

Online photovoice to explore and advocate for Muslim biopsychosocial spiritual wellbeing and issues: Ecological systems theory and ally development

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Tanhan, A., Strack, R.W. Online photovoice to explore and advocate for Muslim biopsychosocial spiritual wellbeing and issues: Ecological systems theory and ally development. *Curr Psychol* (2020). <https://doi.org/10.1007/s12144-020-00692-6>

This is a post-peer-review, pre-copyedit version of an article published in *Current Psychology*. The final authenticated version is available online at:

<http://dx.doi.org/10.1007/s12144-020-00692-6>.

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Abstract:

We aimed to examine the biopsychosocial spiritual strengths and concerns of college affiliated Muslims living in the southeast U.S. through an online photovoice study to enhance their biopsychosocial spiritual wellbeing. Muslims in the U.S., including those living in the southeast, face many issues (physical attacks, discrimination); yet, they are underserved and understudied. To conduct this study in a culturally and contextually appropriate way, we tailored photovoice to collect data online, modified interpretative phenomenological analysis to analyze data, and utilized ecological systems theory and ally theory as our theoretical framework. A total of 131 Muslims participated, of which 118 (80 men and 38 women) completed the participation. The results revealed eight distinct strength and nine concern clusters. The two most reported strengths were having a supportive community ($n = 57$) and prayer in Islam ($n = 43$). The two most reported concerns were lack of prayer facilities ($n = 54$) and lack of support ($n = 32$). Following the analysis, a photovoice exhibit and a community dinner were held, where the results were shared with the participants, allies (organizations, departments, chaplain, university), and key people such as administrators, the Muslim community, and others interested. The most important issues were addressed through advocacy, and the connection between Muslims and allies seemed to increase. This study has practical implications. Mental and public health professionals as providers, researchers, and educators must focus on the primary clusters to address Muslims' biopsychosocial spiritual issues and wellbeing. The professionals can utilize the online photovoice to understand and serve other people contextually in more effective ways especially in the face of disasters (e.g., conflicts, wars, epidemics, pandemics, hurricanes) when it is much more convenient to participate online.

Keywords: Ecological systems theory | Muslim mental health | Online photovoice | Public health | Biopsychosocial spiritual issues and wellbeing | Interpretative phenomenological analysis

Article:

Mental and public health providers are more likely to work with Muslims at the individual or community levels in the U.S. because Islam is the fastest growing religion in the U.S. (Tanhan and Francisco 2019); moreover, the estimated 1.6 billion Muslims worldwide is expected to increase to 2.2 billion by 2030 (Grim and Hsu 2011). Muslims embody varying degrees of religiosity, spirituality, culture, race, and ethnicity. Muslims in the U.S., particularly those in the southeast (Tanhan and Francisco 2019), face persistent biopsychosocial spiritual pressure including negative attitudes, discrimination, and verbal and physical attacks (Lowe et al. 2019). These lead to biopsychosocial spiritual distress at the global, national, and local levels, as well as on interpersonal and individual levels (Adam and Ward 2016; Ahmed et al. 2014; Tanhan 2019).

Few comprehensive studies (Tanhan and Francisco 2019; Tanhan and Young 2020) have examined the biopsychosocial spiritual issues of Muslims in the southeast U.S. Further empirical research concerning this population performed by mental health professionals will help increase the knowledge in this area, which may benefit Muslims and their mental and public health providers. In addition, Muslims—a minority group in the U.S.—underutilize formal mental health services to address their biopsychosocial spiritual issues (Lowe et al. 2019). One reason is that mental health institutions do not effectively attend to Muslims' primary needs (e.g., issues with safety, daily prayer, justice) (Tanhan and Francisco 2019). Further, some Muslims considered key individual issues (e.g., personal issues such as failing an exam or feeling depressed) to be secondary to the common issues faced by their communities (Tanhan and Francisco 2019; Tanhan and Young 2020).

The researchers called for empirical studies that utilize Bronfenbrenner's Ecological Systems Theory (EST) to conduct contextually appropriate studies (Alhomaizi et al. 2018; Tanhan 2019; Tanhan and Francisco 2019; Tanhan and Young 2020). Many mental and public health providers and researchers approach Muslim issues purely from a clinical level; i.e., an individual, acontextual approach (Tanhan and Francisco 2019). Contextual approaches that consider individuals' cultural and spiritual factors lead to more functional research and services (Arslan and Tanhan 2019; Francisco 2013; Koenig et al. 2012; Tanhan 2019; York Al-Karam 2018; Young et al. 2007). Emerging literature focusing on Muslim mental health suggests that the principles of Islam often shape Muslims' issues and strengths (Abdel-Khalek 2011; Altalib et al. 2019; Haque et al. 2016; Kaplick and Skinner 2017; Tanhan and Francisco 2019).

Tanhan and Francisco (2019) suggested conducting more qualitative studies, such as those employing photovoice, to understand Muslims' most common biopsychosocial spiritual concerns and strengths. To our knowledge, no researchers utilized photovoice to examine Muslims' biopsychosocial spiritual wellbeing and issues; however, many researchers focused on empowering other disenfranchised communities (Kim et al. 2019; Strack et al. 2004; Wang and Burris 1997) and suggested the use of photovoice with underrepresented and understudied populations. Some researchers also used photovoice with Muslim participants to explore their experiences related to different specific topics including physical exercise and women's role (Bromfield and Capous-Desyllas 2017; Chakraborty 2009; Eyres et al. 2019; Miled 2019; Murray et al. 2015; Reimers 2016; Samsuni et al. 2019) and high school students in education (Roxas and Vélez 2019). Similarly, other researchers reported that photovoice enables the acquisition of people's experiences more accurately as they can identify, represent, and enhance

their own or their community's status through captions, explanations, and photos (Davtyan et al. 2016; Haugen et al. 2019; Nitzinger et al. 2019; Strack et al. 2015; Sullivan 2017).

Photovoice

Wang and Burris (1997) developed photovoice to empower women with few opportunities living in a rural area; therefore, it makes sense that they conducted their study with a few women, face-to-face, and in small groups. When photovoice is employed in such a traditional way, the participants can elaborate more on their photos and analyze them, thereby enabling them to be heard. Participants can stand beside their photos and captions at photovoice exhibits to discuss their issues in greater detail, which in turn helps key people to address them. Photovoice has three main goals: enabling participants to express their strengths and concerns regarding their communities, promoting critical conversations among participants, and empowering the community to reach out to policymakers and/or critical individuals in charge of institutions to inform them about the issues and how these could be addressed through the process of creating and shaping policy. These goals serve to gradually enhance the quality of life for and with disempowered communities. This final goal highlights the value of photovoice, making it different and more effective than many other research methods like pure interviews and participatory action research.

Researchers (Miled 2019; Tanhan and Francisco 2019; Wang and Burris 1997) have suggested utilizing photovoice to venture out of traditional research and clinical roles, and adopt a social justice, multicultural, and contextually appropriate approach, which made it appropriate to use photovoice for this study involving Muslims. Such an approach enables researchers to reach out to the community in an appropriate and effective way (Cartwright et al. 2008; Crethar et al. 2008; Tanhan and Francisco 2019). Therefore, this online photovoice study contributes to understanding and addressing Muslims' wellbeing and issues.

Problem Statement

Public and mental health professionals are more likely to work with a relatively diverse group of Muslims some time in their career, and should be familiar with their biopsychosocial spirituality. Focusing on Muslims in the south and southeast U.S. is necessary because only few researchers have focused on their issues, and historically, there are more contextual issues (e.g., racism, nationalism, less diversity, white supremacy) in these areas compared to other regions in the U.S. (Tanhan and Francisco 2019; Tanhan 2017). Additionally, to our best knowledge, none of the previous studies used photovoice to explore and advocate for Muslims' biopsychosocial spirituality. Therefore, there is a need for a theoretically well-grounded empirical research utilizing photovoice online to collaborate with Muslims and possible allies in southeastern U.S. to understand and address the community's biopsychosocial spiritual wellbeing and issues from a contextually perspective. Many Muslims feel unsafe to articulate their issues (Tanhan and Francisco 2019); therefore, the researchers called utilizing photovoice mindfully with Muslims. Mental and public health professionals can benefit from using the online photovoice to understand and serve other people contextually in more effective ways especially in the face of disasters (e.g., conflicts, wars, epidemics, pandemics, hurricanes) when it is much more

convenient to participate online, which is the case for this current study due to many Muslims not feeling safe to openly advocate for their issues and wellbeing.

Study Purpose

In this study, we (a) aimed to examine and acknowledge Muslims' most common biopsychosocial spiritual concerns and strengths through an online photovoice study that incorporates tailored interpretative phenomenological analysis (IPA) and collaboration with Muslims and allies in the community. We also (b) aimed to enhance Muslims' biopsychosocial spiritual concerns and strengths through advocacy with and for Muslims by reaching out to policymakers and critical individuals in charge of institutions, to create effective avenues at a systemic level. This is a chief goal of photovoice, the ally theory, and EST. We tailored traditional photovoice and IPA to come with final online photovoice and tailored IPA to make them contextually more appropriate for the Muslim participants.

