like that, because you don’t know people’s, like, insurance issues or conditions.”*

Additionally, participants expressed concerns about their ability to seek services themselves. Some participants shared that they would not feel comfortable telling their parents about their desire to seek help; because they were still financially dependent on their parents, this represented a key barrier to their ability to pursue mental health services, even if they wanted to. One participant summed up this perspective, stating,

“I would say a huge barrier that I saw a lot in high school is financial. Like, your parents are paying for everything, so if you don't want them to know or if insurance will cover it...they are expensive.”

Additionally, participants expressed that students may simply assume on-campus resources are expensive, because mental health services in the private sector have a reputation of being costly, as another participant noted,

“So, I think also with (name of institution) counseling, people don't know: is it free? Like when I get there, do they only pay for a certain amount of sessions? I know sometimes that's how it works or, like, do I only get a certain amount? How does insurance work? So a big thing, I think, is money too. People are like, 'I don't want to not waste money.' They're worried about that part of it.”

Interestingly, this belief constituted a misconception, as campus mental health resources at the institution involved in this study were offered at no cost to the students.

Nevertheless, participants expressed that this idea constituted a significant barrier.

6.4.1.1 Factors Shaping Perceived Behavioral Control Toward Both Target Behaviors

When describing this barrier, many students referenced a previous theme, lack of knowledge, as a factor associated with the perception of cost (RQ10b, RQ10b, RQ11b, and RQ12b). Additionally, they noted their assumptions about costs of mental health care

from the private sector; they assumed those costs would be similar on a college campus. This is significant, because this theme is purely a perception; the campus counseling center at the institution of focus in this investigation provided treatment at no cost to students. As such, this represents a false perception, but a factor that inhibited access nonetheless.

6.4.2 PCB: On-Campus Mental Health Resources Are Difficult to Access in Other Ways

In addition to challenges associated with financial constraints, participants expressed the perception that scheduling an appointment at on-campus mental health resources was a difficult prospect (RQ10a, RQ10a, RQ11a, and RQ12a). This also represented a dominant theme that spanned all four focus groups. Participants described barriers such as long wait times and counselors' full schedules, noting the idea that it could take weeks or longer for students to secure an appointment.

Several individuals had heard from friends that wait times at the on-campus mental health resources were very long, as expressed by this participant, *"I've heard from, like friends who have tried to go to the Counseling Center, that they see like really long wait times, or they can't get an appointment."* Participants in all focus groups referenced long wait times. Another participant stated that her expectation—that appointments would not be available for long periods of time—played a key role in her hesitancy to seek help from the on-campus mental health resources. She explained, *"I haven't really tried the Counseling Center because I know that there's a wait list."*

Others expressed frustration with wait times, having seen friends or loved ones attempt to secure an appointment at the on-campus services. One of the participants

described his boyfriend's experience navigating long wait times, coupled with skepticism that the services may not adequately serve him:

"I do understand that, like, there are really long wait times, so just hearing negative aspects of it...like you're not going to want to wait that long to go to something that's just not even going to help you."

As evidenced by these comments, the assumption that campus mental health services were difficult to access represented a core barrier to help-seeking.

6.4.2.1 Factors Shaping Perceived Behavioral Control Toward Both Target Behaviors

The largest factors influencing perceptions of this dimension of perceived behavioral control—difficulty of access—were personal and peer experiences (RQ9b, RQ10b, RQ11b, and RQ12b). These conversations occurred between friends in both the upper- and underclassmen groups, as this upperclassman student noted:

"From talking to some of my friends who have utilized some of the resources, it's pretty apparent that they're not really invested in...because I've heard from friends who have tried to go to the Counseling Center, that they see, like, really long wait times, or they can't get an appointment."

Additionally, this underclassman participant shared,

"I haven't heard a lot about mental health and how they help...or what they do here to help students, but one thing I've heard is the wait times, and I haven't pursued any help or anything. I think that says something."

Participants also referenced fellow students with some level of authority, such as a resident advisor, as individuals who had influenced their perception of accessibility, as this student shared: *"I remember talking to an RA, and she was going to go, but her*

appointment wasn't until October, and it was in August, or something like that.” Similar experiences seemed to permeate the campus, such that the counseling center was immediately associated with long wait times. This significantly influenced students’ perceptions of their ability to make an appointment, even if they wanted to do so.

6.4.3 Summary of Findings

Difficulty of access, whether real or simply perceived, represented the core sources of perceived behavioral control related to both target behaviors. Two dimensions of access surfaced: financial constraints and time constraints. Students questioned whether they could afford services, which made them resistant to recommending services to others. Additionally, students believed that they would encounter long wait times; this influenced their decisions related to self-help-seeking as well as recommending help-seeking to peers.

6.5 Limitations

This study had a few limitations. First, the sample of undergraduate, Gen Z students was small, although it was an appropriate size for focus groups (Lindlof & Taylor, 2002). An additional potential limitation may have resulted from the research questions focused on periods of normal campus operations. Upperclassmen students were asked to reflect back upon their attitudes, experiences, knowledge levels, perceptions of norms, and perceptions of behavioral control during their college years that preceded the onset of the pandemic. As their responses relied on their memories of this time, it is possible that their responses were different from those they would have provided prior to the beginning of the crisis.

Additionally, for all studies employing focus groups, results are limited in their capacity to produce generalizable conclusions (Lindlof & Taylor, 2002). Thus, although these data revealed rich, nuanced, and in-depth insight addressing this investigation's research questions, the findings are inherently narrow in their applicability. Nevertheless, this formative information served a crucial role in the subsequent stage of this dissertation, as these attitudes, subjective norms, and perceptions of behavioral control formed the foundation of a message design strategy to be evaluated in Study 2. Moreover, the insight provided a basis upon which social marketing strategies could be formed, leveraging both the messages utilized in Study 2 as well as additional tactics responsive to the barriers and opportunities related to mental health help-seeking, as articulated by the students.

6.6 Discussion and Implications for Study 2

This study revealed key insight related to attitudes, subjective norms, and perceived behavioral control underscoring the two target behaviors: seeking help for oneself when one experiences anxiety and/or depression and recommending that peers seek help when they experience anxiety and/or depression. Further, it explored differences in these factors during times of normalcy versus times of crisis. The most prominent themes were utilized to form the basis of messaging to be employed in Study 2, such that these themes, barriers, misconceptions, or key motivators were addressed directly.

The first dominant theme that emerged from the focus groups was a subjective norm: the idea that other people need help more—that other students' struggles were more serious, severe, or meriting formal treatment. This comparison to other students

with bigger challenges (e.g., a death in the family or having experienced suicidal ideation) induced hesitancy for those considering seeking help for themselves and made the concept of recommending services to a peer more uncomfortable. This insight formed the basis of inoculation messages utilized in Study 2; language was used to address the idea that only a small number of students with severe issues should utilize mental health services. Messages included data from the National College Health Assessment, indicating that more than 65 percent and 45 percent of US students have reported anxiety and depression, respectively, emphasizing that students who experience these challenges are not in the minority. Moreover, the messages highlight the benefits of counseling, such as higher GPAs and a better quality of life.

A second dominant theme was tied to perceived behavioral control: the notion that, even if students did seek help, that wait times were long and that appointments were difficult to make. Unfortunately, if true, this perception would constitute a “product” issue, as opposed to an issue associated with the other components of the marketing mix. In other words, the best messaging strategy in the world could not overcome a core defect associated with the product or service—such as the idea that appointments take several months to schedule. Nevertheless, this insight was useful in terms of better understanding the barriers students perceived. It also should be part of any recommendations presented to the university and, when addressed, should constitute a core message in future campaigns.

Students’ perceptions that it is normal to be stressed both in college generally and during COVID-19 specifically, represented themes that recurred, though were less prevalent than the two dominant themes. However, in contrast to the previous perception,

this belief could be targeted through messaging. Messages developed for Study 2 focused on rebutting the belief that what students perceived as normal was also healthy. Specifically, messages referenced the toll anxiety and depression render on a person's quality of life, with data pointing to worse job prospects and damaged relationships among those who allow these conditions to go untreated. Additionally, messages described physical impacts on one's body which, research has shown, can result from poor mental health.

Finally, students' perceptions of the cost associated with campus resources represented a misconception. Because the university serving as the site for this study offered mental health treatment at no cost to students, messages could address and refute this idea directly. The language for Study 2 did just that, noting that many students likely held this perception, but that it was, indeed, untrue.

These themes, organized by periods of normalcy versus crisis and by target behavior shed light on the most strategic content to be used in strategic messaging, whether deployed during a crisis or a normal period, and whether the target behavior was focused on individual help-seeking or the conversations occurring within students' social networks. Moreover, the insight revealing the factors shaping these attitudes, norms, and perceptions of behavioral control may guide future communication strategies and interventions.

6.7 Discussion and Implications for the Social Marketing Plan

Future communication strategies should be developed through the lens of social marketing and should employ Lee and Kotler's (2019) ten step process—procedures that are rooted in rich, thorough formative research. The insight gathered in Study 1 provided

a robust base of knowledge for developing social marketing interventions. Moreover, this knowledge paved the way for message testing, which occurred in Study 2. The following suggestions provide a brief overview of strategies and tactics which could be included in a social marketing plan, rooted in this insight. A comprehensive plan, following Lee and Kotler's ten steps will be developed following the conclusion of this dissertation.

Analysis of Study 1 data revealed several misconceptions that a social marketing strategy should address, particularly given the finding that most participants self-reported a low level of knowledge pertaining to campus mental health resources. This lack of knowledge suggested that misconceptions may constitute low-hanging fruit for a campaign to target, as messages providing new knowledge could fill this void. As such, an important first step would be to overhaul the existing counseling center website to ensure that information is readily available, easily accessible, and displayed in a way that is consistent with the campaign goals.

One important, recurring misconception was the idea that the majority of college students did not experience anxiety or depression so severe as to merit the need for help-seeking; students feared taking an appointment away from someone who "really" needed it. To address this barrier, a social marketing campaign should include information and statistics, such as those delivered in the Study 2 message, demonstrating that, in fact, the opposite is true. The majority of college students experience high levels of anxiety and depression (NCHA, 2019); it is not an affliction which targets only a small percentage of the college population. Campaign strategists may consider leveraging a variety of communication channels to address this barrier, including social media, traditional media, campus/digital signage, and programming, among others. In addition, campaigns could

consider graphics or videos that “put a face” on the issue across these channels, providing testimonials of real students who benefitted from mental health services. Such real-life accounts may help diminish the idea that services should only be pursued by students facing different circumstances.

