Graduate Students' Perceptions of and Recommendations Pursuant to Saudi Arabia's COVID 19 "Stay-at-Home" Initiative

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Abstract

The global spread of COVID-19 has prompted countries worldwide to design initiatives and measures to ensure public health and safety. Saudi Arabia launched a "Stay-at-Home" initiative in March 2020 involving all sectors of society. This exploratory study employed a qualitative research design using written journal reflections to discern the views and opinions of Saudi female graduate students at a large public university in the Eastern Province. The research posed three questions: (1) What were participants' perspectives of the impact of the "Stay-at-Home" initiative; (2) What values did participants manifest during the initiative; and, (3) What were participants' recommendations and innovative solutions to deal with the initiative's effects? Findings reveal that boredom and loneliness, fear of infection, and financial concerns dominated students' perceptions of the impact of the initiative. Participants further identified divine protection and global unity as two key values that were heightened to deal with the initiative and the pandemic. Finally, innovative solutions to mitigate the effects of the initiative were categorized into 13 sub-themes organized around two main spheres of Saudi life — public (governmental/societal) and private (family/home).

Keywords: COVID-19, Saudi Arabia, higher edducation;

1. Introduction

COVID-19 constitutes a new global reality that has impacted every aspect of daily life. This new reality has, no doubt, heightened innovation and the necessity for individuals, educational systems, and governments alike to battle against this pandemic. On the academic level, many countries have scrambled to move schooling online temporarily, a move that proved to be challenging for all stakeholders. Financially, COVID-19 has resulted in financial losses for businesses, a tsunami of layoffs, and increased unemployment. These problems and challenges emanating from the global spread of COVID-19 have led to unprecedented levels of collaboration among governments, academic institutions, healthcare entities and individuals. Some governments have even turned to higher education institutions to benefit from their knowledge and creativity and to act as a 'think tank' for initiatives that could help battle the spread of the virus.

With the first outbreak of COVID-19, the Kingdom of Saudi Arabia (KSA) took precautionary actions before any local cases happened. Those actions were carried out before the World Health Organization (WHO) declared that COVID-19 was a pandemic. The reason for such prompt actions was "the belief that starting earlier would prevent a sharp increase in the number of cases in Saudi Arabia and prevent COVID-19 from becoming an epidemic within the country" (Alshammari et al., 2020, p.899). While ministries started to apply precautions on the medical front, the Saudi Ministry of Education (SMOE) joined the cause by adopting a participatory approach and developing a plan for all levels of education to curb the spread of the virus (Al-Tawfiq et al., 2020). Additionally, the SMOE collaborated with several other ministries and agencies to spread awareness regarding COVID-19 and tried to curb the spread through the "Stay-at-Home" initiative (Al-Shurafa, 2020) (to be discussed).

The driving force for such an initiative was Saudi Vision 2030, Saudi Arabia's most recent national development plan. This national vision is driving fundamental structural changes in the health sector to meet the growing demand for health care services in the Kingdom and promote public health and healthy lifestyles (Kingdom of Saudi Arabia, 2020). As a result, many initiatives, including "Stay-at-Home," focus on the well-being of the Kingdom's residents and citizens.

Although advisement from and funding for the medical sector are paramount at such an exceptional time, as further directed in Saudi Vision 2030, education at all levels is viewed as the foundation to catapult societal growth and advancement. Thus, the views of higher education students, who are future parents and participants in all sectors of society, should be considered as well. Their voices offer a crucial viewpoint on ways to support and cope with the pandemic. Van Bavel et al. (2020) further explain the importance of intersectoral participation, "because the crisis requires large-scale behaviour change and places significant psychological burdens on individuals, insights from the social and behavioural sciences can be used to help align human behaviour with the recommendations of epidemiologists and public health experts" (p. 460).

This study explored the critical perspectives of twenty Saudi graduate students in the field of education during the initial height of the COVID pandemic in April 2020. The voices of these future educators, at the heart of SA's future, provide important insights and experiences pursuant to values and behaviors during exceptional times. Specifically, this research focused on graduate students' perspectives, values, and innovative coping strategies and solutions within an educational frame during the "Stay-at-Home" initiative launched March 27, 2020 (Ministry of Health, 2020c).

