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**Examining the Effects of Religion-Based Meditation on Stress Levels in Palestinian
Muslims**

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Senior Thesis

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May 5th, 2023

Abstract

Given the intractable conflict in Palestine, those living in the area are exposed to constant stress and trauma. A wealth of prior research findings clearly reveals that stress, with an emphasis on traumatic stress, leads to decrements in mental and physical well-being. Thus, it is important to consider implementing interventions that might help people in this area cope with stress. Researchers have advocated for the use of meditation to lower stress and anxiety levels. In the current investigation, I will present findings from a study that I conducted in Palestine, looking at the impact of mindfulness meditation on effective coping with stress. I will discuss data on the effects of two different mindfulness meditations (a religion-based meditation to fit the collectivist, Islamic culture and a standard meditation) on current stress levels. I will also present descriptive data on the following exploratory variables to gain a better contextual understanding of the population: attachment to God, coping by using spiritual practice, and trauma symptoms. Beyond expanding the conversation of mental health into the Arab world, this study intends to provide insight into factors that may influence effective stress coping for Palestinians and investigate whether mindfulness meditation offers Palestinian Muslims a therapeutic mechanism to cope with the stressors they are currently experiencing.

Introduction

With the support of empirical research highlighting the importance of mental health, diverse and widespread initiatives have allowed for the deconstruction of this taboo conversation in the United States (Robles & Kane, 2014; Jones 2019). Overseas in the collectivist, Muslim country of Palestine, that same research and outreach are severely neglected. From the small number of studies conducted, it is estimated that over 40% of Palestinians experience depression and that those exposed to traumatic events report poorer mental health (Alexander, 2020). Furthermore, mental health resources are heavily underfunded, so much so that there are only 20 psychiatrists in all of the West Bank tasked with tackling one of the worst mental health crises in the Middle East (Alexander, 2020).

The reluctance to investigate mental health issues stems from several beliefs, which include the following: westernized therapies would undermine religious, cultural, and/or moral values, mental health issues are tests from God so should be kept secret, a person with mental health issues is not pious enough, succumbing to mental health issues does not align with the Palestinian identity of pushing against all odds and puts the focus on the self rather than the collective, etc. (Sabry & Vohra, 2013; “Islam & Mental Health”, 2020). However, when taking a deep dive into the writings of Islamic scholars and their clear citations of the Holy Quran, the religious scripture in Islam, as well as the sayings of Prophet Muhammad (peace be upon him)¹ known as “hadiths”, there is ample evidence to suggest the religious value in good emotional and mental well-being (Sabry & Vohra, 2013; Samah 2018).

For the purpose of this study, we explore meditation as a method to establish good mental well-being. This practice can consist of breathing cycles, non-judgemental monitoring of

¹ After mentioning the Prophet’s name, Muslims say this phrase as a sign of respect, but also to send peace and blessings to him (McMahon, 2023). It is often spelled out as (peace be upon him) or (PBUH) in both formal and informal writing.

thoughts, affirmations, mantras, visualizations, along with other exercises (Rose et al., 2020). Benefits of meditation include emotional regulation, lowering heart rate and blood pressure, reduction in anxiety and depressive symptoms, strengthening the immune system, increasing focus, and raising self-esteem (Jones et al., 2019; Rose et al., 2020).

According to Sabry & Vohra (2013), when westernized therapeutic practices are modified to be consistent with Islamic beliefs and values they are effective in treating mental health and psychiatric issues. This includes but is not limited to the incorporation of Quranic verses and interpretations, the biography and traditions of the Prophet (PBUH), and remembrance of God (known as *thikr*) into the framework of standard, non-religious meditative practices (Sabry & Vohra, 2013; Edaibat 2021). Edaibat (2021) and Samah (2018) describe in detail how Islam incorporates meditation practices by embracing a state of mindfulness and awareness. They relay how when we neglect to care for our emotional and mental well-being, the version of ourselves associated with a desire for worldly pleasures and material wealth begins to take over and control our behavior, often leading to lapses in judgment from a religious standpoint. Edaibat (2021) has created a step-by-step guide for a mindfulness meditation that incorporates Islamic teachings (*thikr*, prayer, seeking forgiveness, etc) which are very familiar to Muslims and align with common, authentic ways of worship. Inspired by his work, this study introduces a religion-based meditation that integrates these Islamic practices in an effort to help reduce the stigma of mental health in Palestinian-Muslim communities.