A second, glaring misconception that arose through the focus groups was the idea that mental health services at the institution which served as the site for this investigation were prohibitively expensive. This misconception likely exists at other universities as well where mental health support services are offered at no cost. As such, social marketing strategies should emphasize the financial accessibility of these resources. These messages, too, should be relayed through the same channels listed above. Additionally, many participants noted first learning about services at large campus events. At a minimum, individuals and materials introducing these resources should emphasize the lack of cost associated with them, as this represents a key barrier that is solely based on student perception. On top of that, administrators should consider how to infuse messages about the cost (or lack thereof) and other key messages about the services into ongoing campus events, beyond just orientations and gatherings targeting first-year students.

In addition to these misconceptions, the formative insight revealed important information related to key attitudes and norms that inhibited the two target behaviors—seeking help for oneself or recommending it to peers. Participants expressed that they believed college in general, and in particular college during the COVID-19 pandemic, was inherently stressful. As a result, social marketing strategies should seek to shift these norms. Specifically, participants noted that influential others served as important

influences on their perceptions of how much mental health was valued on campus; in other words, they shared that individuals, such as faculty members, made them believe that the campus was not an environment supportive of mental health. In response to this insight, a social marketing campaign might empower ambassadors from different segments of campus to infuse more pro-mental health messaging. For example, faculty ambassadors could share campus resources with colleagues to provide to students, offer resources for the classroom, such as syllabus language and PowerPoint slides with campus resource information. Additionally, a faculty ambassador program could develop training sessions to instruct faculty members on how to interact with students facing anxiety and/or depression, such that each college could have an “officer,” similar to diversity and inclusion officers at many higher education institutions. Moreover, this programming could be replicated for student-facing staff, such as academic advisors. Student ambassadors could also develop ideas to shift the perception that mental health resources are designed for a small percentage of students or that college during periods of normalcy or crisis is “supposed to be” stressful.

The previous themes related to issues of promotion—messages targeting the ways the services are perceived or understood. The formative research further revealed barriers associated with the product itself (the services provided on campus). As part of the social marketing plan, the campaign should make recommendations to the institution to address these issues. The dominant issue was the perception of wait times associated with counseling appointments. Campaign developers should determine the accuracy of that perception and, if it is accurate, recommend that the institution address it as a core barrier to help-seeking. These examinations would be embedded in the assessment and

evaluation of the services— processes which would be crucial to the success of the social marketing campaign. Additionally, several students referenced a perception that the services offered by the university’s counseling center were of low quality. Campaign messages should, in response to this insight, emphasize the qualifications of the counselors employed on campus, as well as sharing success stories of individuals who were helped by these services. These stories, too, could be shared through social media, traditional media, campus/digital signage, and programming, among others.

These recommendations represent simply a surface level overview of how a social marketing plan should address the issues that arose throughout the formative research. A comprehensive plan should be (and will be) developed, following Lee and Kotlers’ (2019) ten steps. This plan will incorporate the strategies detailed above, utilizing the messages evaluated through Study 2, creating a theoretically-based, data-informed roadmap for addressing two key behaviors related to mental health help-seeking. An analysis of these messages is provided in the following chapter.

CHAPTER 7. ANALYSIS OF QUANTITATIVE DATA FROM STUDY 2

A pilot study was conducted approximately two months before the commencement of Study 2. The study took place over the course of two weeks. Findings from the pilot study were used to further refine messages employed in the main study. Analysis and discussion related to both the pilot study and the main study are provided below.

7.1 Study 2 Pilot Study

Undergraduate students between the ages of 18-26 ($n = 36$) at a large southeastern university were targeted to participate in the pilot study. This pilot served as a manipulation check for the traditional inoculation message; its capacity to perform the inoculative function was measured by the extent to which the messages evoked threat. Threat was conceptualized and measured in two ways: as traditional threat (apprehension; see Burgoon et al., 1978) and as motivational threat (see Banas & Richards, 2017).

7.1.1 Analysis

Four independent sample t-tests were conducted to measure the level of threat experienced. The results of the motivational threat tests for both attitudes were statistically non-significant, $t(21) = -.38, p = .35$ (attitude toward seeking help for oneself) and $t(21) = .55, p = .29$ (attitude toward recommending that peers seek help). The results of the traditional threat test showed, once again, a non-significant finding for the attitude toward self-help-seeking, $t(21) = -.80, p = .22$. However, the results of the independent sample t-test for the attitude toward recommending help to peers, between the inoculation condition ($M = 5.50, SD = 3.02, n = 15$) and control condition ($M = 3.09,$

$SD = 1.60, n = 8$) did show significant differences in the predicted direction, $t(21) = -2.50, p < .05$, Cohen's $D = 1.00$.

7.1.2 Discussion

Despite the fact that three of the four tests fell short of statistical significance, the results were promising, especially given the small sample size. This was true particularly when positive initial attitudes were isolated for analysis. One would expect individuals with initially positive attitudes to experience higher levels of threat after exposure to an inoculation message warning of impending counterattitudinal messaging. In contrast, those with initially negative attitudes would be less likely, naturally, to feel threatened; in these cases, inoculation messages warned of forthcoming messages consistent with these participant's existing attitudes. This is inherently less threatening.

Results were consistent with this logic. Analysis of only initially positive attitudes revealed that threat levels moved further in the predicted position as the valence of the initial attitude increased. In other words, those with more positive initial attitudes experienced higher levels of threat. This suggests that with a larger sample size and greater statistical power, one could expect results to reach statistical significance.

Notably, threat levels associated with the first attitude (seeking help for oneself) were stronger than their counterparts associated with the second (recommending that peers seek help). Accordingly, the section of the traditional inoculation message which addressed the second attitude was edited to provide stronger arguments before it was utilized in the main study.

7.2 Study 2 Main Experiment

7.2.1 Data Screening and Preparation

Data were prepared for analysis in alignment with Tabachnik and Fidell's (2013) procedures for data screening. Descriptive statistics were evaluated for accuracy by identifying values that were out of range; assessing standard deviations and plausible means; and screening for missing data points. Accordingly, incomplete responses (instances in which participants left measures unanswered) were removed from the dataset. The data also were filtered for univariate and multivariate outliers. Univariate outliers were detected by computing participant's z-scores on the composite variables by condition. This included the duration spent completing the survey. Any individuals with responses resulting in z-scores larger than 3.29 were classified as outliers, and their responses were removed from the dataset for analysis (Kline, 2005).

Multivariate outliers were detected by calculating Mahalanobis distances for the composite variables. All distances with values of $p < .001$ were considered outliers (Kline, 2005) and also were removed from the dataset. Afterward, multicollinearity was evaluated by assessing the correlational matrix of composite variables for instances of correlations larger than .90 (Kline, 2005). No evidence of multicollinearity was discovered. Lastly, the dataset was evaluated for normality by determining the skewness and kurtosis through probability plots. In accordance with Kline's (2005) guidance, kurtosis values larger than 10 and values for skewness larger than 3 were considered non-normative and were therefore removed from the dataset as well. Following these steps, 387 responses remained in the dataset and were evaluated in the main analysis.

7.2.2 Omnibus Results (Multivariate and Univariate Analyses)

A multivariate analysis of covariance (MANCOVA) was performed in which the condition served as the independent variable and involvement served as the covariate. Attitude change, counterarguing, traditional threat, and motivational threat for both issues were treated as the dependent variables. The omnibus test was significant for both involvement (the covariate variable), $F(8, 372) = 4.13, p < .01, \text{par. } \eta^2 = .08$, and condition (the independent variable), $F(8, 377) = 4.40, p < .01, \text{par. } \eta^2 = .09$. Following the omnibus results, univariate tests were conducted. Where significant results were discovered, planned comparisons were performed using Dunn's multiple comparison procedure (see Kirk, 1995) on the outcomes that were predicted.

The univariate tests indicated significant statistical differences in traditional threat for the first issue (attitude toward help-seeking for oneself), $F(6, 379) = 3.38, p < .01, \eta^2 = .05$, but not for motivational threat, $F(6, 379) = .46, p = .84$, counterarguing, $F(6, 379) = .94, p = .46$, or attitude change, $F(6, 379) = 1.29, p = .26$. For the second issue (attitude toward recommending treatment to peers) univariate tests did not reveal a statistically significant impact of the independent variable on traditional threat, $F(6, 379) = 1.91, p = .08$, motivational threat, $F(6, 379) = 1.68, p = .12$, counterarguing, $F(6, 379) = 1.05, p = .39$, or attitude change $F(6, 379) = .39, p = .88$.

7.2.3 Manipulation Checks

Before conducting the main analyses, it was necessary to determine whether the messages were properly manipulated. The two traditional inoculation conditions (booster and non-booster) were collapsed for threat comparisons, as threat was measured in phase 1, (before the presentation of boosters, which would differentiate the two groups). Means

for both conditions are, however, provided below. The univariate results indicated statistically significant differences for the condition on the traditional threat variable for the first issue (attitude toward seeking treatment for oneself). Marginal mean comparisons indicated greater levels of traditional threat experienced by individuals receiving the traditional inoculation message (non-booster [marginal $M = 5.50$, $S.E. = .36$, $n = 62$] and booster [marginal $M = 6.34$, $S.E. = .41$, $n = 48$] conditions combined) as compared to those in the control condition, reaching statistical significance (marginal $M = 4.88$, $S.E. = .38$, $n = 57$), $F(2, 165) = 7.17$, $p < .01$, $\eta^2 = .02$.