Study Significance

First, we utilized online photovoice and tailored IPA to acknowledge Muslims' biopsychosocial spiritual issues and strengths from their own perspectives. Second, we clarified Muslims' unexplored common concerns and strengths. Third, we advocated for Muslims through the media—which is one of the aims of photovoice—to enable the concerns of the community to be addressed at institutional levels. Fourth, we tailored photovoice and modified IPA, which bridges some important gaps in the related literature and provides key implications for future studies through using the online photovoice especially to reach out more diverse and underrepresented participants and also in the face of calamities (e.g., lack of safety, endemics, hurricanes). Finally, the current study is theoretically well-grounded and meets some important gaps in the related literature.

Theoretical Framework: EST and Ally Development

In 1970, Urie Bronfenbrenner proposed EST as a conceptual model that considers environmental conditions apart from intrapersonal and genetic factors (Bronfenbrenner 1977). EST includes four interrelated levels (micro, meso, exo, and macro systems) that must be considered together. The person—as an individual—is at the center and all other systems are nested around. If researchers focus only on one level (e.g., the individual level without including the institutional level), they may end up blaming the individuals for the issues they struggle to address (Tanhan 2019; Tanhan and Francisco 2019).

Bhattacharyya et al. (2014) utilized the ally development model, wherein mental health providers collaborate with individuals and organizations to address social justice issues encountered by Muslims in the U.S. The researchers noted the need for counselors to use the model from a contextual perspective while utilizing counseling skills at the community level—extending beyond traditional clinical services. The model has six components: experiencing oppression and conflict, increasing awareness of social injustice, building a sense of efficacy for more meaningful and livable conditions, seeing one's position in all these processes, building a comprehensive and contextual perspective for biopsychosocial spirituality, and utilizing

advocacy to bring into action what is meaningful for the community (Becker et al. 2014; Tanhan and Francisco 2019).

Method

The joint use of EST and the ally model as the theoretical framework is crucial for examining contextual and individual factors simultaneously while collaborating with allies throughout the process (e.g., tailoring, method, discussion, data analysis, advocacy). Individual and contextual issues are interrelated and addressing them simultaneously and from a contextually sensitive perspective creates justice and wellbeing at each level (Tanhan 2019; Tanhan and Francisco 2019). Therefore, we tailored and implemented photovoice online to make the study culturally and contextually more appropriate and effective than some other qualitative methodologies (interview, traditional photovoice, etc.) owing to the following reasons: attendance of numerous and diverse participants, including marginalized groups among Muslims; participants feeling much more secure and autonomous; younger Muslims' overall tendency to utilize electronic tools; tailored photovoice incorporating a strength-based approach and involving the basic five senses (e.g., vision, hearing) and other senses (e.g., kinesthetic, direction) for both participants and targeted policymakers; and online tailored photovoice that saves time.

Participants. The sample comprised 131 Muslims affiliated with colleges in the southeastern U.S. who submitted their responses. To participate, one had to have an affiliation with a college in the southeastern U.S. and submit at least one photo along with a caption and a theme to depict the strength or concern they faced in relation to their college experience. Participants who did not do this were not included in the analysis. Ten participants did not provide any photos, captions, or themes; five participants did not provide themes for their photos nor captions depicting strengths; and nine participants did not provide themes for their photos nor captions depicting concerns. Data from all these participants (in total 13) were excluded from the analyses. Therefore, 118 participants (80 men and 38 women) were included in the analyses: 110 participants submitted photos with captions and themes depicting both strengths and concerns, six participants submitted photos with captions and themes depicting only strengths, and two participants submitted photos with captions and themes depicting only concerns.

Participants were from four different colleges, with 102 of them being from the same college where the study was conducted and announced through activities and social media accounts of the Muslim Student Association (MSA). Of the 118 participants, eight were freshmen, 15 were sophomores, 17 were juniors, and 10 were seniors. A total of 50 were undergraduate students, 45 were graduate students, and 12 were from other programs, such as an English course; in addition, three were alumni and eight were faculty members, parents of students, and employees. Online photovoice enabled reaching out to diverse and many participants in a relatively short time when recent contextual national and international political events were happening, placing enormous pressure on Muslims. It would have been considerably difficult, if not impossible, to reach out to that many and diverse participants in such a short time through traditional photovoice or other qualitative strategies such as interviews. Based on the framework, it is necessary to have many and diverse voices when working with disempowered groups, so that all voices and messages are heard.

Procedure. This work was conducted at a university in the southeastern U.S. The university's Institutional Review Board approved this study. Participants provided verbal consent for confidentiality reasons as signing forms is a sensitive issue for many Muslims. Verbal consent means the participants clicked "yes" when they were presented with an online consent statement. The survey was conducted online through the university's Qualtrics system and sent to over 2000 people through email lists, social media accounts, Muslim student organization events, and Islamic centers. We have considered our framework throughout the process and accordingly collaborated with our allies.

Questionnaire/Survey. A cover letter was included with the survey explaining the study rationale and importance. Links to videos, websites, and articles were provided for potential participants to learn more about photovoice and how to use it. Participants were informed about how they could borrow tools—such as cameras, computers, tablets—from their schools, or they could contact the researchers to acquire the tools necessary for participation; 40 participants borrowed devices from the first researcher. Although participants were allowed to submit hard copies of their photos and captions to the first researcher, none did. Providing them this option was necessary because certain participants may not have had the tools to upload the material, or were afraid that their information would be stolen, which could put them at risk for misplaced blame.

In our online photovoice, we aimed to reach as many and diverse participants as possible so that more voices, perspectives, and experiences could be shared. In addition, the anonymous Qualtrics survey provided confidentiality, which was critical because of the several contextual issues faced by Muslims (e.g., rhetoric expressions, Islamophobia, discrimination, not feeling safe, having less privilege because of national and international political events).

In collaboration with Muslim organizations and based on previous researchers' (Miled 2019; Tanhan and Francisco 2019; Wang and Burris 1997) suggestions for researchers utilizing photovoice to venture out of their traditional roles, we tailored traditional photovoice in such a way that data could be collected online to maintain anonymity and to enable many and diverse Muslims to participate. This coincides with the ally model, as it emphasizes the feeling of oppression faced by participants, increases awareness for them, builds a culturally effective and sensitive approach, and utilizes advocacy to bring positive changes.

The online survey included a video with step-by-step instructions for using photovoice. Participants were asked to submit one photo that expresses their supports/strengths and another representing their concerns/barriers. Photos of both strengths and concerns were solicited so that there would be a balance of understanding regarding their experiences. Focusing on both strengths and concerns was highlighted as key by our allies (especially MSA members) and framework. The tailored photovoice seemed to be more effective than traditional photovoice and other qualitative approaches, such as purely participatory action research, because many participants through different avenues (e.g., face-to-face, email) appreciated being able to participate online, especially with photos and their captions that reminded them of social media and how visual documents can be used to address their issues. Some reported they felt entertained completing the online photovoice compared to completing classic surveys or

participating in qualitative studies. Having an appealing method fits with EST and ally model as well, as it is recommended to build comprehensive and contextually appropriate approaches while addressing issues. It is also crucial to state how Muslims struggling with issues require allies at local, regional, and national levels in the form of individuals, communities, and institutions (Altalib et al. 2019; Khan et al. 2019; Tanhan and Francisco 2019). This study involved a diverse range of allies (e.g., Muslim and non-Muslim individuals and organizations, departments, universities, student organizations), which combined EST and ally theory. The allies from the counseling and public health departments were non-Muslims, whereas the others from MSA and the chaplain were Muslim. The allies contributed to the process throughout the study, such as in deciding whether to ask for strengths and issues and how many photos are to be submitted, reaching out to stakeholders to enable participation, finding support for the exhibit and dinner, organizing the event, facilitating the event, and supporting the follow-up advocacy process to address the issues.

Study Steps. Participants were guided through five steps to complete the study.

Step 1. Identifying a support/strength and a concern/barrier. Participants were instructed to identify a support/strength and a concern/barrier, with a focus on their experience as a Muslim on campus. If they had more than one strength and concern, they were asked to take time to reflect on which ones were the most important to them.

Step 2. Taking photos of strengths and concerns. Participants were asked to take one photo of a support/strength and another of a concern/barrier. They were encouraged to carefully consider how to best represent their idea through a photograph. They could take as many photos as they wanted; however, they would only submit one each for depicting a strength and a concern. Limiting the number of photos was important because it is possible to end up with too many photos that may go without being analyzed and acknowledged. In photovoice, taking photos of people and private property was allowed if consent was obtained; however, because of the contextual conditions (e.g., hatred toward Muslims, discrimination) and suggestions by the allies, the researchers decided not to include any photos of people or private property. Any photos or captions that had identifiable information (e.g., name, personal photo), private information was automatically removed to keep the message heard anonymously.