Several studies have also found mental health stressors, especially those experienced during traumatic events, yield physiological symptoms if left untreated (“Recognizing and Easing the Physical Symptoms of Anxiety”, 2020; McFarlane, 2010). To gain a better understanding of trauma symptoms in Palestinians, we measured these in the current study. As a

result of the Palestinian-Israeli conflict, Palestinians experience a heightened amount of stress due to the occupation and war-related trauma. Thus we expected to find heightened levels of trauma symptoms in our sample. Regardless, the need for mental health education and intervention is necessary to help them cope with this extreme stress and minimize its physical manifestations.

Additionally, attachment style has been suggested to influence immediate coping strategies within stressful situations (Bayrak et al., 2018). Attachment style refers to how individuals tend to think, feel, and behave in interpersonal relationships, which has a link to how they were raised by their caregivers (Bayrak et al., 2018). Moreover, an attachment scale has been created to assess an individual's attachment to God and also categorizes this relationship as secure, anxious, or avoidant (Cherniak et al., 2020). Since Palestine has a very large Muslim population, this study also aims to gain a descriptive understanding of the Palestinian's attachment to God to further contextualize this population.

Muslims in Palestine are experiencing some of the worst mental health crises in the Middle East due to the stigmatization and lack of education surrounding what mental health really is (Alexander 2020). This hinders their ability and desires to seek mental health treatment to cope with both everyday life and siege-related stressors. However, with the Islamic faith largely represented in the Palestinian population, stress-coping interventions show greater effectiveness if integrated with religion-based ideals (Sabry & Vohra, 2013; Edaibat 2021). Therefore, the primary research question in this study is: How do religion-based meditation interventions influence anxiety/stress levels in Palestinian Muslims during a geopolitical crisis? I hypothesized that Palestinians who use religion-based meditations would report lower stress levels in comparison to those exposed to a breathing meditation or no meditation. I also wanted

to better characterize this population, so I measured attachment to God, spiritual practice, and frequency of trauma symptoms. These were only exploratory variables.

Methods

Following the approval of Loyola Marymount's Institutional Review Board, data collection began in Hebron, located in the West Bank in Palestine. In partnership with the Excellence Center in Palestine, we recruited a total of 46 participants between the ages of 18-25 ($M=20.25$, $SD=1.99$). All participants were native Palestinians and identified as Muslim. However, only 31 participants were utilized for statistical analyses. Reasons for participant removal included the lack of completion of more than half of the questionnaire items.

Over the span of 3 weeks, I hosted 4 identical workshops with about 10 participants at each session. Because Arabic is the primary language in Palestine, I communicated with the participants in Arabic but also had a translator in the room to fill in any language gaps.

As participants entered the workshop space, they filled out a series of electronic questionnaires on a Qualtrics survey: 1) Part 4 of The Harvard Trauma Questionnaire, Iraqi Version is an adapted version of the Harvard Trauma Questionnaire which applies a cross-cultural lens and aims to measure trauma symptoms in Iraqi refugees (R & W, 2007). Many of the items on this questionnaire, such as "feeling jumpy, easily startled" and "feeling like you have no one to rely on but God", apply to Palestinian citizens and the refugees who have been displaced from their homes, both of which are populations that the Excellence Center works with. Plus, this questionnaire has already been translated into Arabic. Participants were instructed to rate how often they felt a variety of trauma symptoms on a scale of 1 ("not at all") to 4 ("extremely"). 2) Stress Coping Resources Inventory: A Self-Assessment measures the coping ability of the individual; however, we were primarily interested in the spiritual practice

subscale. These 4 items included questions like “How often do you engage in a spiritual practice like prayer, meditation, or inspirational reading to enrich your internal life?”, which participants rated on a scale of 0 (infrequently, unlikely, very little extent) to 4 (very often, very likely, to great extent). 3) The Attachment to God Inventory measures the attachment style an individual has to God (Beck & McDonald, 2004). Two items were removed for sensitivity to the Palestinian population: “I often feel angry with God for not responding to me when I want” and “I am uncomfortable allowing God to control every aspect of my life.” The scoring scale was then adjusted accordingly. Participants rated how much they agreed with each statement on a scale of 1 (“disagree”) to 7 (“agree strongly”). 4) Current Stress Level Survey created by me and scored on a 7-point Likert scale ranging from 1 (not at all) to 7 (extremely), which was administered after the meditation condition. Example items include “Right now, how nervous or stressed do you feel?”