Even though the univariate tests were not significant for the remainder of the manipulation check variables, performing mean comparisons is justified if the simple effects are theoretically predicted (Huberty & Morris, 1992), as is the case for threat and counterarguing in the process of inoculation. Thus, marginal mean comparisons were performed for the first issue (attitude toward seeking help for oneself) with motivational threat and counterarguing serving as the dependent variables. The comparison test of marginal means showed no difference in levels of motivational threat between individuals who received traditional inoculation messages (non-booster [marginal $M = 4.02$, $S.E. = .13$, $n = 62$], and booster [marginal $M = 4.21$, $S.E. = .15$, $n = 48$] conditions combined), and participants in the control condition (marginal $M = 4.28$, $S.E. = .14$, $n = 57$), $F(2, 165) = .13$, $p = .88$. Similar findings were attained for counterarguing as no statistically significant differences were discovered between individuals who received traditional inoculation messages (non-booster [marginal $M = 3.46$, $S.E. = .23$, $n = 62$] and booster messages [marginal $M = 3.33$, $S.E. = .26$, $n = 48$] conditions combined), and

participants in the control group (marginal $M = 3.33$, $S.E. = .24$, $n = 57$), $F(2, 165) = .01$, $p = .99$.

In regard to the second issue (attitude toward recommending that peers seek help), marginal mean comparisons indicated greater levels of traditional threat experienced by individuals receiving the traditional inoculation message (non-booster [marginal $M = 5.34$, $S.E. = .45$, $n = 62$] and booster [marginal $M = 6.40$, $S.E. = .51$, $n = 48$] conditions combined) as compared to those in the control condition (marginal $M = 4.91$, $S.E. = .47$, $n = 57$), $F(2, 165) = 5.60$, $p < .01$, $\eta^2 = .01$. These differences were statistically significant. An additional comparison test of marginal means for this issue (attitude toward recommending that peers seek help) showed no difference on motivational threat between individuals who received traditional inoculation messages (non-booster [marginal $M = 4.39$, $S.E. = .16$, $n = 62$] and booster [marginal $M = 4.36$, $S.E. = .18$, $n = 48$] conditions combined) and participants in the control condition (marginal $M = 4.50$, $S.E. = .16$, $n = 57$), $F(2, 165) = .22$, $p = .80$. Similar findings were attained for counterarguing with individuals who received traditional inoculation messages (non-booster [marginal $M = 3.18$, $S.E. = .23$, $n = 62$] and booster [marginal $M = 3.41$, $S.E. = .26$, $n = 48$] conditions combined) and participants in the control condition (marginal $M = 2.88$, $S.E. = .24$, $n = 57$), $F(2, 165) = 1.27$, $p = .28$.

Importantly, the results of the traditional threat measures indicated that the traditional inoculation messages, for both issues (attitude toward help-seeking for oneself and attitude toward recommending that peers seek help), generated statistically significant levels of threat, as compared to no message at all (the control group). Unfortunately, for both issues (attitude toward help-seeking for oneself and attitude

toward recommending that peers seek help), the levels of motivational threat did not reach statistical significance. Notably, for both issues, the motivational threat scales were discovered to be unreliable; this likely accounts for the lack of significant findings. This scale, developed by Banas and Richards in 2017, measures the motivational impact of inoculation; this complements the traditional threat scale, created by Burgoon et al. (1978), which more precisely measures apprehension. Because it is new, a limited number of studies exist to compare motivational threat findings or to broadly assess the extent to which it has proven reliable. Nevertheless, although this investigation fell short of finding significant results for both dimensions of threat, it did find significant results for the threat scale that has been historically used, and which proved to be reliable in the context of this investigation.

Although counterarguing levels for both issues failed to reach statistical significance, prior investigations have reported insignificant results for counterarguing (Parker et al., 2020b; Pfau et al., 2009; Wood, 2007) while still discovering significant findings for the dependent variables upon which the studies focused. These past results suggest that the inoculation process is not entirely hinged upon counterarguing. As such, and in line with these prior studies, it was acceptable to continue the analysis without detecting the desired levels of counterarguing. Because the manipulation check revealed significant levels of traditional threat for both traditional inoculation conditions (with boosters and without boosters), as compared to the control condition, the researcher conducted analyses of the hypothesized relationships.

7.3 Main Analysis

Again, although the univariate tests performed on the independent variable for attitude change on both issues (attitude toward seeking help for oneself and toward recommending treatment to a peer) were not significant, performing mean comparisons is justified if the simple effects are theoretically predicted (Huberty & Morris, 1992), as they were in the hypotheses for this investigation. By the same token, there was no justification to proceed with testing the research questions. As such, the following analyses only focused on evaluating the predicted comparisons as articulated in the hypotheses.

H1 predicted that individuals exposed only to traditional initial inoculation messages, as compared to those in the control group, would demonstrate higher message-congruent attitudinal levels. A marginal means comparison for the first issue (attitude toward help-seeking for oneself) showed no significant difference in attitude change between individuals treated with traditional inoculation messages (marginal $M = .24$, $S.E. = .30$, $n = 62$) in comparison to participants in the control group (marginal $M = -.18$, $S.E. = .31$, $n = 57$), $F(1, 118) = .95$, $p = .33$. The results of the comparison for the second issue (attitude toward recommending help to peers) also were not significant between those inoculated with traditional inoculation message (marginal $M = -.20$, $S.E. = .21$, $n = 62$) and members of the control condition (marginal $M = -.11$, $S.E. = .22$, $n = 57$), $F(1, 118) = 1.00$, $p = .32$. As such, H1 was not supported.

H2 predicted that individuals exposed only to terse initial inoculation messages, as compared to those in the control group, would demonstrate higher message-congruent attitudinal levels. A marginal means comparison for the first issue (attitude toward help-seeking for oneself) also showed no significant difference in attitude change between

individuals treated with a single inoculation terse message (marginal $M = .26$, $S.E. = .30$, $n = 63$) as opposed to participants in the control condition (marginal $M = -.18$, $S.E. = .31$, $n = 57$), $F(1, 119) = 1.05$, $p = .31$. The results were similar for the comparison for the second issue (attitude toward recommending treatment to peers), showing no significant differences between those inoculated with a single terse inoculation message (marginal $M = -.27$, $S.E. = .21$, $n = 63$) and members of the control group (marginal $M = -.11$, $S.E. = .22$, $n = 57$), $F(1, 119) = .29$, $p = .51$. Thus, H2 was not supported.

H3 predicted that individuals exposed only to three terse initial inoculation messages, as compared to those in the control condition, would demonstrate higher message-congruent attitudinal levels. A marginal means comparison for the first issue (attitude toward help-seeking for oneself) showed a significant difference in attitude change between individuals treated with three terse inoculation messages initially (marginal $M = .74$, $S.E. = .33$, $n = 51$) in comparison to participants in the control group (marginal $M = -.18$, $S.E. = .31$, $n = 57$), $F(1, 107) = 1.05$, $p < .05$, $\eta^2 = .01$. However, no significant difference was displayed by the marginal mean comparison for the second issue (attitude toward recommending that peers seek help) between those inoculated with three terse inoculation message (marginal $M = .09$, $S.E. = .23$, $n = 51$) and members of the control group (marginal $M = -.11$, $S.E. = .22$, $n = 57$), $F(1, 107) = .40$, $p = .53$. Accordingly, H3 received partial support.

H4 predicted that individuals exposed only to three terse initial inoculation messages, as compared to those exposed only to a single terse initial inoculation message, would demonstrate higher message-congruent attitudinal levels. A marginal means comparison for the first issue (attitude toward help-seeking for oneself) showed no

significant difference in attitude change between individuals treated with a single inoculation terse message (marginal $M = .26$, $S.E. = .30$, $n = 63$) in relation to participants receiving three terse inoculation messages (marginal $M = .74$, $S.E. = .33$, $n = 51$), $F(1, 113) = 1.19$, $p = .28$. The result of the comparison for the second issue (attitude toward recommending mental health care to peers) showed similar results; this comparison occurred between those inoculated with a single terse inoculation message (marginal $M = -.27$, $S.E. = .21$, $n = 63$) and participants receiving three terse inoculation messages (marginal $M = .09$, $S.E. = .23$, $n = 51$), $F(1, 113) = 1.36$, $p = .25$. As such, H4 was not supported.

H5 contained three components. H5a predicted that individuals exposed to a single traditional initial inoculation message plus three terse booster messages would demonstrate higher message-congruent attitudinal levels than individuals in the control group. A marginal means comparison for the first issue showed no significant difference in attitude change between individuals treated with a single traditional inoculation message reinforced by three terse booster messages (marginal $M = .15$, $S.E. = .34$, $n = 48$) as compared to participants in the control condition (marginal $M = -.18$, $S.E. = .31$, $n = 57$), $F(1, 104) = .51$, $p = .48$. The results for the second issue (attitude toward recommending help to peers) were similar. The comparison for this issue occurred between those inoculated with a single traditional inoculation message reinforced by three terse booster messages (marginal $M = -.34$, $S.E. = .24$, $n = 48$) and members of the control group (marginal $M = -.11$, $S.E. = .22$, $n = 57$), $F(1, 104) = .51$, $p = .48$. As such, H5a was not supported.

H5b predicted that individuals exposed to a single traditional initial inoculation message plus three terse booster messages would demonstrate higher message-congruent attitudinal levels than individuals exposed to a single traditional initial inoculation message without boosters. A marginal means comparison for the first issue (attitude toward seeking help for oneself) showed no significant difference in attitude change between individuals treated with a single traditional inoculation message reinforced by three terse booster messages (marginal $M = .15$, $S.E. = .34$, $n = 48$) as opposed to participants who received a single traditional inoculation message without boosters (marginal $M = .24$, $S.E. = .30$, $n = 62$), $F(1, 109) = .04$, $p = .84$. Results were similar for the second issue, showing no significant differences in the comparison between those inoculated with a single traditional inoculation message reinforced by three terse booster messages (marginal $M = -.34$, $S.E. = .24$, $n = 48$) and those receiving a single traditional inoculation message with no boosters (marginal $M = -.20$, $S.E. = .21$, $n = 62$), $F(1, 109) = .20$, $p = .66$. As such, H5b was not supported.

H5c predicted that individuals exposed to a single traditional initial inoculation message plus three terse booster messages would demonstrate higher message-congruent attitudinal levels than those receiving a single terse initial inoculation message without boosters. A marginal means comparison for the first issue (attitude toward help-seeking for oneself) showed no significant difference in attitude change between individuals treated with a single traditional inoculation message reinforced by three terse booster messages (marginal $M = .15$, $S.E. = .34$, $n = 48$) as compared to participants receiving a single terse inoculation message without boosters (marginal $M = .26$, $S.E. = .30$, $n = 63$), $F(1, 110) = .06$, $p = .81$. Additionally, a marginal means comparison for the second issue

(recommending help-seeking to peers) showed no significant difference between those inoculated with a single traditional inoculation message reinforced by three terse booster messages (marginal $M = -.34$, $S.E. = .24$, $n = 48$) and those receiving a single terse inoculation message with no boosters (marginal $M = -.27$, $S.E. = .21$, $n = 63$), $F(1, 110) = .05$, $p = .82$. Thus, H5c was not supported.