2. Literature review

2.1 Education in Emergency: Global to Local

Education has been severely and immediately impacted by the COVID-19 global pandemic. UNESCO estimates that nearly 1.5 billion students are not in school (87% of the world's student population) (Strauss, 2020), and more than 165 countries have closed their schools (Cohen et al., 2020; Galea, et al., 2020; Meng et al., 2020; Strauss, 2020; Wang et al., 2020). Experts agree that quality education in cooperation with health ministries and providers is necessary to ensure appropriate precautionary and emergency arrangements. Schools can develop effective solutions (Van Bavel et al., 2020; Wang et al., 2020) at local and national levels to deal with infectious disease outbreaks.

With COVID rates decreasing significantly in several countries (at the time of writing) in concert with concern over quality online education, many governments have decided to reopen schools using online, in-person and blended models (Boursicot et al., 2020; Coe et al., 2020; Dai & Lin, 2020; Golberstein et al., 2020). Thus, several stakeholders have informed reopening policies around the globe. School stoppages during the outbreak, which led to home schooling and online learning in many countries, may have shown some benefits through parents' and students' increased accountability. However, the majority of consequences have been negative including economic distress for working parents, healthcare workers, and other necessary employees whose schools and childcare facilities were closed, which forced them to seek childcare while experiencing job loss or reduction of hours (Coe et al., 2020; Kapasia et al., 2020; Sintema, 2020). Further, mandated social isolation may induce psychological concerns in different forms for a large majority of people (Sandars, et al., 2020).

In Saudi Arabia, as a precautionary measure to curb the spread of COVID-19, schools and universities were officially closed on March 9th, 2020. Students at all levels finished the final two months of the semester using an online platform often supported by home schooling through parents and other guardians (e.g., grandparents, extended family members, and nannies). As mandated by the SMOE, all primary and secondary school students in good standing for the 2019-2020 academic year where promoted to the next grade. As much of the educational sector was unprepared for this exceptional situation, those schools and universities with virtual learning environments already in place transitioned more easily and readily used Zoom or Microsoft Teams platforms. Several universities announced that students had a choice of whether to take their courses for final grades (involving mandatory final exams) or pass/fail with no effect on their GPA. Other universities did not offer a choice and completed online exams for earned final grades at the end of the term.

2.2 Innovation and Education

Innovation in education (Schwengel & Toy, 2019; Yesufu & Alajlani, 2019) requires both (a) discovering different ways to achieve outcomes and fresh approaches to analyze issues (Beavis & Ward, 2019; Ellis et al., 2019) and (b) reacting to exceptional and novel situations. The way knowledge is acquired, developed and transmitted has changed significantly with technology. Today, citizens have become members of the information technology, digital-native culture (Zhang et al., 2016). In education, there is a question of whether technology-based education can create critical and creative thinkers who respond to the needs of the economic and social world of today and tomorrow (Mykhailyshyn et al., 2018; Smith et al., 2018; Yunus, 2018).

Unequivocally, the COVID-19 pandemic has thrust the field of education and educators into an exploration of innovative ways to build and co-construct knowledge with students while promoting 21st century skills of problem solving and creativity, professional connectivity, teamwork, and adaptability (Tatnall, 2020). This thrust has placed students at the forefront of schooling. Counter to traditional learning frameworks, putting students in innovative learning environments that promote co-constructive creativity and innovation has the potential to transform them from knowledge consumers to knowledge creators (Abu-Rashed et al., 2020; Amirat & Zaidi, 2019; Nurunnabi, 2017). However, the knowledge creation ideal puts enormous pressure on education systems to develop citizens with strong technical skills and information development potential. Going beyond basic awareness and knowledge transfer, innovative education leads to professional problem solvers and citizens who are willing to support their lifelong learning (Alzahrani, 2017; Baslom & Tong, 2019; Qahl et al., 2019).

Like schools and universities worldwide, Saudi Arabia has also innovated unprecedented approaches to manage education at the start of the 2020-2021 academic year. The SMOE decided, as a precautionary measure, to begin Term 1 online for at least the first seven weeks. Per the SMOE's decision, schools and universities opened on August 30, 2020 using a primarily online platform with laboratory courses delivered using a blended mode: online lectures and in-person lab work. After revaluating the initial plan, the SMOE decided in October 2020 to continue in the online environment for the remainder of Term 1, 2020-2021. At the time of this writing, the majority of classes are still offered in an online environment.

In preparation for the imposed shift in delivery mode for Term 1, educational institutions across the Kingdom ran virtual professional development (PD) sessions about online teaching in July-August 2020. Private and international schools began the school year using their virtual learning (VL) environments (e.g., Blackboard, Canvas) and electronic meeting platforms such as Zoom and Microsoft Teams along with e-resources or book distribution with set timing to support social distancing.