Once the participants completed these surveys, they were randomly assigned into one of 3 groups: 1) Breathing mindfulness meditation, 2) Gratitude for Blessings/Thikr (remembrance of Allah) mindfulness meditation, or 3) a control group where they listened to an instruction manual.

Breathing Mindfulness Meditation

This meditation was a standard, guided breathing exercise that acted as my comparison group. It included phrases such as “(inhale, exhale....inhale, exhale....inhale, exhale)...Allow your breath to find its own natural rhythm...And notice each out-breath as your belly contracts and air moves up through the lungs back up through the nostrils or mouth.”

Religion-Based Gratitude Meditation

Inspired by the work done by Edaibat (2021), this meditation included phrases such as “In the Holy Quran, Allah says “So remember Me; I will remember you. And be grateful to Me, and do not deny Me” (Quran 2:152)”, “Oh Allah, I am grateful for all you have given me”, and “Glory be to Allah, Subhanallah...All praise is for Allah, Alhamdulillah...Allah is the greatest, Allahu Akbar”.

All interventions lasted 15 minutes and were written, recorded, and edited in English and Arabic. They were uploaded to Soundcloud and embedded into the Qualtrics survey for easy access on participants’ smartphones. 91% of Palestinians own a smartphone so accessibility was not an issue. Participants were instructed beforehand to bring headphones to the workshop. After the experiment, participants were debriefed and offered a list of mental health resources, though limited in Palestine, if they were interested in learning more about mental health or would like to reach out to a therapist or psychiatrist.

Results

Overview of Statistical Analysis

Descriptive statistics were calculated for the Harvard Trauma Questionnaire, spiritual practice subscale stress coping scale, and attachment to God inventory. Mean differences were used to examine the change in stress/coping levels from before to after each meditation.

Stress Coping

For this variable, only 21 participants provided complete data. Due to the nature of the small sample size, we primarily looked at trends instead of statistical significance because of the low power. Changes in stress levels were calculated by first, reverse scoring one item and then averaging the scores across the three items in the Current Stress Levels survey. A mean score was calculated before the meditation condition and a separate score was calculated after the

meditation condition. Higher scores reflected lower stress levels and better coping. The mean change in stress level was then computed by subtracting the pre-meditation score from the post-meditation score. A more positive score indicated lower stress and better coping. That being said, participants in the religion-based gratitude condition ($M=0.39$, $SD=1.76$) exhibited a non-significant trend suggesting a greater reduction in stress, or increased stress-coping ability (Table 1). Participants in the control ($M=-0.0833$, $SD=1.354$) and breathing ($M=-0.0952$, $SD=2.034$) conditions may have experienced a decreased reduction in stress or a decrease in stress-coping ability. Again, because we were underpowered we could not run tests to detect significantly different means.

Population Characteristics

On average, Palestinian participants in this study ($N=31$) scored an average of 2.27 ($SD=0.56$) out of 4 on the DSM-IV subscale of the Harvard Trauma Questionnaire. Mean scores exceeding 2.5 are indicative of being symptomatic for Post Traumatic Stress Disorder (PTSD). Although the mean was just below the cut-off, participants still seem to be experiencing elevated PTSD symptoms.

In regards to their attachment to God, participants ($N=29$) scored an average of 33.14 ($SD=8.76$) out of 55 on avoidant attachment to God. For anxious attachment to God, participants ($N=29$) scored an average of 43.28 ($SD=12.17$) out of 85. In comparison to the research done by Mohammadzadeh & Oraki (2020) on a Muslim population in Tabriz, Iran, participants scored an average of 42.19 ($SD=9.79$) on avoidant attachment to God and 40.30 ($SD=15.15$) on anxious attachment to God. In comparison to western populations, a study conducted by Thomas and colleagues (2011) found that participants scored an average of 50.6 ($SD=17.8$) out of 98 on avoidant attachment to God and 69.9 ($SD=17.5$) out of 98 on anxious attachment to God. It is

important, however, to note that the participants in the study by Thomas and colleagues were recruited from a private, Christian university interested in developing their relationship with God.