H6a predicted that individuals, after exposure to a single terse initial inoculation message plus three terse booster messages would demonstrate higher message-congruent attitudinal levels than individuals in the control group. A marginal means comparison for the first issue (attitude toward seeking help for oneself) showed a significant difference in attitude change between individuals treated with a single terse inoculation message reinforced by three terse booster messages (marginal $M = .81$, $S.E. = .31$, $n = 57$) compared to participants in the control condition (marginal $M = -.18$, $S.E. = .31$, $n = 57$), $F(1, 113) = 5.05$, $p < .05$, $\eta^2 = .01$). On the other hand, the result of the comparison for this issue (attitude toward recommending help-seeking to peers) between those inoculated with a single terse inoculation message reinforced by three terse booster messages (marginal $M = -.08$, $S.E. = .22$, $n = 57$) and members of the control group (marginal $M = -.11$, $S.E. = .22$, $n = 57$), $F(1, 113) = .01$, $p = .92$), were not statistically significant. As such, H6a received partial support.

H6b predicted that individuals, after exposure to a single terse initial inoculation message plus three terse booster messages, would demonstrate higher message-congruent attitudinal levels than individuals exposed to a single traditional initial inoculation message without boosters. A marginal means comparison for the first issue (attitude toward help-seeking for oneself) showed no significant difference in attitude change

between individuals treated with a single terse inoculation message reinforced by three terse booster messages (marginal $M = .81$, $S.E. = .31$, $n = 57$) in comparison to participants receiving a single traditional inoculation message without boosters (marginal $M = .24$, $S.E. = .30$, $n = 62$), $F(1, 118) = 1.74$, $p = .19$). The result of the comparison for the second issue (attitude toward recommending treatment to peers) mirrored these findings. There were no significant differences between those inoculated with a single terse inoculation message reinforced by three terse booster messages (marginal $M = -.08$, $S.E. = .22$, $n = 57$) and those receiving a single traditional inoculation message with no boosters (marginal $M = -.20$, $S.E. = .21$, $n = 62$), $F(1, 118) = .16$, $p = .69$). Accordingly, H6b was not supported.

H6c predicted that individuals, after exposure to a single terse initial inoculation message plus three terse booster messages, would demonstrate higher message-congruent attitudinal levels than individuals exposed to a single terse initial inoculation message without boosters. A marginal means comparison for the first issue (attitude toward help-seeking for oneself) showed no significant difference in attitude change between individuals treated with a single terse inoculation message reinforced by three terse booster messages (marginal $M = .81$, $S.E. = .31$, $n = 57$) compared to participants receiving a single terse inoculation message without boosters (marginal $M = .26$, $S.E. = .30$, $n = 63$), $F(1, 119) = 1.64$, $p = .20$. The comparison for the second issue (attitude toward recommending treatment to a peer) was similar. There was no significant difference between those inoculated with a single terse inoculation message reinforced by three terse booster messages (marginal $M = -.08$, $S.E. = .22$, $n = 57$) and those receiving a

single terse inoculation message with no boosters (marginal $M = -.27$, $S.E. = .21$, $n = 63$), $F(1, 119) = .40$, $p = .53$. As such, H6c was not supported.

H7a predicted that individuals exposed to three terse initial inoculation messages plus three terse booster messages, would demonstrate higher message-congruent attitudinal levels than individuals in the control group. A marginal means comparison for the first issue (attitude toward seeking help for oneself) showed no significant difference in attitude change between individuals treated with three terse inoculation messages reinforced by additional three terse booster messages (marginal $M = .03$, $S.E. = .34$, $n = 49$) as compared to participants in the control condition (marginal $M = -.18$, $S.E. = .31$, $n = 57$), $F(1, 105) = .21$, $p = .65$. Similarly, the comparison for the second issue (recommending treatment to a peer) showed no significant differences between those inoculated with three terse inoculation messages reinforced by additional three terse booster messages (marginal $M = -.05$, $S.E. = .23$, $n = 49$) and those in the control condition (marginal $M = -.11$, $S.E. = .22$, $n = 57$), $F(1, 105) = .04$, $p = .84$. As such, H7a was not supported.

H7b predicted that individuals exposed to three terse initial inoculation messages plus three terse booster messages, would demonstrate higher message-congruent attitudinal levels than individuals exposed to a single terse initial inoculation message without boosters. A marginal means comparison for the first issue (attitude toward help-seeking for oneself) showed no significant difference in attitude change between individuals treated with three terse inoculation reinforced by additional three terse booster messages (marginal $M = .03$, $S.E. = .34$, $n = 49$) as compared to participants receiving a single terse inoculation message without boosters (marginal $M = .26$, $S.E. =$

.30, $n = 63$), $F(1, 111) = .26, p = .61$. Similar results were found for the second issue (recommending help-seeking to a peer); there were no significant differences in the comparison between those inoculated with three terse inoculation messages reinforced by additional three terse booster messages (marginal $M = -.05, S.E. = .23, n = 49$) and those receiving a single terse inoculation message with no boosters (marginal $M = -.27, S.E. = .21, n = 63$), $F(1, 111) = .50, p = .48$. Thus, H7b was not supported.

H7c predicted that individuals exposed to three terse initial inoculation messages plus three terse booster messages, would demonstrate higher message-congruent attitudinal levels than individuals exposed to three terse initial inoculation messages without boosters. A marginal means comparison for the first issue (attitude toward help-seeking for oneself) showed no significant difference in attitude change between individuals treated with three terse inoculation messages reinforced by additional three terse booster messages (marginal $M = .03, S.E. = .34, n = 49$) in comparison to participants receiving three terse inoculation message without boosters (marginal $M = .74, S.E. = .33, n = 51$), $F(1, 99) = 2.28, p = .13$. Results of the comparison for the second issue (attitude toward recommending help-seeking to a peer) also showed no significant differences between those inoculated with three terse inoculation messages reinforced by additional three terse booster messages (marginal $M = -.05, S.E. = .23, n = 49$) and those receiving three terse inoculation message with no boosters (marginal $M = .09, S.E. = .23, n = 51$), $F(1, 99) = .18, p = .67$. As such, H7c was not supported.

7.4 Discussion

The results of this study were encouraging—despite the number of insignificant findings—as they signal the capacity of terse inoculation messages to induce resistance

and persuasion, a prospect that inoculation scholars have long contemplated (Compton & Ivanov, 2013; Ivanov, Parker et al., 2018a). This investigation represents the first study, to the researcher's knowledge, to evaluate the efficacy of inoculation messages delivered in succinct formats. Results indicated that terse messages represent a promising avenue for future inoculation scholarship and practice.

Specifically, the burst of three terse messages, as an initial treatment, generated higher levels of message-congruent attitudes as compared to the control group, for the first issue (H3). In other words, the combination of three terse inoculation messages produced an effect, as compared to control, which has in previous studies been achieved through traditional (i.e., lengthier) inoculation messages (Banas & Rains, 2010). This is promising; it signals that terse messages may constitute a novel avenue for extending the theory as well as a new opportunity for practical application. Notably, however, further investigation is necessary, particularly because the attitude change of the traditional inoculation condition did not differ from that of the control group in this study. These results were disappointing, as they inhibit one's ability to draw conclusions about the power of terse messages in comparison to an effective traditional inoculation treatment. As such, although the difference in attitude change between the terse and control conditions is encouraging, the question regarding the power of terse messages compared to traditional inoculation remains. Future investigations should replicate this design to further disentangle these comparisons.

The promise of the terse format was further bolstered by the finding that the single terse inoculation message in combination with three terse boosters also generated significant differences in attitude change, as compared to the control group, for the first

issue (H6). That two conditions solely exposed to terse messages reported higher levels of message-congruent attitudes than the control group is encouraging; it reinforces the notion that terse messages offer promise as inoculation strategies. However, these findings would be more meaningful had the traditional inoculation message performed as hypothesized and provided a sufficient comparison. Again, this reflects the need for future studies with effective traditional inoculation treatments to fully grasp the potential of inoculation via terse messaging.

The partial support for H6 also sheds more light on the captivating but elusive question of boosters. Inoculation research to date has produced equivocal findings (Ivanov et al., 2018; McGuire 1962; Pfau et al., 1990, 1992, 2006; Pfau & Van Bockern, 1994), which scholars have suggested may result from a need to better orchestrate timing, frequency, content, and other message factors specific to restoration strategies. The current results suggest that the single terse message in isolation was not sufficient to induce significant effects upon the attitudes; however, for the first issue, a single message boosted by three additional terse messages *did* significantly impact attitudes, as compared to the control condition. Taken together with the partial support for H3, these findings demonstrate the strength of multiple terse messages; not only did a series of terse messages produce an effect as an initial treatment, a series of terse messages serving as a booster to a single terse message also produced effects. This is a promising pattern.

The latter is an encouraging result for the burgeoning body of literature on reinforcement messages. This is particularly true, given that the predominant approach for operationalizing boosters to date has been a repetition of the original inoculation message (e.g., Ivanov et al., 2009, 2018; McGuire, 1961). However, Compton and Pfau

(2005) and Compton and Pfau (2013) proposed that booster messages that are distinct from the original treatment may hold greater promise. For instance, Parker and colleagues (in press) found support for this argument, finding significant effects for booster messages comprising just the forewarning or refutational preemption components of a traditional inoculation message. The current findings align with and further strengthen this reasoning. These results suggest that utilizing multiple different terse messages (that are also different from the original message) as a booster treatment may constitute an effective alternative strategy.

A terse messaging strategy would provide exciting translational value for practitioners, particularly when targeting Gen Z audience members, the vast majority of whom use the internet either via a smartphone or via a computer almost constantly or multiple times a day (Anderson & Jiang, 2018). Terse messages also are more suited for social media platforms, which have become increasingly visual and less reliant on lengthy text (Leetaru, 2019). Moreover, terse messages would constitute a valuable tool for practitioners, as succinct messages would likely take less time to prepare than traditional messaging. This in no way suggests that terse messages require less strategic thought or effort; rather, multiple terse messages could be developed utilizing the weakened arguments and refutational preemption from a single traditional inoculation message, whereas drafting multiple traditional inoculation messages would require additional time, research, and resources.