Step 3. Submitting photos and writing captions. A caption, which would give meaning to the photo and convey participants' messages, was required for each photo. Participants were advised to follow the SHOWED acronym to make the captions and stories more effective, meaningful, powerful, and comprehensive as a whole rather than writing separate sentences for each letter:

S. What do you *see* in the picture as representative of a strength/support for you or as part of your life experience on your campus?

H. What is *happening* in the picture you have taken? (Briefly describe the picture).

O. How does that relate to (*y*)our life as a *person* and/or *community*?

W. *What* is it that contributes to or creates the strength/support?

E. What did you *experience (feelings, thoughts, sensations)* when you took the photo and when you wrote the caption and then submitted the photo?

D. What can we (as mental health professionals, peers, university, and all) *do* about it?

SHOWED was described under the boxes used to upload photos and write captions so that they could see the photo, acronym, and caption simultaneously. The acronym was similarly used for the concern section, in step 3, where the participants would upload and share their concern photos and captions.

Wang and Burris' (1997) SHOWeD acronym was slightly modified for this study to make it more appropriate culturally, contextually, and from a mental health perspective. First, the "O" stood for "(y)our" rather than "our" because, in the mental health profession, understanding what everyone is going through is equally important for the society. Community is crucial for Muslims; therefore, the researchers explained that "O" stands for both individual- and community-level needs. Second, "W" stands for "what" rather than "why" so that the study could achieve a certain level of objectivity and openness. In the mental health profession, experts have noted that using "why" could lead to judgment and make people feel blamed; in contrast, using "what" is more descriptive and invites more-detailed expressions. Third, in Wang and Burris' SHOWeD, "e" stands for nothing and, therefore, is written in lower case. In the mental health profession, understanding people's experience is crucial; thus, in this study, "E" stands for "experience (feelings, thoughts, and sensations)." Other minor changes were employed to provide more information and make our questions clearer because this study required online participation and this was the first time this methodology was being used among Muslims.

The researchers consulted with key allies regarding the order of the photos that were submitted and decided that strength would come first, followed by concern. To submit a photo showing support or concern with captions, participants were provided with a box that allowed them to upload their photo first, and then another box in which to type the caption.

Step 4. Identify a theme or metaphor. In a typical photovoice method, researchers listen to participants in groups of five to eight people, each using the SHOWeD method to show their photos and talk about the stories and messages in them, while the researchers record the participants' verbal and nonverbal expressions to identify overall themes. Different researchers used diverse analytic techniques such as versions of content (Brunsden and Goatcher 2007) and narrative (Harrison 2002) analysis. However, some researchers (Brunsden and Goatcher 2007; Smith and Osborn 2003) stated how these techniques are not explicitly detailed and not appropriate for visual (photovoice) data, especially because of the risk of losing the participants' voices.

The researchers called for the use of IPA as a considerably more appropriate technique in such cases. Traditional IPA involves two stages to interpret data: first, participants make sense of their own world and lived experiences, and concurrently, researchers try to make sense of the participants' making sense of their world (Brunsden and Goatcher 2007; Smith and Osborn 2003). This means that traditional IPA utilizes a research team to extract the final meaning from participants' stories and interpretations, which should be implemented with

photovoice (Brunsden and Goatcher 2007). However, in EST and ally theory, even the use of traditional IPA may lead to losing participants' voices and experiences, thus preventing reaching out to many and diverse participants.

Therefore, based on the theoretical framework, especially ally theory, and to protect Muslim participants' identities and voices as much as possible, we tailored traditional IPA to a more appropriate, analytic, and objective data analyses method. Therefore, our online tailored photovoice method and IPA shaped how we collected and analyzed data by adding a fourth step and asking participants to provide a theme or metaphor following their caption while collecting data. In this way, this tailored IPA approach is more analytic and objective, and seemingly provides a more rigorous approach than some other researchers' (e.g., Brunsden and Goatcher 2007; Smith and Osborn 2003) use of traditional IPA. In addition, it provides an effective response to their call for systematical procedures developed specifically for visual data. Therefore, we asked participants to extract the meanings of their stories and captions and provide a theme each comprising one to three words. In our tailored IPA, we only checked if the themes provided by the participants fit their captions to prevent any misplacement or outliers; thereafter, we grouped the captions and themes under a few overall themes to make the research more understandable.

Step 5. Voluntarily attendance to photovoice exhibition, community dinner, and prayer. In traditional photovoice, an important step is to hold an exhibition that the participants and invited policymakers (or anyone interested) can attend to view all photos and captions, and acquire more detailed information so that necessary policy changes can be implemented. Therefore, in this step, participants were briefly informed about the volunteer attendance to the photovoice exhibition, including its main purpose; how all photos, captions, and themes would be anonymously exhibited; invitations to key people (e.g., mayor, key individuals from colleges, different community leaders, student representatives, and professors) and how they could be interested in some photos, captions, and themes; and how all attendees at the exhibit could contribute more to the photos, captions, and themes if others attending the exhibit requested more information. The participants were also informed that there would be a free dinner—financed by the allies and some other organizations (details provided in the acknowledgments)—including common traditional Muslim foods—thus facilitating attendees to enjoy the meal and exhibition through meaningful conversations. Having a humble traditional dinner was recommended in Muslim mental health literature (Tanhan and Francisco 2019; Tanhan 2017) as well as by our allies, especially by the MSA.

The participants were also informed that prayer places would be provided, separate for men and women, so that they could pray there without facing difficulties. They were also informed that they could pray in two different provided places. At one place, non-Muslims could observe Muslims while they were praying for a cultural experience and to understand Muslims more, as some researchers have stated that prayer has a central role for many Muslims (Ahmed et al. 2014; Tanhan 2019; Tanhan and Francisco 2019). A second place was provided where Muslims could pray in private. Such an approach is culturally and spiritually sensitive and can increase attendance to create a richer exchange at the exhibits; this makes the online photovoice more appropriate and effective than other qualitative methodologies (e.g., traditional photovoice,

interviews, etc.). Providing cultural food and necessary prayer tools are strongly suggested by the ally theory so that the researchers can be mindful of their participants and communities and of their positions and identities throughout the process. The stakeholders as allies (e.g., counseling and public health departments, MSA, Muslim chaplain, office of intercultural engagement) assisted with organizing the exhibition, dinner, and prayers, which coincides with SEM, ally theory, and photovoice aspects.

Sociodemographic Data. Sociodemographic data on sex, college, educational level, and frequency of practicing religion were collected.

Results

The responses were analyzed by following the tailored IPA solely based on participants' themes through four steps to preserve participants' voices and messages. Throughout the steps, allies were informed about the process and were invited to examine the captions and how each caption and its theme was placed in appropriate cluster(s). Through an online survey of the participants at the exhibit, all participants and attendees were informed how they could contact the researchers if they did not agree with the analyses and/or wanted to share feedback on the results and analyses. The theoretical framework and methodology used affect the kind of data and results that are obtained; therefore, we aimed to collect the results objectively and from many and diverse participants. Although the main researcher was officially in charge of the entire process, the stakeholders as allies (e.g., members of counseling and public health departments and MSA) contributed to checking the captions, themes, and overall clusters, which coincides with aspects of photovoice, IPA, EST, and especially ally theory. We analyzed data in four steps.

Step 1: Checking Photos and Captions for Missing Information. The researchers checked all photos and captions submitted by participants. Of the 131 participants, 13 did not submit anything and were thus excluded from the study. The remaining 118 participants submitted photos and captions. However, themes for support and concern were not provided for five photos and nine captions; therefore, these were clustered under "no themes."

Step 2: Checking Photos, Captions, and Themes or Metaphors for Confidentiality. Data submitted in non-English languages ($n = 8$), such as Arabic, Persian, Turkish, and Kurdish, were translated to English by professional translators. Participants could submit in any language they preferred to make them comfortable in their expression and to not prevent anyone with limited English skills from participating. Allowing this is crucial in EST, ally theory, and photovoice to empower participants throughout the research. Participants were informed that their captions and themes would be translated into English and both the original and translated ones would be exhibited. All the data were checked for confidentiality. Individual names and faces in the photos and captions were removed to protect the people and anonymity.

Step 3: Classifying Themes of Support/Strenght Captions. First, all themes in the support captions were checked for consistency, and all were found to be consistent with the captions. Several participants used more than one theme; this was allowed to make it easier for participants to determine their themes. These themes were classified in more than one group. We grouped similar themes into the same cluster(s). Eight clusters were formed (Table 1). Owing to

paper length restraints, we will only provide two support photos and their captions and themes from the most reported (first and second) clusters here.