When it came to spiritual practice, participants (N=27) scored an average of 3.15 (SD=0.67) out of 4 on the Stress Coping Resource Inventory. Given that it was towards the upper end of the scale, it was clearly a high score.

Discussion

In this study, we aimed to determine if a religion-based meditation intervention lowered stress levels in Palestinian Muslims. In comparison to a standard breathing meditation or control condition, we predicted that participants exposed to the gratitude religion-based meditation would experience a greater reduction in stress levels and better coping. While our small sample size did not allow us to claim statistical significance to support our hypothesis, we did observe a trend that mirrored our prediction. On average, participants exposed to the experimental condition may have experienced lower stress levels and better coping after listening to the meditation, juxtaposing the comparison and control groups who may have encountered higher stress levels and worse coping.

Palestinians' experienced trauma coupled with their attachment to God and frequent spiritual practice shed interesting light on our trends. While our sample did not pass the threshold to be classified as symptomatic for PTSD, they were just below that cutoff and could potentially be borderline symptomatic. Frequent exposure to trauma and endurance of traumatic symptoms can yield physiological dysregulation due to the nervous system's hyperactivity, a bias towards negative emotions and depressive tendencies, and a compromised mental well-being (McFarlane, 2010). Yet perhaps Palestinians' attachment to God mitigates some of

the impacts of these detriments, especially in a country with frequent exposure to violence and a generally tense atmosphere. On average, participants were moderately low in avoidant attachment to God, but moderately high in anxious attachment to God. Avoidant attachment is characterized by distancing from others, or in this case God, in an effort to preserve one's independence (Mosely et al., 2020). Anxious attachment manifests through an increased fear of abandonment, feelings of jealousy, and the need to be close to others, or in this case God (Mosely et al., 2020).

In the context of our study, participants' lower avoidance and higher anxiety in their relationships with God may reflect their need to depend on and feel close to God, which would be unsurprising in a Muslim country since developing one's relationship with God is a key mission in Islam. Although, more research needs to explore whether the trauma Palestinians experience bolsters this anxious attachment to God or if this attachment exacerbates their traumatic symptoms. Regardless, perhaps a religion-based meditation that is grounded in their relationship with God and reinforced with positive, religious messaging helps alleviate some anxiety they may feel and invites them to engage in stress-coping behaviors. In Islam, Muslims turn to God and spiritual exercises for relief, guidance, support, etc (Abdulla, 2021). So in a country where stress levels are high, being mindful of God through the use of Islamic practices, coupled with standard meditative breathing and mindfulness techniques (Rose et al., 2020) may yield optimal stress level reduction, especially since it is culturally sensitive.

Limitations

The main limitation of our study was the very small sample size which hindered us from determining statistical significance of the religion-based meditation. Since mental health is a sensitive topic in Palestine, it was difficult to get participants to not only participate in the study

but even be interested in the subject matter. This also limited our ability to test correlations between the mean change in stress level and measures of trauma symptoms and attachment to God. Therefore for future studies, I recommend increasing the sample size to a minimum of 100 participants to obtain more power, which would allow researchers to test whether relationships between the variables presented here are statistically significant. Expanding the age range of the sample across cohorts may also reveal differences in the efficacy of meditation between the younger and older population. There are currently young adult community groups advocating for mental health awareness in Palestine, so perhaps the perception of this topic may change for the coming generation. Finally, providing a space for free-response answers within the questionnaire may make for a more nuanced insight into mental health perceptions in Palestine and uncover some common themes that have not been documented in the literature yet.

The Islamic traditions integrated into this novel religion-based meditation are already in practice within the Muslim community and bring people varying degrees of peace. So it is inherently a form of mental health care. The larger task moving forward will be to rework the inner biases Palestinian Muslims have towards this issue and mental health providers. By doing so, they can more readily embrace these psychological interventions, buffer the consequences of traumatic stress, and overall improve their mental and physical wellbeing.

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Appendix**Table 1***Comparison of Mean Change in Stress Coping Across Meditation Conditions*

Condition	Sample size (N)	Mean Change in Stress Coping	Standard Deviation
Control	8	-0.08	1.354
Breathing	7	-0.10	2.034
Religion-Based Gratitude	6	0.39	1.756

Note. All means $p > 0.05$