While particularly useful for Gen Z audience members, terse messages provide opportunities for inoculation messaging to be utilized over a variety of channels utilized by various audiences (including and beyond Gen Z), that were previously impractical for

lengthy language (e.g., twitter, which imposes character limits, and Instagram, which is largely visual and only incorporates text through captions or text superimposed on photos, etc.). Stated differently, terse messages, if effective, would open doors for practitioners to infuse inoculation strategies throughout a wide variety of platforms, creating additional capacity for comprehensive messaging campaigns to utilize inoculation strategies in a multimodal, multichannel fashion.

Of course, additional research is needed to better understand the capacity of terse messages to deliver initial inoculation effects as well as booster effects. Again, that the traditional condition in the current investigation did not demonstrate significant differences from the control group was disappointing. One likely reason for this was that the attack message was not strong enough to effectively diminish individuals' initial attitudes. Despite the Study 1 focus group data suggesting that attitudes toward both issues would be overwhelmingly negative, the median initial attitudes in Study 2, on a 15-point scale, were 11.56 and 12.75, respectively (this unexpected finding is discussed in the next chapter). This suggests that a ceiling effect may have been in place, particularly for the second attitude. In other words, attitudes were initially high. Typically, initially high attitudes do not pose a problem for inoculation research; on the contrary, in the traditional inoculation scenario, attitudes are very high. However, the attitude change scores in the control condition (-.18 and -.11 respectively for the two conditions on a 15 point scale) indicate that the attack message did not deliver a strong effect. In other words, participants in the control condition, after exposure to the attack, did not demonstrate the attitudinal slippage the attack message was designed to induce.

Given that the attack was not as strong as desired (and thus did not, so to speak, push the attitudes down the scale), a very small window existed for the other conditions to significantly influence attitudinal levels, whether the participants received solely initial treatments or booster treatments. Indeed, with respect to the booster conditions specifically, attitudes were already so high, there was virtually no space on the positive end of the attitudinal spectrum, in the absence of a forceful attack, for attitudes to be boosted. Future studies with more effective attack messages would shine more meaningful light on the differences among these various treatments, including those incorporating traditional, terse, and booster messages.

Prior inoculation research also has faced this obstacle; studies have employed attacks that turned out to be ineffective (see Banas & Rains, 2010). However, as previously suggested, future research should replicate this design with a stronger message derogating the target attitude. Fortunately, with respect to this context, the data from Study 1 provides a foundation for designing more effective messaging. While the attack message utilized in this study reflected content that emerged from the formative focus groups, it is possible that the attack message format (a letter to the editor of the student newspaper) was not the ideal channel to deliver an effective attack. Moreover, the attack message included general ideas related to mental health help-seeking for both issues, which were gleaned from the formative stage. However, given the findings related to the importance of peer experiences, along with the target generation's use of social media, future studies may benefit from designing attack messages as accounts of negative first-person experiences, perhaps written as if they were social media posts. Again, with a more effective attack message, future investigations may have the capacity to produce

more meaningful conclusions in comparing the terse messaging conditions to those presenting traditional messaging.

Future studies also should take into account the fact that most participants reported highly positive initial attitudinal valence with respect to both issues. This was surprising, as individuals in the focus groups overwhelmingly expressed negative attitudes toward the notions of seeking help from campus resources *and* toward the idea of recommending those services to a peer. The discrepancy between the insight gleaned from the focus groups and the initial attitudes reported in the quantitative study was puzzling, particularly given the high levels of passion and enthusiasm with which focus group participants articulated their responses (again, see next chapter for a more detailed discussion).

Interventions, based on these results, appear to be more poised to target the first issue (attitude toward self-help-seeking) than the second (attitude toward recommending help-seeking to peers), as the significant results for terse messages related to H3 and H6 only applied to the former attitude. This may be explained, in part, by the previously discussed ceiling effect caused by the initially (or strongly positive) high attitudes for the second issue, which were surprising given the findings from Study 1. To be clear, both attitudes were strongly positive; the second one was even stronger (represented by a greater value) than the first. It may also be the case that Study 2 participants contemplated the concepts of mental health treatment in broader, more abstract terms than their counterparts in Study 1, which led to an estimation of more positive attitudes. This discrepancy in attitude valence reflected in Study 1 versus Study 2 is explored in more depth in the following chapter.

Finally, future studies should investigate the interesting finding related to threat levels reported by the traditional inoculation condition as compared to the terse message conditions. The traditional conditions demonstrated higher levels of threat compared to all other conditions. Nevertheless, the only two conditions that differed significantly from control in terms of attitude change were the three-initial-terse-message condition and the single-terse-message-plus-booster condition. That both of these conditions outperformed the condition which experienced higher levels of threat is fascinating. It calls for additional investigation into how terse messages catalyze the inoculation process and generate the core components—threat and counterarguing. Future studies utilizing this design can further untangle these questions.

7.5 Limitations

This study had a few limitations. First, some of the manipulation checks were unsuccessful—namely, motivational threat and counterarguing, for both issues (attitude toward help-seeking for oneself and attitude toward recommending help-seeking to peers). Consistent with previous studies in which insignificant results were found for one dimension of threat, (e.g., Parker et al., 2020b), these findings add to a growing body of literature that is valuable in determining the ideal instruments for measuring perceived threat levels. Indeed, the motivational threat scale is relatively new; Banas and Richards (2017) developed the scale to focus more intently on the motivational impact of inoculation, arguing that the traditional threat scale, created by Burgoon et al. (1978), more precisely measures apprehension. Thus, while this investigation fell short of finding significant results for both dimensions of threat, it did find significant results for the threat scale that has been historically used.

Results for counterarguing, another manipulation check, also were insignificant. This too, was consistent with some previous studies and reflects the challenging nature of assessing counterarguing particularly when using a one-item scale. Indeed, scholars across contexts have deliberated on the best avenue for measuring counterarguing (e.g., Ivanov et al., 2013). Moreover, this counterarguing scale is still in its early stages of usage, meaning the insignificant findings may, at least partially, stem from issues inherent to the assessment measure. This assumption is consistent with arguments articulated by Ivanov, Parker, and Dillingham (2013).

Moreover, the audience in this investigation included individuals with positive, negative, and neutral attitudes. As such, it is not surprising that those with neutral or negative initial attitudes may have reported lower levels of counterarguing, given that the attack message would not have constituted a rebuttal to their existing beliefs, and, in fact, would have embodied a supportive message consistent with the beliefs of participants with negative attitudes. This finding is consistent with recent findings from Ivanov and colleagues (2021), who also did not find significant levels of counterarguing for the neutral and opposing attitude conditions.

7.6 Conclusion

In total, the results of Study 2 fell short of the desired outcomes. The issues related to the ineffective attack message and the unforeseen ceiling effect limited the potential for significant differences in attitude change among the various conditions. Nevertheless, the patterns discovered with respect to the terse initial messages and terse booster messages in comparison to control for the first issue (attitude toward seeking help for oneself) were encouraging. These findings suggest that terse messages, presented in

bursts either as an initial treatment or as a booster, may hold promise. This represents an alluring direction for future studies—one that would, potentially, provide considerable translational value to social marketing campaigns and interventions.

CHAPTER 8. GENERAL DISCUSSION

The current investigation generated robust insight for a complex endeavor—a theoretically grounded and empirically driven approach to developing mental health interventions for Gen Z college students. Taken together, the two studies comprising this investigation provide a rich foundation for the development of a strategic social marketing campaign. The researcher plans to develop this campaign, in partnership with administrators at the university where this work occurred, following the conclusion of this dissertation.

Because the two studies were analyzed jointly, as two core components of an overall investigation, a variety of interesting insights emerged that would not have materialized in isolation—insights that may be valuable for campaign development and that lay groundwork for future studies. Additionally, a comprehensive analysis of the two studies demonstrates the advantages of the investigation’s progressive structure. It began with theoretically based formative research that fed into an experimental design, allowing for a more robust discussion and rife with directions for future research. These discussion topics and opportunities for future investigations relate to the question of initial attitude valence (as referenced in the previous chapter), the promise of terse messaging, the prospect of interactive terse messaging, and the lingering question of boosters.

8.1 The Question of Initial Attitude Valence

Among the most interesting findings that bridged Study 1 and Study 2 was the discrepancy in the attitude valence toward both issues of interest (attitude toward help-seeking for oneself and attitude toward recommending mental health care to a peer) between participants in the two studies. Study 1 results suggested that attitudes toward

both issues were overwhelmingly negative and, further, that attitudes toward the second issue (attitude toward recommending help to a peer) were significantly more negative than the first issue. (As a reminder, among male participants especially, an overwhelming assumption existed that telling a peer he should consider mental health treatment could potentially damage or end the friendship. Females, too, expressed extreme uneasiness when describing the prospect of recommending counseling services to their friends).

In both respects, however, the opposite results were discovered in Study 2. As reported in the previous chapter, the median initial attitudes in Study 2, on a 15-point scale, were 11.56 and 12.75 for attitudes toward the first and second issue, respectively. Ostensibly, this suggests that Study 2 participants' attitudes with respect to both of the target issues were, in fact, firmly strong. This deviates from Study 1 insight and, as such, was unexpected.

One possible explanation for this unanticipated result lies in the nature of the measures employed in the two studies. The format of the focus groups allowed participants to share granular details of their attitudes along with references to particular campus resources. They were able to converse "in the weeds," so to speak, about experiences they either witnessed or underwent themselves; knowledge they felt they lacked; norms they observed; and/or barriers they perceived. Conversely, given the format of Study 2, individuals contemplated the concepts of mental health treatment, both for themselves and for others, in broader, more abstract terms. It is likely that survey questions, to which participants responded via numerical sliders, did not prompt the deeper thinking or contemplation related to experiences and/or barriers that was facilitated in the focus group setting.