Table 1. Support themes categorized into eight clusters

Support themes (Some responses counted in more than one category)	Total number (116)	%
1. Supportive community (e.g., conversation, respect, unity, safety)	57	49.14
2. Prayer in Islam (e.g., reflection, prayer facilities like water in restrooms)	43	37.1
3. Muslim Student Associations (e.g., activities, Muslim chaplain)	11	9.48
4. Healthy food in Muslim community (e.g., healthy food, fruit, sharing)	9	7.76
5. Supportive campus environment (e.g., supportive departments, people)	9	7.76
6. Having knowledge about Islam	8	6.9
7. Research (from counseling department) team focused on Muslims	5	4.31
8. Supportive economic factors (free transportation)	3	2.59

The first one is from the 111th participant and falls under cluster one: supportive community. This was the most reported strength: almost half of the (57/116; 49.14%) participants spoke about this cluster. The second selected photo was from the third participant, and it fell under the second most reported strength cluster: prayer in Islam. More than one-third (43/116; 37.1%) of the participants expressed about this strength. Other important support clusters and how many participants reported them are shown in Table 1.



Figure 1. Theme for the photo and caption: “More conscious activities”. Note 1. The participants provided photos, captions, and themes. Due to limited space, only a few examples are provided

“I took this photo at [...] in December when I was walking with my friends and some people told us, “F... all Muslims.” My friends, who are not Muslim, looked at them and frowned at them. The strangers stopped talking and walked away. I believe such ignorant actions stem from a lack of knowledge and interaction with Muslims. As Muslims, I believe we need more conversations and dinners, coming together. I also believe [the university] should support Muslim groups more so that they can do more activities. In

addition, I want to see our activities as being humble, not as showing-off or with blaring music because people in the USA and especially in our countries face many difficulties and lose their life. How is it possible that the MSA could play music when we lost so many people in Syria and Palestine? We need to be conscious of what we go through; we cannot be blind.” (Participant 111; Fig. 1; under cluster 1: supportive community).



Figure 2. Theme for the photo and caption: “Water and being clean”

“It is a private restroom in [...] at the library. It is good to have private restrooms because we, as Muslims, have to use water to clean ourselves when we use restrooms; otherwise, we cannot pray. Therefore, when there are private restrooms, we can use them and carry a bottle to use the water and get clean. I feel some shame at the moment talking about this, but I think it is necessary to let the university know so that they can do more. Increasing the number of private restrooms will be good so that we can use water and get clean to pray without leaving the campus.” (Participant 3; Fig. 2; under cluster 2: prayer in Islam).

Step 4: Classifying the Themes of Concern/Barrier Captions. As in Step 3, all concern caption themes were checked for consistency. Some participants used more than one theme or metaphor; such themes were classified in more than one group. The researchers clustered the similar themes in groups and then produced nine concern clusters, listed in Table 2. Again, owing to space constraint, we only selected four concern photos and their captions and themes from the most reported clusters.

Table 2. Concern themes categorized into nine Clusters

Concern themes (Some responses counted in more than one category)	Total number (112)	%
1. Lack of prayer facilities (e.g., lack of prayer rugs, place, time)	54	48.2
2. Lack of adequate support from Muslim and non-Muslim communities	32	28.57
3. Lack of healthy and halal food on campus	15	12.93
4. Lack of knowledge about Islam among Muslims and non-Muslims	13	13.39

Concern themes (Some responses counted in more than one category)	Total number (112)	%
5. Global issues (suffering, Palestine, Zionism, terrorism, wars)	10	8.93
6. Lack of professional research for Muslims	10	8.93
7. Disorganized MSA activities and Muslim chaplain	8	7.14
8. Lack of support to focus on studies	6	5.36
9. Economic difficulties	3	2.68

The third photo was submitted by the 14th participant and the photo, caption, and its theme were categorized under the first (lack of prayer facilities) and second (lack of adequate support from both Muslim and non-Muslim communities) clusters. These were the most reported concerns, with the first one being reported by 54 (48.2%) participants and the second one by 32 (28.57%) participants. The fourth photo is from the 37th participant, which we placed under the third (lack of healthy and halal food on campus) and fourth (lack of knowledge about Islam among Muslims and non-Muslims) concern clusters. The third and fourth clusters were reported by 15 (12.93%) and 13 (13.39%) participants, respectively. The fifth (submitted by the 10th participant), and sixth (submitted by the fourth participant) photos were categorized under cluster five (global issues). In cluster six, 10 participants requested researchers to collaborate with Muslims, especially through their organizations. In the seventh cluster, eight participants requested MSA and Muslim chaplains on campuses to become more organized and acquire professional training regarding the best way to communicate with and treat people. In cluster eight, six participants expressed how, from time to time, they have felt unmotivated to focus on their studies due to different issues (e.g., global issues, lack of prayer facilities on campus, being alone); further, only three participants expressed about the financial difficulties associated with being a student. Although most captions were related to more than one main cluster, while collaborating with our allies, we strived to place each theme under only one cluster (i.e., the most relevant one), except for cases in which the participant provided more than one theme that were related to more than one cluster.



Figure 3. Theme for the photo and caption: “Lack of resources and places”

“I think we need a place for prayer and water in restrooms at the health center because many Muslims go there. They miss prayers [because of the lack of facilities], including myself and a few of my friends. I will be happy to see a place for prayer for women and water in restrooms as well as a place where we can feel secure to practice ablution. I do not want to have to think a hundred times before I leave home; it is stressful and unjust. I will be very happy if the health center would know about this issue. What we ask for, I think, goes perfectly with health: being clean, physical exercise, and praying. Muslims’ prayer consists of physical movements and meditation, so it is a perfect activity for good health.” (Participant 14; Fig. 3; under clusters 1 & 2: lack of prayer facilities/lack of adequate support from communities).



Figure 4. Theme for the photo and caption: “Big picture”

“People, including Muslims, tend to have difficulty in looking at the big picture. People hear something bad on the news, and, immediately, they buy into it and then cause many innocent people to suffer. We need to see the big picture. At our campuses, both at [...], we could have [halal and healthy food that is missing from our campuses] gatherings and be more open to understand instead of being ignorant and simply believing in the media.” (Participant 37; Fig. 4; under cluster 3 & 4: lack of healthy and halal food/lack of knowledge about Islam).



Figure 5. Theme for the photo and caption: “Real terrorist”

“I agree with many of my friends that ferocious ones [Zionists, foreign countries’ exploitation, and their puppet terrorist groups who are claiming to be Muslims] destroy [Muslim] countries’ civilization and people, and that of Christians and Jews. However, it is mostly Muslims who are losing everything, and then we are blamed as terrorists. They are terrorists, and everybody knows that. I pray they will find peace because Hell is waiting for them forever if they do not stop their violence and terrorism. I think the school and all of us need more activities so that people can learn about Islam, which means peace.” (Participant 10; Fig. 5; under cluster 5: global issues—exploitation).



Figure 6. Theme for the photo and caption: “Ignorance”

“[I want] to stay inside, or if I go out, I will just go to a corner in the university or library and study there till late hours and then go home. Sometimes, I want to call a friend to sit and talk but I do not do so because I do not know how she will respond. Being women in Islam and in this country is difficult; you are out there, and anybody can attack you at any time. I am sick of these people who are ignorant and hateful. Some people treat us like we are terrorists, but they and everybody know that they are the terrorist who exploit all people and land. They created terrorism and then they blame us. I am scared even now—typing these words. My wish for all people is to live in peace and have a good life with their family; this is too far from us as Muslims because tyrants who are modern pharaohs constantly occupy our lands, enslaving us; worldwide, they do this with other people, too. (Participant 4; Fig. 6; under cluster 5: global issues—not feeling safe/suffering).

Data from the Community Dinner and Exhibit. Over 110 people (including professors, media representatives, members of the police and sheriff’s department, chancellor’s office staff, student organization leaders, and mental and public health providers) attended the dinner and exhibit, which lasted about three hours. Participants provided more detailed information (e.g., need for a squatting versus sitting toilet) on the support and concern clusters at the exhibition. We printed almost all photos and captions in color for the exhibit and also provided them on a few electronic devices (e.g., tablets, laptops); the attendees walked around or sat down and looked at the photos and read the captions and themes while having dinner. Many attendees appreciated for being provided with all photos and captions on electronic devices; a few elderly parents of students and professors found it very convenient to be able to sit, have dinner, and check the photos and their captions.

Non-Muslims asked many questions; many Muslims freely joined small-group conversations to provide more information. Stakeholders as allies (e.g., six doctorate students in a counseling program, MSA members) also helped with the organization of the data and answered attendees’ questions. Many attendees expressed interest in helping the researchers with the next steps to address Muslims’ biopsychosocial spiritual issues and wellbeing.