For instance, many focus group respondents lamented, in great detail, that older generations were less accepting of, or amenable to, mental health issues than their generation—a sign that they, at least in their calculation, held stronger attitudes toward mental health help-seeking than, for example, their parents. Nevertheless, they still clearly and, at times animatedly, articulated barriers to both target issues (help-seeking for oneself and recommending it to peers) in the focus groups. This juxtaposition demonstrates the complexity of the issue, as well as the cognitive dissonance it appears to have induced. On the one hand, participants reported positive attitudes when comparing themselves to their parents, grandparents, faculty, and other older individuals. They praised their generation for taking mental health more seriously. On the other hand, further conversation (the majority of the conversation, in fact) focused on experiences, beliefs, norms, and barriers that would, seemingly, inflict a negative impact on one’s attitude.

Again, the survey employed in Study 2 likely did not activate awareness of, or immersion in, this cognitive dissonance. By nature, the quantitative measure did not encourage in-depth contemplation or rumination on the various dimensions of mental health in the same way the focus group moderator aimed to stimulate active engagement. Thus, it is possible that the survey captured a more high-level snapshot of college students’ attitudes toward both issues or of associated beliefs that were more top-of-mind. These broader, more salient attitudes, Study 2 results indicate, were positive.

Though the positive initial attitudes reported in Study 2 were unforeseen, this may represent a good sign with respect to influencing mental health attitudes. One can only hope this signals progress toward establishing healthier general attitudes toward mental

health and associated treatment services. Importantly, however, campaign developers should consider whether these initially positive attitudes only reflect surface-level contemplations. Nevertheless, interventions should build upon this progress. It may very well be the case, as the participants articulated, that interventions targeting their generation—in comparison to previous cohorts—would benefit from a more positive baseline with respect to broad attitudes toward mental health. Future studies should seek to gather additional insight into both the valence of these attitudes as well as potential explanations for the valence discrepancy discovered between the two studies.

This discrepancy also generated additional questions. For instance, how can we more accurately and reliably measure participant's attitudes toward mental health? What is the most appropriate measure for evaluating an intervention's success? How can interventions engage individuals on deeper levels to address barriers that are seemingly not situated in their top-of-mind awareness? The passion and fervor with which the focus group participants engaged in the discussion, particularly when discussing the importance of peer experiences and peer support, offers one potential answer to the final question. Future studies should continue investigating best methods for leveraging peer influence and incorporating peer-based messaging into campaigns.

Additionally, given the two significant findings in Study 2 pertaining to the first issue, scholars and practitioners also should devote further attention to the potential of terse inoculation messaging. Ideally, researchers would combine these two approaches to further evaluate the effectiveness of peer-based messaging delivered in terse formats.

8.2 The Promise of Terse Messaging

Indeed, as discussed in the previous chapter, the patterns discovered in Study 2 related to terse messaging are encouraging. That two conditions solely exposed to terse messages reported significant differences in attitude change, as compared to the control condition for the first issue, signals that persuasive messages delivered in succinct formats may constitute a key tool in social marketing strategies targeting Gen Z college students. This is particularly important, given that Gen Z college students are heavy users of social media (Anderson & Jiang, 2018) and because research indicates a clear preference among Gen Z for bite-sized information, likely a result of their demonstrated shorter attention spans (Twenge, 2017; Yeykelis et al., 2014). Taken together, this evidence strengthens the potential utility of terse messages in a comprehensive social marketing campaign, in which campaign developers would certainly benefit from incorporating social media strategies.

The pattern discovered in Study 2 with respect to terse messages further underscores the benefit of pairing quantitative message testing with formative qualitative research in both scholarship and practice. Indeed, this combination of approaches constitutes a crucial precursor to social marketing campaign development. This is true, in general, with respect to campaign development best practices (Lee & Kotler, 2019). It is perhaps even more imperative in the context of succinct messages.

Terse messages, by nature, offer very limited space to deliver persuasive language. Thus, it was necessary that the terse messages employed in Study 2 contain information targeting the most relevant and meaningful issues with respect to mental health help-seeking. In other words, there was no room (literally) for irrelevant or inconsequential message content. For example, the dominant theme from the focus

groups—the idea that other people need help more—would not have served as the centerpoint of a terse message had this barrier not emerged in the focus groups. Similarly, the misconception that campus resources cost money, was addressed head-on in a terse message because of the frequency with which the topic arose as a perceived barrier in the focus groups. Thus, the fact that some significant effects were discovered can be, in part, attributed to the formative insight gained through Study 1. This formative data, guided by the theory of planned behavior, was intended to equip the messages with the most strategic, relevant information within the constrained character limits.

Of course, the fact that several messages also derived from Study 1 findings did not generate statistically significant differences could be seen as a weakness of the preceding argument for the importance of formative research. However, a closer look at the treatments delivered to each condition demonstrates that message content could not have been the primary issue. Specifically, both conditions that demonstrated significant differences in attitude change for the first issue were exposed to a burst of three terse messages—each containing exactly one message per TPB component (attitude toward the behavior, subjective norms, and perceived behavioral control), which emerged from the focus groups. The same terse messages were utilized throughout all conditions receiving bursts of terse treatments. As such, the significant findings for the two groups with respect to the first issue signal the strength of the message content.

It is more likely that the ceiling effect imposed by the initially positive attitudes in Study 2, combined with a weak attack (demonstrated by minimal attitude change scores among the control group participants; see chapter 7), explains the nonsignificant results, particularly given that the ceiling was higher for the second attitude for which no

significant results were found. Stated differently, initial attitudes were higher for the second issue and, thus, even more difficult to influence following an ineffective attack. This provides a more likely explanation for the lack of significant differences in attitude change for this issue.

8.3 The Prospect of Interactive Terse Messaging

Moreover, and interestingly, the relevance of the terse message topics was further supported by unsolicited feedback from a handful of participants. The mass texting software utilized in Study 2 delivered SMS messages to the participants. Though not part of the research design, and not communicated to the participants, the software also had the capacity to record responses from the participants if they “texted back” of their own volition. No participant was instructed to do so, and no participant received any communication as a result of sending SMS responses to the phone number delivering the messages. The responses, however, were recorded by the software. To be sure, these responses offer solely anecdotal support for the topics which formed the foundation for the terse message content. As such, they should be considered to a limited degree. However, they do provide interesting additional insight.

Responses included statements affirming barriers such as, “Since I was a freshman, I've heard that the counseling center never has enough appointments.” Others reflected the perception of stigma, such as *“some people may think it's embarrassing to get help, or feel as if they are less than those who don't have mental health problems.”* Still other responses reflected the dominant idea from the focus groups, that other students needed help more than they did: *“most students don't think they need it or don't want to be seen going there.”* Individuals also emphasized difficulty with being

vulnerable with statements such as, *“I think many people don't give it a try because they're scared to open up to others, even when it's a counselor.”* Finally, one student responded with a simple, but powerful message, signaling that the terse messages had, in this case, proven convincing with respect to his/her attitude toward the benefits of mental health treatment; this student texted, *“I didn't know that. I might have to do that.”* While there is no way to confirm that the student did, in fact, initiate the process of help-seeking, one can certainly hope this is the case.

Again, the ability to engage in two-way communication was not part of the research design and the capability was not utilized in the study. The participants' attempts to text back, because those attempts were not answered (and, indeed, were not even read until the conclusion of the study), could not have impacted the results. However, the positive messages further support the idea that the message topics, which were discovered in Study 1, resonated with target audience members in Study 2.

At the same time, that individuals even attempted to engage with the messenger demonstrates an additional advantage of leveraging terse messaging strategies in the context of a social marketing campaign. The nature of terse message delivery channels, (in this case SMS, but also social media platforms) often allows for two-way, interactive communication. Indeed, Gen Z audience members may even expect this level of engagement, given the landscape in which 89% of teenagers use the internet, either via smartphone or computer, either almost constantly or multiple times a day—platforms which often allow for two-way communication (Anderson & Jiang, 2018). Given the positive pattern of results with respect to terse messages for the first issue in Study 2, additional research into terse messages is warranted. The prospect of eventually

advancing upon that scholarship in the realm of reciprocal communication via terse messages represents an alluring possibility for social marketing scholars and practitioners alike.

Indeed, the possibility for interactive engagement within the realm of inoculation research broadly, and terse inoculation specifically, poses several interesting questions, which future studies should consider: Could terse inoculation, delivered via interactive communication, effectively influence attitudes? What would constitute an effective experimental design for such an investigation? How would timing associated with the delivery of terse messages in this context impact their effectiveness? Additional research can shed light on these questions.

8.4 The Lingering Question of Boosters

The results of Study 2, as previously discussed, add to a history of mixed evidence with respect to extending the biological analogy into the communication domain. The rationale behind booster messaging is straightforward, as it derives directly from the medical analogy; several medical vaccines, including several versions of the COVID-19 vaccine, are administered in multiple doses to generate higher levels of immunity. In fact, it is perhaps the elegance of this logic that has rendered the equivocal results so frustrating to scholars who sought to translate the process to the communication realm. By the same token, the mixed findings make the prospect of discovering the key to effective booster strategies even more enticing. To that end, researchers continue to explore issues of effective booster design and application, examining proper content, frequency of delivery, and timing (e.g., Parker et al., 2021), arguing that research simply has not yet uncovered the ideal booster operationalization.

The current investigation contributes to this endeavor—signaling potential new avenues for scholarship on booster messaging and its role in the inoculation process. For the first issue in this study (attitude toward seeking help for oneself), individuals in the single-terse-message-plus-terse-booster condition reported significantly higher levels of attitude change than those in the control group. These findings demonstrate a pattern with potential meaning. To be sure, *potential meaning* falls short of *strong support* for the power of terse boosters; however, the results indicate a topic worthy of further exploration. To that end, this demonstrates the need for future research, evaluating boosters operationalized as terse messages, to build upon these results.

Moreover, this study represents the first, to the author's knowledge, to reveal some evidence of effective terse boosters *and* to discover potential efficacy in booster messages presented in bursts, as opposed to individual messages. As such, this investigation is responsive to scholars' calls to explore different types of booster content (e.g., Compton and Pfau, 2005). Future studies might further respond by examining booster messaging bursts with respect to the other two factors scholars have raised: Would terse bursts be more effective boosters if delivered with a different frequency or over a different period of time? Parker and colleagues' (2021) findings suggested that proper timing of boosters, as opposed to frequency, was more important in generating effectiveness for messages that were not delivered in bursts. Future studies might investigate whether this pattern would hold for boosters in the form of terse bursts as well.