Key Muslim leaders and organization members attended the event and showed interest in supporting such studies. They expressed their realization of the effectiveness of mental health providers in addressing the issues and wellbeing and their deep gratitude for such an initiative. Some participants wished they had reached out to more Muslims. Several attendees recommended having structured conversations for each cluster, to obtain deeper information about each. Having many and diverse attendees from all levels from EST at the event made it much more productive: strengths and issues were acknowledged and conversations about vital issues took place.

Discussion

The present research made a significant contribution to the elucidation of Muslims’ biopsychosocial spiritual wellbeing and issues. The findings can be discussed under two main categories. First, the results showed that the online photovoice (SHOWED not SHOWeD) was an effective method and the data could be analyzed through the proposed modified IPA, which together contributed to clarifying Muslims’ biopsychosocial spiritual strengths and concerns

thoroughly from their own perspective. The use of online photovoice in this way could promote progress in different areas because this combination together bridges some important gaps regarding improvement of methods for collecting and analyzing online visual data, which has been noted in past research (Brunsden and Goatcher 2007; Davtyan et al. 2016; Sullivan 2017; Volpe 2019). Second, participants' responses demonstrated that the researchers identified participants' biopsychosocial spiritual strengths and concerns through the online photovoice, analyzed them utilizing the modified IPA, employed EST and ally theory as the framework, and finally advocated with and for Muslims to address these issues. All of these added significant value to understanding Muslims.

Concerning the first category, the findings contribute to the growing body of empirical literature on Muslims. The results could be used to enhance the quality of life at all levels for Muslims and for American society at large. The present study extends the literature in several important ways concerning Muslims' biopsychosocial spirituality, online photovoice, and modified IPA. The findings support that the proposed online photovoice methodology is quite effective. The theoretical framework contributed to tailoring online photovoice methodology and enabled us to conduct empirical research. Online photovoice is also a response to researchers' calls to construct and extend effective methodologies that appropriately collect and analyze visual data to fit participants' cultures, spirituality, and contexts (Brunsden and Goatcher 2007; Nitzinger et al. 2019; Strack et al. 2015; Tanhan and Francisco 2019; Volpe 2019; Wang and Burris 1997). Other researchers also called for the extension of IPA to make it more appropriate for visual data (Brunsden and Goatcher 2007; Davtyan et al. 2016; Smith and Osborn 2003).

Researchers also called for the use of EST (Francisco 2013; Strack et al. 2010; Tanhan 2019; Tanhan and Francisco 2019) and ally theory (Bhattacharyya et al. 2014; Tanhan and Francisco 2019) to shape empirical research. First, to our knowledge, this was the first study in which photovoice was tailored and used entirely online and with a large number of diverse participants. Second, this was also the first study that used tailored photovoice from a community psychological perspective to make it more appropriate for use in public and mental health. Third, the use of adopted IPA also empowered and protected participants' voices. Fourth, during the dinner and exhibit, the researchers paid the utmost attention to all points to ensure that Muslim attendees would feel welcome (e.g., halal and cultural food, space and tools to pray); additionally, we promoted the inclusion of those interested in the study, especially key stakeholders (e.g., policymakers, media). Although some researchers utilized photovoice with Muslim participants for different subjects (e.g., cloths, religious perspective, hygiene, and physical activity; Asniar et al. 2018; Bromfield and Capous-Desyllas 2017; Eyres et al. 2019; Graziano 2014; Miled 2019; Murray et al. 2015; Reimers 2016; Samsuni et al. 2019), no one had focused on Muslims' biopsychosocial spirituality with such a large and diverse sample.

In terms of the second category, the strength and concern themes add unique value to the U.S. Muslims' biopsychosocial spiritual literature. Concerning strength clusters, the first two clusters are critical since so many participants submitted relevant photos and captions. The first cluster, *supportive community*, highlight how being united and supportive of one another—both Muslims and non-Muslims—helps individuals address their issues and have more meaningful college experiences. These findings coincide with almost all research about Muslims' mental health, which stresses the importance of social support (e.g., Alhomaizi et al. 2018; Mohr et

al. 2019; Tanhan 2019; Tanhan and Francisco 2019). Having a supportive community in which everyone feels safe, supported, and understood is a basic human need. The second cluster—prayer for Muslims who strive to practice their religion/spirituality has been at the center of vast research (Altalib et al. 2019; Tanhan and Francisco 2019). Many Muslims set aside time to mindfully get ready (e.g., have ablution, getting in prayer mood) for daily prayers to comply with their beliefs, feel physically and spiritually relaxed, and have time to reflect (Tanhan 2019; Tanhan and Francisco 2019). Therefore, prayer is crucial to many Muslims, and many participants felt disturbed or bored when they could not do so, which aligns with other research (Tanhan and Francisco 2019).

The third (Muslim student associations) and fourth (healthy food in the Muslim community) clusters also seem to be related to the first and second clusters. Participants explained how having the MSA, Research Association for Muslims (RAM), a Muslim chaplain, and healthy food facilitate a functional community and foster the practice of spirituality. Some participants reported some issues with these strength clusters, which are addressed in the concern section below. It is important for Muslims to be able to come together and have their most important needs—safety, prayer, and support. In this research, we respected participants' anonymity and provided an exhibit with prayer and dinner so that the ones who wanted to connect with others and speak publicly could do so. Such an approach facilitated participants' inclusion and comfort, which aligns with other researchers' suggestions (Alhomaizi et al. 2018; Tanhan and Francisco 2019; Tobah 2018).

The fifth strength cluster, reported by nine participants, was getting support from departments and people on campus. The participants provided the names of specific people, departments, or offices that were supporting Muslims. Related to this theme and yet somewhat different is the seventh cluster: a counseling department being a source of strength. Five participants expressed how they feel supported owing to the offered empirical research and practical services to address issues faced by Muslims in college. This finding coincides with some other results—that Muslims' view of mental health services improves once they receive the services and experience how their quality of life is enhanced by utilizing them (Bhattacharyya et al. 2014; Tanhan and Francisco 2019). In the sixth cluster, eight participants spoke about how they feel supported and comfortable when all, including Muslims, have accurate knowledge about Islam, rather than feeling obligated to correct or provide information. Finally, only three participants expressed how receiving scholarships during their education was supportive.

To summarize the strength clusters, a supportive community and prayer in Islam emerged as the two most important strengths, which could be utilized to address issues or enhance Muslims' quality of life at all levels. This study differs significantly in that the strengths were expressed in a contextually appropriate innovative online photovoice. This serves the voices of the underrepresented and underserved Muslims. Such a positive psychological perspective is vital as prior researchers noted the need for contextually appropriate research for Muslims so that they, as individuals, groups, or communities, do not feel threatened (e.g., Alhomaizi et al. 2018; Tanhan 2019; Tanhan and Francisco 2019). From an ally theory perspective, the results indicated that participants acknowledged the support from people and departments and saw them as important strengths. Additionally, almost each strength caption included an aspect of concern (e.g., praying daily is a strength; yet, there are many concerns with it), which may indicate that

participants were overwhelmed with issues. This makes sense because human beings are wired to pay utmost attention to their problems when they do not feel safe (Tanhan 2019).

Nine concern clusters emerged. The participants had many primary and urgent biopsychosocial spiritual issues at all levels (e.g., individual, community, and global). These results mirrored other studies about Muslims' biopsychosocial spirituality (Bhattacharyya et al. 2014; Lowe et al. 2019; Phillips and Lauterbach 2017; Tanhan and Francisco 2019), and the results make sense from EST and ally theory perspectives. The first cluster was facing difficulties when Muslims want to pray, which nearly half the participants reported as the chief concern. In their captions, they explained how Muslims pray daily and need to be clean, including requiring water after using the restroom for performing ablution to pray. They asked for appropriate places and ablution stations to be provided to feel safe and relaxed. Many participants reported receiving prejudiced looks, words, and even physical attacks when they performed ablution in normal restroom areas (e.g., washing their feet in the sink). Some participants recommended placing water in the restroom stalls in two ways: by placing 1.5-l watering cans in the stalls so that one could fill them with water from the sink or by installing a water system or bidet in sitting toilet seats. They expressed the need for squatting restrooms for two main reasons: squatting restrooms help the digestive and excretory systems to work much better, which helps with one's health; and because squatting toilets are cleaner considering some people leave dirt on sitting toilets. If there is visible dirt on the seat, and one's skin or clothes touch the seat, then it is not acceptable to prepare for prayer. Regarding squatting restrooms, one's skin does not touch any toilet surface; therefore, it is easier to stay clean. Many participants appreciated expressing this issue, which has typically remained undiscussed in academic settings. These results coincide with Tanhan and Francisco's (2019) study.