Importantly, any of the aforementioned possibilities for future booster studies would benefit from replicating the two-study design employed in the current

investigation. Again, the nature of terse messages, whether used as initial treatments or as boosters, necessitate the strongest and most relevant message content possible, given the character limits. Although traditional messages, obviously, should present strong, germane arguments as well, their length provides more capacity for arguments of varying strength or relevance; terse messages lack that flexibility. The partial support discovered in Study 2 suggests that insight derived from Study 1 translated into effective content for the booster messages. This further suggests that this design may constitute a best practice for social marketers designing interventions that include booster strategies.

Taken together, results from the two studies that jointly form this investigation underscore the importance of empirical and theoretical foundations for social marketing campaign development. These findings will inform the creation of interventions, as part of a comprehensive and strategic effort to encourage help-seeking among Gen Z college students.

CHAPTER 9. GENERAL LIMITATIONS AND FUTURE STUDIES

The limitations specific to Study 1 are discussed in Chapter 6, and the limitations that pertain solely to Study 2 are described in Chapter 7. A small number of limitations constitute an overlap between the two studies.

In both cases, social desirability bias may have influenced participants' responses. Within the context of the focus groups, individuals may have felt pressure to agree with other participants' answers or to reflect upon experiences consistent with those of their peers. The challenge of group dynamics, in which individuals feel pulled by more dominant group members toward a particular opinion represent a limitation of any focus group. It is worth noting, however, that several measures were taken to minimize these effects, including separating individuals into gender-homogenous groups, utilizing a detailed protocol that emphasized the expectation of respect for diverse opinions, and holding additional focus groups until a point of saturation was reached with respect to recurring themes.

In the same vein, participants in Study 2 may have experienced a social desirability bias. This should have been less of a factor given the format of the response platform in this study, a web/mobile survey which facilitated a much less intimate experience compared to the focus group discussions. Nevertheless, it is possible that students felt they *should* respond a certain way on the survey to align with what they considered the correct attitude to hold.

Another limitation lies in the scope of the investigation. Both Study 1 and Study 2 were conducted on a single campus and, thus, reflect the attitudes, experiences, and beliefs of a single campus population. This constitutes an advantage for social marketing campaign development, as interventions derived from this insight would reflect the

campus culture and the barriers specific to the university community. At the same time, a similar design implemented across multiple campuses would reveal more generalizable results relevant to Gen Z college students in general and their attitudes toward mental health help-seeking.

Finally, both studies focused on attitudes as they related to both times of normalcy and crisis on a college campus. The crisis period was operationalized as the COVID-19 pandemic. Accordingly, research questions explored in Study 1 focused on both normal times and crisis periods. Additionally, some messages in Study 2 referenced the pandemic. The potential limitation lies in the extent to which attitudes related to COVID-19 reflect attitudes related to other types of crises. The pandemic was a long-term crisis that impacted nearly every aspect of students' lives. The magnitude of the crisis, the duration of its impact, and the ubiquity that characterized it likely renders it distinctly different from other types of crisis. As such, the generalizability of the crisis-specific responses are less clear. Moreover, the infrequency of crises comparable to a global pandemic limit the replicability of this study, in terms of its focus on periods of emergency.

These broad limitations were thoughtfully considered. Future investigations may explore how to further minimize the potential for social desirability bias in both qualitative and quantitative studies. To promote further generalizability, researchers may consider adapting this design to include multiple campus populations. It would also be interesting to explore whether similar results are discovered in the context of a different type of crisis. This study provides a foundation for exploring these possibilities.

CHAPTER 10. GENERAL CONCLUSION

The current investigation provided both translational and theoretical contributions to the fields of communication and mental health promotion. Designed to serve as the basis for a social marketing plan targeting Gen Z college students, the investigation also explored the joint application of two different communication theories. Moreover, the efforts examined possibilities associated with nuances and extensions of inoculation theory, finding some promising results, albeit limited, that may signal potential for future theoretical work.

Indeed, this investigation was the first, in this researcher's knowledge, to utilize both inoculation theory and the theory of planned behavior (TPB) in a single effort. Inoculation messages, the content for which was gleaned through a TPB framework, demonstrated some success, as demonstrated by partial support for two hypothesized relationships in Study 2. This suggests that these two theories may be successfully used in conjunction to design effective messages. Of course, additional research is needed to further determine the compatibility of these two theories. If future scholarship supports the notion that these two theories are well suited to be used jointly, these findings may prove useful for individuals contemplating processes for effective message design.

Moreover, the results of this investigation knocked at the door of a potential theoretical nuance for inoculation theory (terse messages) as well as an extension of the theory (booster messages, for which studies have, to date, produced equivocal results). This investigation represented the first effort, to the researcher's knowledge, to evaluate inoculation delivered via terse messaging. While significant results were limited, the findings revealed a pattern of success with terse messages that merits further study into this potential nuance. This is an exciting prospect. Additionally, the investigation

employed a new avenue for exploring booster messages, conceptualizing them as bursts of three terse messages, delivered over three days, a week after exposure to an initial inoculation treatment. This builds upon a history of mixed results with regard to booster message effectiveness. Here, too, the results demonstrated limited success; however, given the disappointing conclusions related to the weakness of the attack message in this study, as well as the resulting ceiling effect (as described in Chapter 7), the fact that one booster condition generated statistically significant attitude change, as compared to control, is promising. Future studies should continue to evaluate the potential of booster treatments operationalized as terse message bursts. Perhaps in absence of the ceiling effect, the messages would demonstrate a greater capacity to influence attitudes.

Scholarship should continue exploring these theoretical nuances and focusing on further extending inoculation theory. Researchers also should consider ways message design may be strengthened by incorporating other theoretical frameworks, as this investigation did with use of the TPB. This investigation provides some insight into how future studies might design such efforts. However, more directly, this investigation provides a foundation for momentous translational impact.

Insight from this investigation will serve as the foundation for a comprehensive social marketing campaign targeting attitudes and behaviors related to mental health help-seeking on a university campus. This work will begin in earnest following the completion of this dissertation, emboldened by the nuanced findings discovered through Study 1, which provide a robust foundation for intervention development. Findings from Study 2, which suggest a potential for terse messages to influence mental health attitudes, also will inform the development of messaging strategies in the context of the campaign.

Campaign strategies, which will include terse messaging, will focus on the recurring themes that emerged from the Study 1 focus groups. In particular, interventions will target the dominant themes, or those that were repeated frequently and passionately, such as the notion that other individuals need help more, or that campus resources are difficult to access because of long wait times. Notably, these two themes represent different types of challenges (i.e., promotion issue versus product issue, respectively, as discussed in Chapter 6). These two very different barriers—one impossible to address through marketing strategies—underscore the importance of the robust insight from Study 1. The formative data provides insight necessary for campaign developers to both recognize the myriad barriers inhibiting the target behavior and to articulate appropriate objectives that would facilitate the desired behavior, whether those objectives relate to topics inside or outside of the communication realm. In line with Lee and Kotler's (2019) ten steps for social marketing campaign development, the plan that will emerge from this investigation will include holistic recommendations addressing all components of the marketing mix: promotion, product, price, and place.

While the social marketing plan, when finalized, will most directly demonstrate the translational impact of this research, it is important to recognize that theoretical advances also hold promise for meaningful practical application. Results from this study indicate that terse messages and terse message boosters may represent strategic communication tools, particularly among Gen Z audience members. Should future research reinforce this notion, campaign developers, health promotion specialists, and other practitioners devoted to enhancing public health would have additional mechanisms to influence healthy behaviors—to turn the tide of the stubborn statistics characterizing

college student mental health. As such, this investigation does not represent a finish line. Rather, it is a starting point—one that hopes to catalyze sea change.

APPENDICES

APPENDIX 1. Study 2 Messages

ATTITUDE: Other people need it more than me.

You may have heard that only a small # of students need counseling—that only those with severe issues benefit? This is incorrect. Per the reputable NCHA survey 65%+ of US students report anxiety. 45% report depression. And research shows: when they go to counseling they have higher GPAs & better quality of life. So why not give it a try? (280 characters) 58 words

ATTITUDE: Services are not high quality—the number of sessions is not enough.

Many students don't do counseling because they think they need many, many sessions to feel better. But that's simply not true. Per the national Center for Collegiate Mental Health, students who average 5 appointments report enhanced relationships, improved wellbeing and boosted GPAs. So why not choose mental health? (270 characters) 48 words.

NORMS: It's normal to be stressed.

Your friends may think anxiety/depression are parts of college life. Some say they lead to greater success. Unfortunately, that's not accurate. Research shows anxiety/depression lead to worse job prospects & damaged relationships. They can physically affect your body. So why not choose to care for your mental health? (271 characters) 49 words

NORMS: Everyone is stressed during COVID.

Students across the US report, since COVID is temporary, it's not damaging to mental health—that students don't really need counseling. But, anxiety/depression can physically affect the brain. It can lead to suicidal thoughts—rates which increased during COVID. So why not decide to care for your mental health? (265 characters) 48 words.

PBC: The UK Counseling Center is prohibitively expensive.

Many UK students believe the Counseling Center is expensive. Some think it costs 1000s of dollars—far too much money for a college student. However, this is inaccurate. In fact, the services are completely covered for UK students. That includes a whole range of services. So why not choose to care for your mental health? (268 characters) 54 words.

PBC: My insurance won't cover a visit to the UK Counseling Center.

You may have heard that counseling is expensive. Lots of students think their insurance won't cover their sessions because the services are provided through UK. This is incorrect. These resources are available and free to you, as a UK student. So why not choose to care for your mental health? (244 characters) 50 words.

Traditional Inoculation Message:

Many college students make the decision not to take advantage of mental health counseling resources because of assumptions or misinformation. For example, some students believe that only a tiny percentage of college students actually stand to benefit from counseling services such as those offered at the UK Counseling Center. They assume that most students fall into the large majority of individuals who do not experience any stress, anxiety or depression. But here's the thing: the idea that only a small percentage of college students need mental health resources is clearly debunked by research. According to the National College Health Association, in 2019, 65.7% of college students reported feeling overwhelming anxiety, and 45.1% of college students reported feeling so depressed it was difficult to function. This shows that the majority of college students could benefit from mental health resources—that the majority of students experience anxiety and can truly benefit from services designed to support them. This may be true for you; it also may be true for your friends. These services are not designed just to support a small population of students. They are designed to support you, your classmates, and your friends as students navigate a stressful time in their lives.