The second theme was lack of support from others regarding facing oppression, prejudice, stigma, hate speech, discrimination, and even verbal and physical attacks on campuses, which nearly one-third of participants spoke about. Feeling and being safe represents one of the most important needs from a biopsychosocial spiritual perspective; therefore, attention could be duly provided to this concern. Participants stated that they were not safe and did not feel safe, even in their classes; they also stated how they gradually get used to this and treat everything as "normal." Other researchers also reported similar results (Adam and Ward 2016; Lowe et al. 2019; Manejwala and Abu-Ras 2019; Miled 2019; Tanhan 2019; Tanhan and Francisco 2019).

The third theme was facing difficulties in finding halal and healthy food. Muslims have some restrictions (e.g., not being allowed to eat anything that includes alcohol or pork, not being allowed to eat meat if the animal was slaughtered intentionally without mentioning the name of God). Some reported how the dining rooms' schedules affected them dramatically during Ramadan (ninth month of the Islamic lunar calendar), when Muslims fast for a month and need to have *suhoor* (meal before dawn) and *iftar* (dinner after sunset). Many dining rooms' schedules do not fit with Muslims' dining schedule for Ramadan. A few researchers stressed how Muslims might be dealing with issues related to food (Musleh 2018; Tanhan and Francisco 2019). The fourth theme concerned how both Muslims and non-Muslims lacked knowledge about Islam. For Muslims, they tend to get questions from their peers regarding Islam, and some participants reported that they do not want to be the ones who constantly correct people and provide

information about their religion. Similarly, the fifth theme concerned global issues, wars, and the exploitation of Muslims and non-Muslims (e.g., Zionism, terrorism, occupation of Palestine), and how these issues distract them from their work.

The sixth theme was the need for support from research associations, mental health departments, and counseling centers to address issues. This theme is significant because, unlike prior studies, Muslim participants (without being asked) reported working with mental health professionals as providers and researchers as a need. Consistently, the seventh theme was the need for Muslim organizations and chaplains on campus to increase their quality, be more organized, make fewer mistakes, and to be more effective when interacting with others. The next theme was facing difficulties while trying to study, which was related to other themes such as wars and lack of conducive conditions for prayer. The last theme was economic issues regarding difficulties affording educational expenses.

All these concern clusters demonstrate how they are related to each other and each being related to one or more specific levels—from micro to macro system—in EST. This indicates that an issue at one level affects other issues at other levels, which is the main message of EST—that all levels are interrelated and an issue or strength at one level concurrently affects other issues and strengths at other levels. The demand for support from individuals and institutions to address issues indicates the need of working from an EST and ally theory perspective. The findings from the strength and concern clusters also coincide with one another: the most reported strengths and concerns were about prayer and community support, respectively, which indicates the importance of these themes. Additionally, there were no clearly expressed themes about Muslim identity or personality submitted through the photos or captions (e.g., feeling proud to be a Muslim), as found by some other researchers (Lowe et al. 2019; Tanhan and Francisco 2019). However, based on our observations and experiences with the participants throughout this research, an in-depth interpretation of the clusters, participants' rich connection with the researchers and attendees at the exhibit, and Muslims' consistent interest to utilize the results at diverse levels (e.g., city councils, media, institutions, departments, and international organizations) highlight their Muslim identity. The Muslim participants at the exhibit felt proud to be Muslim despite the noted concerns, which underlines Muslims' psychological resiliency noted by some researchers (Tanhan 2019; Tanhan and Francisco 2019).

Advocacy: Concrete Contextual Changes Following the Research. Hosting the dinner and exhibit, where anyone interested in the study had a chance to learn about the results, was befitting of the spirit of Islam (Tanhan and Francisco 2019), photovoice methodology, EST, and the ally theory perspective. Owing to the presence of representatives from the media, law enforcement, student organizations, and other interest groups at the exhibit and dinner, the first and most important step of advocacy was completed. However, to address the issues as thoroughly as possible, we reached out to more media such as local radios and newspapers to ask them to discuss these issues, visited some key collaborators (e.g., mayor's office, college chancellors) who were unable to attend the event, and held a few requested interest meetings with organizations (e.g., chancellor's offices) to answer their questions regarding the study and how they could contribute to the process.

All these created a great synergy, and some primary issues were addressed that led to contextual concrete changes. First, key people and the media focused on addressing issues reported in the study more effectively (e.g., watering cans in restrooms, more prayer rugs and prayer areas, and more attention and collaboration to enhance safety). Second, Muslims became more organized in collaborating with different offices on campus and improved RAM, which received considerable support and funding. Third, MSAs also became more organized based on the feedback from this study. Fourth, Muslim chaplains paid more attention to enhance their quality and collaborated more with mental health professionals. Fifth, the Muslim community became more interested in collaborating with professionals, including providing training and activities related to public and mental health. Consequently, the community applied to establish the Wellness and Health Association for Muslims (WHAM) on one of the campuses to involve more Muslims. Finally, the six doctorate students from the counseling department—involvement in the study as allies—reported enhanced knowledge and experience about Muslims.

Although there are no photovoice studies about Muslims' biopsychosocial spiritual statement, the results indicated that Muslims felt acknowledged and that some of their primary issues were addressed. These fit with the overall photovoice literature body because many researchers that conducted photovoice with people coming from minority, underprivileged, underrepresented, understudied, and underserved populations found photovoice to be culturally and contextually appropriate (Davtyan et al. 2016; Graziano 2014; Nitzinger et al. 2019; Strack et al. 2015; Volpe 2019). In sum, public and mental health providers could utilize the online photovoice and tailored IPA and the theoretical framework to collaborate with Muslims to enhance their biopsychosocial spiritual wellbeing and address related issues, as Tanhan and Francisco (2019) suggested.

Limitations. Our study has several limitations. First, the participants were from four southeastern U.S. colleges. Second, the participants had only about two months to participate, which have been a short time considering the novelty of the online photovoice. Third, we mainly reached out to participants through the connections of Muslim organizations, which may have affected acquiring participants from only four colleges and specifically affiliated with these Muslim organizations. Fourth, the study was mostly announced and conducted online. Finally, the study tended to rely on the submitted themes to construct the thematic clusters. These limitations should be considered to formulate more creative and comprehensive ways to increase the effectiveness of future studies.

Implications. The findings from the present study have implications for three main areas.

Future Research

It will be important to compare how the use of participants' themes (as in this study), use of traditional IPA, and focused groups (as in the traditional photovoice) will affect the construction of overall themes. Future researchers could focus on more specific themes (e.g., mental health, spirituality) as well as include the general public as participants, not just college affiliated Muslims.

Mental and Public Health Professionals

The providers can attend to both strengths and concerns simultaneously to address Muslims' issues and enhance their wellbeing. Therefore, broadened perspectives based on individuals and systems are needed to provide effective services. Some specific implications can include addressing the issues from the top concern clusters and striving to address each one after another. Accordingly, two specific implications can be providing appropriate places and tools (at least at a few places across campus) so that Muslims can pray and experience campus life more mindfully. Related to that, providing water in restrooms across campuses and some small spaces at each building for prayers could create a more inclusive environment. Such prayer places could be open to all so that anyone who wants to pray, get some quiet or rest time, or practice mindfulness could do so mindfully and comfortably. One important point will be providing separate places for men and women as, in some faith groups including Muslims, it is highly recommended, if not obligatory, to pray separately for more mindful praying. For example, providing these at counseling and other related centers may cultivate more collaboration between public and mental health providers and Muslims. Additionally, acknowledging physical and verbal attacks, racism, hate, discrimination, and prejudice that Muslims face at the individual, group, and community levels as well as collaborating with other individuals, departments, communities, and allies to address these issues is more likely to contribute to more structurally and culturally competent services.

Another implication is using positive language when introducing public and mental health services. Mental health services should aim to both address issues and enhance wellbeing at all levels as we did in this study. Future practitioners can collaborate with key individuals and organizations (e.g., imams, Muslim organizations) to introduce mental health services. The practitioners considering contextual and complex interactions among themes and clusters to determine what is happening at different levels can promote effective collaboration between key people (e.g., imams, health providers). Finally, practitioners must pay attention to utilizing all media and social media outlets to inform about their services and research benefitting from online photovoice and the results of this current study.

Educators

Mental health (Fickling et al. 2017; Tanhan 2018) and public health educators are crucial in shaping public and mental health professionals in training (Tanhan and Francisco 2019). These key educators can be more cautious in their pedagogy while teaching future providers how to address biopsychosocial spiritual issues. The educators can utilize online photovoice and the results to bring a contextual and comprehensive perspective in teaching, especially when addressing subjects related to public and mental health services for Muslims. Moreover, information on the foundations of Islam and Muslims' biopsychosocial spirituality can be integrated into the teaching process to prepare future practitioners. This can be done in the following different ways: providing academic reading and visual materials, inviting key individuals from Muslim organizations, organizing cultural immersion activities, collaborating for advocacy events, promoting research collaboration, visiting spiritual and cultural centers.