Additionally, many students believe that—even if they did seek mental health resources—counseling takes years to make any difference. For example, many students have noted that, if they did decide to engage in mental health counseling, they would require lots of sessions to actually feel better. However, this is also not supported by evidence. Per the Center for Collegiate Mental Health, college students actually average approximately five appointments per academic year. That time enhances relationships, improves wellbeing and boosts academic performance, including higher GPAs.

This is important, because some of your peers may think anxiety and/or depression is a fundamental part of college life. Friends of yours may even think that anxiety and depression aren't damaging at all; in fact, some say these mental health struggles actually lead to greater success. If people strive through the stress, they believe, they are better equipped to maintain relationships and juggle different responsibilities. But, again, the benefits of mental health counseling show that the argument about anxiety and depression being good for students is also fundamentally flawed. National research demonstrates that anxiety and depression lead to negative outcomes in career trajectories, relationships, and even physical health. This is especially true during times of crisis, such as the COVID-19 pandemic. The CDC reports that levels of anxiety and depression across the country have increased during the pandemic. This means it's possible—even likely—that many of your friends may be struggling with these issues. You may be struggling too.

Finally, many students believe that none of the above truly matters anyway, because on-campus counseling services are incredibly expensive—even though so many other campus resources are provided to students at no additional cost. However, student's assumptions related to the cost of receiving on-campus support are also

incorrect. The UK Counseling Center offers mental health support—through a variety of different programming and therapeutic offerings—at no additional cost to students. You and your friends can access them for free.

UK students are allowing these misconceptions and false beliefs to impact their decisions related to their mental health. Many people may also not recommend that their friends seek help because of these misunderstandings about the prevalence of anxiety and depression as well as the well-documented need for student mental health services. Why not give mental health the proper attention? Why not recommend that your friends do the same?

Attack Message (presented as student op-ed in Kentucky Kernel)

The University of Kentucky regularly promotes the services at the UK Counseling Center to the entire student population. I don't plan on seeking these services. Truly, why would any student consider them?

First of all, why would students subject themselves to the incredibly uncomfortable and vulnerable setting of therapy, when the services are provided by sub-par practitioners? The counselors who provide therapy on college campuses are paid so much less than those in the private sector. Why? It must be that they aren't as good as their counterparts who are operating in community or private practices. Again, why take that uncomfortable leap if we aren't sure it will actually make a difference?

Perhaps even more importantly, college students are *supposed* to be stressed. That is what it means to be a college student. Keeping up with school work, trying to find internships, and preparing for a career is an experience that inherently will cause slight levels of anxiety and even, at times, depression. That's just part of being in college. It doesn't mean we need to go to therapy. And, of course, doing all of this while navigating a global pandemic is tough. But it doesn't mean we need to rush to a therapist, particularly when the small number of sessions likely won't provide benefits anyway.

The UK Counseling Center should stop promoting services as if they can truly benefit all students. And students should take a good hard look at what is reasonable to expect from a college experience. We all knew what we were getting into when we came to UK. And if we keep supporting each other, we can get through anything.

APPENDIX 2. Hypotheses and Research Questions and Results

Research Questions

RQ1: During periods of normal campus operations, (a) what are students' current attitudes toward seeking mental health resources on campus and (b) what knowledge, beliefs, and experiences have shaped those attitudes?

RQ2: During periods of normal campus operations, (a) what are students' current attitudes toward recommending that peers seek mental health resources on campus and (b) what knowledge, beliefs, and experiences have shaped those attitudes?

RQ3: During periods of crisis, (a) what are students' current attitudes toward seeking, mental health resources on campus and (b) what knowledge, beliefs, and experiences have shaped those attitudes?

RQ4: During periods of crisis, (a) what are students' current attitudes toward recommending that peers seek mental health resources on campus and (b) what knowledge, beliefs, and experiences have shaped those attitudes?

RQ5: During periods of normal campus operations, what (a) subjective norms exist related to seeking mental health resources on campus, and (b) what knowledge, beliefs, and experiences have shaped those norms?

RQ6: During periods of normal campus operations, what (a) subjective norms exist related to recommending that peers seek mental health resources on campus, and (b) what knowledge, beliefs, and experiences have shaped those norms?

RQ7: During periods of crisis, what (a) subjective norms exist related to seeking mental health resources on campus, and (b) what knowledge, beliefs, and experiences have shaped those norms?

RQ8: During periods of crisis, what (a) subjective norms exist related to recommending that peers seek mental health resources on campus, and (b) what knowledge, beliefs, and experiences have shaped those norms?

RQ9: During periods of normal campus operations, to what extent do students perceive (a) that they have the ability to seek mental health resources on campus and (b) what knowledge, beliefs, and experiences have shaped those perceptions?

RQ10: During periods of normal campus operations, to what extent do students perceive that (a) they have the ability to recommend that peers seek mental health resources on campus, and (b) what knowledge, beliefs, and experiences have shaped those perceptions?

RQ11: During periods of crisis, to what extent do students perceive (a) that they have the ability to seek mental health resources on campus and (b) what knowledge, beliefs, and experiences have shaped those perceptions?

RQ12: During periods of crisis, to what extent do students perceive that (a) they have the ability to recommend that peers seek mental health resources on campus, and (b) what knowledge, beliefs, and experiences have shaped those perceptions?

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| H1: Individuals exposed only to traditional initial inoculation messages, as compared to those in the control group, will demonstrate higher message-congruent attitudinal levels. | Not supported |
| H2: Individuals exposed only to terse initial inoculation messages, as compared to those in the control group, will demonstrate higher message-congruent attitudinal levels. | Not supported |
| H3: Individuals exposed only to three terse initial inoculation messages, as compared to those exposed only to a control message, will demonstrate higher message-congruent attitudinal levels. | Partially supported (for first issue). |
| H4: Individuals exposed only to three terse initial inoculation messages, as compared to those exposed only to a single terse initial inoculation message, will demonstrate higher message-congruent attitudinal levels. | Not supported |
| RQ14: Will individuals exposed only to three terse initial inoculation messages, as compared to those exposed only to a single traditional initial inoculation message, demonstrate higher, lower, or similar message-congruent attitudinal levels? | Not considered |
| H5: Individuals exposed to a single traditional initial inoculation message plus three terse booster messages will demonstrate higher message-congruent attitudinal levels than individuals exposed to (a) a control message (b) a single traditional initial | Not supported |

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| <p>inoculation message without boosters, and (c) a single terse initial inoculation message without boosters.</p> | |
| <p>H6: Individuals exposed to a single terse initial inoculation message plus three terse booster messages will demonstrate higher message-congruent attitudinal levels than individuals exposed to (a) a control message, (b) a single traditional initial inoculation message without boosters, and (c) a single terse initial inoculation message without boosters.</p> | <p>Partially supported (part a, for first issue).</p> |
| <p>RQ15: Which combination yields higher message-congruent attitudinal levels: traditional initial inoculation plus boosters or terse initial inoculation plus boosters?</p> | <p>Not considered</p> |

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VITA

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EDUCATION

Master of Arts in Communication, December 2015

University of Kentucky, College of Communication and Information; Lexington, KY

Area of Concentration: Strategic Communication

Advisor: Dr. Beth Barnes

Bachelor of Arts in Integrated Strategic Communication, May 2012

University of Kentucky; Lexington, KY

Area of Concentration: Public Relations

Minors: Philosophy and Hispanic Studies

PROFESSIONAL POSITIONS

Executive Director of Strategic Communication, University of Kentucky

Director of Executive Communication, University of Kentucky

Senior Public Relations Specialist, University of Kentucky

Public Relations Specialist, University of Kentucky

HONORS

Carozza Graduate Fund for Excellence in Health Communication, awarded 2021. This fund supports a fellowship for a graduate student in the Graduate Program in Communication at the University of Kentucky who demonstrates academic excellence, leadership traits, and intends to pursue a career in health communication.

Bruce H. Westley Memorial Scholarship, awarded 2020. Award recognizes excellence in mass communication theory and research in the Graduate Program in Communication at the University of Kentucky.

Bruce H. Westley Memorial Scholarship, awarded 2019. Award recognizes excellence in mass communication theory and research in the Graduate Program in Communication at the University of Kentucky.

Sarah Bennett Holmes Award, nominee, 2018. Award recognizes women at the University of Kentucky who promote the growth and well-being of other women at the institution and across the state.

PUBLICATIONS

- Hester, E. B., **Geegan, S.**, & Ivanov, B. (accepted) Preserving student trust in universities following a campus shooting crisis. *Journal of School Violence*.
- Hester, E., **Geegan, S.**, Said, M., Nowicki, B., & Parker, K. (accepted). Learning “through the prism of art”: Engaging Gen Z students with university art museums. *The International Journal of Learning in Higher Education*.
- Parker, K. A., **Geegan, S. A.**, Hester, E. B., Stefanovska-Petovska, M., & Ivanov, B. (accepted). “We see our country as a trash can”: Exploring pollution-related attitudes among young people in North Macedonia. *International Journal of Climate Change*.
- Ivanov, B., Rains, S. A., Dillingham, L. L., Parker, K. A., **Geegan, S.**, & Barbati, J. L. (2021). Role of threat and counterarguing in therapeutic inoculation. *Southern Communication Journal*.
- Parker, K. A., **Geegan, S.**, Hester, B., Ivanov, B. (forthcoming, 2022) Social marketing strategy: Enhancing preparedness for catastrophic events. In D. O’Hair and M. J. O’Hair (Eds.), *Communication Science in Times of Crisis: Catastrophic Events*. Wiley Blackwell.
- Parker, K. A., **Geegan, S.**, & Ivanov, B. (2020). Social marketing: Applying strategies to social change campaigns. In H. D. O’Hair and M. J. O’Hair (Eds.), *Handbook of Applied Communication Research*. Wiley.
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- Parker, K. A., **Geegan, S.**, Ivanov, B., Slone, A., Silberman, W., Martin, J., Hester, E., Goatley-Soan, S., Anderson, A., Herrington, T., & Riker, S. (2019). Defending democracy: Inoculation’s efficacy in protecting First Amendment attitudes.” *Communication Studies*.
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