In sum, the issues and strengths are multidimensional and require more comprehensive and systematic perspectives in research, practice, and trainings. Mental and public health

professionals increase their chances to be culturally, spiritually, and professionally more effective if they address all aspects when shedding light on the nature of Muslims' biopsychosocial spirituality and benefitting from online photovoice that is contextually appropriate. Therefore, public and mental health professionals as practitioners, educators, and researchers—in collaboration with stakeholders—can contribute to addressing the issues, starting from the most urgent, to ensure cultural and contextual appropriateness and play a crucial role in advocacy process as well.

Conclusion

The results showed that Muslims in the southeast U.S.—an understudied population—face many biopsychosocial spiritual issues while also possessing some distinct strengths. Therefore, the current study bridges some important gaps by (a) introducing an online photovoice methodology and utilizing tailored IPA for data analysis; (b) identifying eight strength and nine concern thematic clusters, acknowledging them, and addressing some of the most primary issues through collaboration with the allies; and (c) utilizing theoretical framework perspective throughout the study. To our knowledge, this was the first online photovoice study and also the first photovoice regarding Muslims' biopsychosocial spirituality. The results coincide with the larger related literature and add some critical results that have implications for mental and public health professionals as practitioners, researchers, and trainers. Specifically, there is a need for a) collaboration with Muslims at individual, group, community, and ally levels to promote a culturally, spiritually, and contextually appropriate process; b) consideration of a contextual and comprehensive perspective at all levels so that wellbeing can emerge simultaneously; and c) focusing on both strengths and concerns while addressing issues to utilize resources, as well as advocating with and for Muslims to address the issues. More research utilizing online photovoice with different samples and topics are needed to enhance wellbeing and address issues for Muslims and others.

Acknowledgments. We deeply appreciate all the research support received from the Muslim and non-Muslim community who made the study possible and productive; the study required so much effort that without the help and guidance of the following people it would have been much more difficult. Therefore, thanks to all who helped, and special thanks to UNC Greensboro counseling department, and the following people at UNC Greensboro: Drs. *Kelly Wester, Kelly Moore Spencer, Hallie Sylvestro, Jaimie Stickl Haugen*, and J. Scott Young at the department of counseling; Drs. Vincent T. Francisco and Muhsin Michael Orsini at the department of public health education; the board members of the Muslim Student Association Abdelrahman Elnoush, Asiya Khan, Ayah Khalifa, Duaa Altholoya, Faris Almubaslat, Hajar Tadili, Hossam Boucteb, Lena Ragab, and Yasmin Ali; the co-presidents of the Research Association of Muslims at UNC Greensboro Aaliyah Rasheed, Zargham Muhammad, Abdulah Almulhim, Ahmed Hadhel, Hamza Minhas, Khalifa Almamari, Mykala Thomas, Sarah Kassem, and Aslihan Sakar; Muslim chaplain Abdoulmouhaimin Zeba; Murat Köse and Enis Ucuncu from the Muslim community; and finally to Augusto “Gus” Peña as the director of the UNC Greensboro Office of Intercultural Engagement.

We also appreciate the following organizations for financing the dinner for the exhibit: Department of Counseling at UNC Greensboro, Zakat Foundation of America- North Carolina

Chapter, Islamic Relief USA, Islamic Center of Triad, Islamic Center of Greensboro. We asked multiple stakeholders to share the cost together rather than just one to make the process more collaborative and meaningful.

Funding. Except for a few local and national organizations that arranged the dinner for the photovoice exhibit and gathering, no other funding support was received.

Conflict of Interest. The authors declare that they have no conflict of interest.

Additional information

Note 1: Ahmet Tanhan, the first author, received a research award for this current study at 11th Muslim mental health conference organized by the Department of Psychiatry at the University of Michigan partnering with American Psychiatric Association (APA) and Institute for Muslim Mental Health in 2019 at Tempe, Arizona, the USA. For the research award video: https://www.youtube.com/watch?v=CU5Fdbm_g3Q.

Note 2: The method section, online photovoice, of this paper was partially presented at 11th Muslim mental health conference in 2019, Tempe, AZ, the USA.

References

- Abdel-Khalek, A. M. (2011). Religiosity, subjective well-being, self-esteem, and anxiety among Kuwaiti Muslim adolescents. *Mental Health, Religion & Culture, 14*(2), 129–140. <https://doi.org/10.1080/13674670903456463>.
- Adam, Z., & Ward, C. (2016). Stress, religious coping and wellbeing in acculturating Muslims. *Journal of Muslim Mental Health, 10*(2). <https://doi.org/10.3998/jmmh.10381607.0010.201>.
- Ahmed, S., Abu-Ras, W., & Arfken, C. L. (2014). Prevalence of risk behaviors among US Muslim college students. *Journal of Muslim Mental Health, 8*, 5–19. <https://doi.org/10.3998/jmmh.10381607.0008.101>.
- Alhomaizi, D., Alsaidi, S., Moalie, A., Muradwij, N., Borba, C. P., & Lincoln, A. K. (2018). An exploration of the help-seeking behaviors of Arab-Muslims living in the US: A socioecological model. *Journal of Muslim Mental Health, 12*(1). <https://doi.org/10.3998/jmmh.10381607.0012.102>.
- Altalib, H. H., Elzamzamy, K., Fattah, M., Ali, S. S., & Awaad, R. (2019). Mapping global Muslim mental health research: Analysis of trends in the English literature from 2000 to 2015. *Global Mental Health, 6*. <https://doi.org/10.1017/gmh.2019.3>.
- Arslan, G., & Tanhan, A. (2019). Ergenlerde okul aidiyeti, okul işlevleri ve psikolojik uyum arasındaki ilişkinin incelenmesi [examining the association between school belonging, school functioning, and psychological adjustment in adolescents]. *Journal of Education for Life, 33*(2), 318–332. <https://doi.org/10.33308/26674874.2019332127>.
- Asniar, A., Hatthakit, U., & Wiroonpanich, W. (2018). Voices from inside Dayah culture: Using photovoice to explore lives of Indonesian Muslim female adolescents. *Songklanagarind Journal of Nursing, 38*(4), 138–151.

- Becker, K., Reiser, M., Lambert, S., & Covello, C. (2014). Photovoice: Conducting community-based participatory research and advocacy in mental health. *Journal of Creativity in Mental Health, 9*, 188–209. <https://doi.org/10.1080/15401383.2014.890088>.
- Bhattacharyya, S., Ashby, K. M., & Goodman, L. A. (2014). Social justice beyond the classroom: Responding to the marathon bombing's Islamophobic aftermath. *The Counseling Psychologist, 42*, 1136–1158. <https://doi.org/10.1177/0011000014551420>.
- Bromfield, N. F., & Capous-Desyllas, M. (2017). Photovoice as a pedagogical tool: Exploring personal and professional values with female Muslim social work students in an intercultural classroom setting. *Journal of Teaching in Social Work, 37*(5), 493–512. <https://doi.org/10.1080/08841233.2017.1380744>.
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist, 32*, 513–531. <https://doi.org/10.1037/0003-066X.32.7.513>.
- Brunsdon, V., & Goatcher, J. (2007). Reconfiguring photovoice for psychological research. *The Irish Journal of Psychology, 28*(1–2), 43–52. <https://doi.org/10.1080/03033910.2007.10446247>.
- Cartwright, B. Y., Daniels, J., & Zhang, S. (2008). Assessing multicultural competence: Perceived versus demonstrated performance. *Journal of Counseling & Development, 86*, 318–322. <https://doi.org/10.1002/j.1556-6678.2008.tb00515.x>.
- Chakraborty, K. (2009). 'The good Muslim girl': Conducting qualitative participatory research to understand the lives of young Muslim women in the bustees of Kolkata. *Children's Geographies, 7*(4), 421–434. <https://doi.org/10.1080/14733280903234485>.
- Crethar, H. C., Rivera, E. T., & Nash, S. (2008). In search of common threads: Linking multicultural, feminist, and social justice counseling paradigms. *Journal of Counseling & Development, 86*, 269–278. <https://doi.org/10.1002/j.1556-6678.2008.tb00509.x>.
- Davtyan, M., Farmer, S., Brown, B., Sami, M., & Frederick, T. (2016). Women of color reflect on HIV-related stigma through photovoice. *Journal of the Association of Nurses in AIDS Care, 27*(4), 404–418. <https://doi.org/10.1016/j.jana.2016.03.003>.
- Eyres, P., Bannigan, K., & Letherby, G. (2019). An understanding of religious doing: A photovoice study. *Religions, 10*(4), 269. <https://doi.org/10.3390/rel10040269>.
- Fickling, M. J., Borders, L. D., Mobley, K. A., & Wester, K. (2017). Most and least helpful events in three supervision modalities. *Counselor Education and Supervision, 56*(4), 289–304. <https://doi.org/10.1002/ceas.12086>.
- Francisco, V. T. (2013). Participatory research and capacity building for community health and development. *Journal of Prevention & Intervention in the Community, 41*, 137–138. <https://doi.org/10.1080/10852352.2013.788337>.
- Graziano, K. J. (2014). The everyday realities of Palestinian college students living and studying in Israel: A photovoice study. *International Journal of Progressive Education, 10*(1), 32–45.
- Grim, B. J., & Hsu, B. (2011). Estimating the global Muslim population: Size and distribution of the world's Muslim population. *Interdisciplinary Journal of Research on Religion, 7*.
- Haque, A., Khan, F., Keshavarzi, H., & Rothman, A. E. (2016). Integrating Islamic traditions in modern psychology: Research trends in last ten years. *Journal of Muslim Mental Health, 10*(1). <https://doi.org/10.3998/jmmh.10381607.0010.107>.
- Harrison, B. (2002). Photographic visions and narrative inquiry. *Narrative Inquiry, 12*, 87–111. <https://doi.org/10.1075/ni.12.1.14har>.

- Haugen, J. S., Neverve, C., & Waalkes, P. L. (2019). Advocacy in action: The use of photovoice in school counseling. *Professional School Counseling*, 23(1). <https://doi.org/10.1177/2156759X19885888>.
- Kaplick, P. M., & Skinner, R. (2017). The evolving Islam and psychology movement. *European Psychologist*, 22, 198–204. <https://doi.org/10.1027/1016-9040/a000297>.
- Khan, F., Khan, M., Soyege, H. O., & Maklad, S. (2019). Evaluation of factors affecting attitudes of Muslim Americans toward seeking and using formal mental health services. *Journal of Muslim Mental Health*, 13(2). <https://doi.org/10.1016/j.jad.2012.06.035>.
- Kim, S. H., Canfield, J., & Harley, D. (2019). Using photovoice as a method to examine microaggressions: Conceptualizing culturally competent practice and curriculum with Asian Americans. *Journal of Human Behavior in the Social Environment*, 29(8), 1036–1043. <https://doi.org/10.1080/10911359.2019.1658684>.
- Koenig, H. G., Al Zaben, F., & Khalifa, D. A. (2012). Religion, spirituality and mental health in the west and the Middle East. *Asian Journal of Psychiatry*, 5(2), 180–182. <https://doi.org/10.1016/j.ajp.2012.04.004>.
- Lowe, S. R., Tineo, P., & Young, M. N. (2019). Perceived discrimination and major depression and generalized anxiety symptoms: In Muslim American college students. *Journal of Religion and Health*, 58(4), 1136–1145. <https://doi.org/10.1007/s10943-018-0684-1>.
- Manejwala, R., & Abu-Ras, W. (2019). Microaggressions on the university campus and the undergraduate experiences of Muslim south Asian women. *Journal of Muslim Mental Health*, 13(1). <https://doi.org/10.3998/jmmh.10381607.0013.102>.
- Miled, N. (2019). Muslim researcher researching Muslim youth: Reflexive notes on critical ethnography, positionality and representation. *Ethnography and Education*, 14(1), 1–15. <https://doi.org/10.1080/17457823.2017.1387063>.
- Mohr, S. H., Wong, R., & Keagy, C. (2019). Protective factors in Muslim women's mental health in the San Francisco bay area. *Journal of Muslim Mental Health*, 13(2). <https://doi.org/10.3998/jmmh.10381607.0013.204>.
- Murray, K., Mohamed, A. S., Dawson, D. B., Syme, M., Abdi, S., & Barnack-Tavlaris, J. (2015). Somali perspectives on physical activity: Photovoice to address barriers and resources in San Diego. *Progress in Community Health Partnerships: Research, Education, and Action*, 9(1), 83–90. <https://doi.org/10.1353/cpr.2015.0011>.
- Musleh, S. (2018). Eating disorder of a Muslim American 'hijabi' woman: Case study and cultural formulation. *Journal of Muslim Mental Health*, 11(2). <https://doi.org/10.3998/jmmh.10381607.0011.204>.
- Nitzinger, V., Held, S., Kevane, B., & Eudave, Y. (2019). Latino health perceptions in rural Montana: Engaging promotores de salud using photovoice through Facebook. *Family & Community Health*, 42(2), 150–160. <https://doi.org/10.1097/FCH.0000000000000213>.
- Phillips, D., & Lauterbach, D. (2017). American Muslim immigrant mental health: The role of racism and mental health stigma. *Journal of Muslim Mental Health*, 11(1). <https://doi.org/10.3998/jmmh.10381607.0011.103>.
- Reimers, B. C. (2016). Peacebuilding in refugee resettlement communities: Using photovoice to find common ground. *Journal of Peacebuilding & Development*, 11(3), 108–113. <https://doi.org/10.1080/15423166.2016.1230024>.

- Roxas, K., & Vélez, V. (2019). Photovoice as micro-invitation: A case study of high school im/migrant youth disrupting everyday forms of racism. *The High School Journal*, 102(4), 267–282. <https://doi.org/10.1353/hsj.2019.0011>.
- Samsuni, S., Mulyono, S., Wiarsih, W., & Kusumawardani, L. H. (2019). Photovoice interactive media improves the personal hygiene of teenage students at pesantren school in Tangerang. *Enfermería Clínica*. <https://doi.org/10.1016/j.enfcli.2019.04.104>.
- Smith, J. A., & Osborn, M. (2003). Interpretative phenomenological analysis. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to methods* (pp. 51–80). London: Sage.
- Strack, R. W., Magill, C., & McDonagh, K. (2004). Engaging youth through photovoice. *Health Promotion Practice*, 5, 49–58. <https://doi.org/10.1177/1524839903258015>.
- Strack, R. W., Lovelace, K. A., Jordan, T. D., & Holmes, A. P. (2010). Framing photovoice using a social-ecological logic model as a guide. *Health Promotion Practice*, 11, 629–636. <https://doi.org/10.1177/1524839909355519>.
- Strack, R. W., Orsini, M. M., Fearnow-Kenney, M., Herget, J., Milroy, J. J., & Wyrick, D. L. (2015). Developing a web-based tool using information and communication technologies to expand the reach and impact of photovoice. *American Journal of Health Education*, 46(4), 192–195. <https://doi.org/10.1080/19325037.2015.1044585>.
- Sullivan, P. (2017). Participating with pictures: Promises and challenges of using images as a technique in technical communication research. *Journal of Technical Writing and Communication*, 47(1), 86–108. <https://doi.org/10.1177/0047281616641930>.
- Tanhan, A. (2017). Mental health issues and seeking of formal mental health services among Muslims in the southeastern U.S.: Preliminary investigation of a contextual theoretical framework based on the theory of planned behavior/theory of reasoned action and the social ecological model. Retrieved from <https://search.proquest.com/docview/1927630253?accountid=15329>.
- Tanhan, A. (2018). Beginning counselors' supervision in counseling and challenges and supports they experience: Based on developmental models. *Adiyaman Üniversitesi Eğitim Bilimleri Dergisi*, 8(1), 49–71. <https://doi.org/10.17984/adyuebd.336222>.
- Tanhan, A. (2019). Acceptance and commitment therapy with ecological systems theory: Addressing Muslim mental health issues and wellbeing. *Journal of Positive Psychology and Wellbeing*, 3(2), 197–219.
- Tanhan, A., & Francisco, V. T. (2019). Muslims and mental health concerns: A social ecological model perspective. *Journal of Community Psychology*, 47(4), 964–978. <https://doi.org/10.1002/jcop.22166>.
- Tanhan, A., & Young, J. S. (2020). *Muslims and Mental Health Services: A Concept Map and a Theoretical Framework*. Manuscript submitted for publication.
- Tobah, S. (2018). Constructing mental illness: Comparing discourses on mental health, illness, and depression by Muslim leaders with those found in consumer health materials. *Journal of Muslim Mental Health*. <https://doi.org/10.3998/jmmh.10381607.0011.203>.
- Volpe, C. R. (2019). Digital diaries: New uses of photovoice in participatory research with young people. *Children's Geographies*, 17(3), 361–370. <https://doi.org/10.1080/14733285.2018.1543852>.
- Wang, C., & Burris, M. A. (1997). Photovoice: Concept, methodology, and use for participatory needs assessment. *Health Education and Behavior*, 24, 369–387. <https://doi.org/10.1177/109019819702400309>.

- York Al-Karam, C. (2018). Islamic psychology: Towards a 21st century definition and conceptual framework. *Journal of Islamic Ethics*, 2(1-2), 97-109. <https://doi.org/10.1163/24685542-12340020>.
- Young, J. S., Wiggins-Frame, M., & Cashwell, C. S. (2007). Spirituality and counselor competence: A national survey of American counseling association members. *Journal of Counseling & Development*, 85(1), 47-52. <https://doi.org/10.1002/j.1556-6678.2007.tb00443.x>.