Public schools, as mandated by the SMOE, used the Ministry-developed platform Madrasati, or "My School," supported by a YouTube channel for each level and other platforms (e.g., Microsoft Teams, Zoom) to ensure quality and consistent education for all students. As of 2018, there were approximately 7.7 million students in primary and secondary schools in Saudi Arabia, 6.7 million (87%) in government schools and 1 million (13%) in private schools (Strategic Gears Management Consultancy, 2018). Public school students began the term with a one-week orientation on using the online platform. To support parents and guardians' ability to manage their children's online learning, primary students were online in the afternoon beginning at 3 p.m. while older secondary children took classes during the morning session from 7 a.m. (Ministry of Education Announcement on Distance Learning, 2020). Increasingly, educators are using social media applications (e.g., WhatsApp, Twitter) to keep parents and students informed and to support the main technology platforms.

2.3 Saudi's "Stay at Home" Initiative

The U.S. Centers for Disease Control and Prevention (CDC) posits that non-pharmaceutical interventions (NPIs) are crucial in the effective management of any infectious disease such as MERS or COVID-19 (National Center for Health Statistics, 2017). During the height of the COVID-19 outbreak in March 2020, Saudi Arabia began a "Stay-at-Home" intervention, which was recommended by health officials and authorities to curb the spread of the virus and to educate and protect its citizens and residents (Al-Shurafa, 2020).

Affecting all sectors of society, the medical aspect of this initiative included COVID testing, daily COVID reports, quarantine zones, and tips on staying healthy, all of which were conveyed using mass communication, social media outlets, direct messages to citizens and residents, and a medical hotline through the Ministry of Health Portal (Ministry of Health, 2020b).

From a civil aspect, "Stay-at-Home" orders, event cancellations, closures, and curfews were in effect from March 2020. These orders involved mandatory masks, daily curfews (which varied depending on the number of cases), businesses closures (except grocery, food, and pharmaceutical services), suspended travel between the Kingdom's 13 regions, and temporary suspension of international flights (Al-Shurafa, 2020; Ministry of Health, 2020a). Umra (mini-pilgrimage to holy sites) and daily prayer in mosques were also suspended during late spring and summer 2020.

On the societal level, through television and other media programs, social media, traffic signage, and direct messages, the Kingdom's authorities encouraged people to stay home. In order to understand the importance of the "Stay-at-Home" initiative and its effectiveness in controlling the spread of COVID-19 in SA, it is paramount to understand the social tapestry of the country outside of the education sector. Understanding the social dynamic of Saudi Arabia further explains why the Kingdom's precautionary measures are slightly different from other states in the Gulf Cooperation Council (GCC) region and around the world. It is estimated that more than 80% of the Saudi population lives in urban or well-populated areas (Abdul Salam et al., 2014). Saudi Arabia comprises of two distinct spheres, public and private, with the common denominator being social interaction usually revolving around the home, family, and social gatherings. Therefore, family and social gatherings are the societal norm in Saudi Arabia (Yezli & Khan, 2020).

Vision 2030 has brought another dimension to Saudi society, focused on business and tourism, which could exponentially increase the number of annual visitors to the country (Kingdom of Saudi Arabia, 2020; Yezli & Khan, 2020). The unprecedented investment in cinemas, restaurants, coffee shops and other entertainment avenues has led to a vibrant social life in Saudi Arabia and more mobility from the private to public sphere. Moreover, Saudi Arabia, being the epicenter of Islam, hosts large, well-attended annual pilgrimages for Muslims from around the world and daily group prayers in mosques around the Kingdom.

All of these gatherings (familial, community, faith, and commercial) now pose threats and provide opportunities for COVID-19 outbreaks. Predictably, before quarantine and lockdown measures, social interaction and gatherings continued early in the pandemic, which led to a spike in COVID-19 numbers and, consequently, mandated curfews and other safety initiatives. Table 1 shows the numbers of confirmed COVID-19 cases and deaths as provided by the WHO. To provide context, the population size of neighboring countries is also shown. As of September 30, 2020, Saudi Arabia reported a 95.4% recovery rate of 335,997 total cases, evidence that the "Stay-at-Home" initiative has helped curb the spread of the virus (The Gulf Health Council, 2020; Ministry of Health, 2020a). Indeed, Saudi's COVID-19 Monitoring Committee "commended the citizens' compliance with the curfew, and called on them to stay home, and refrain from going [out] unless extremely necessary (during the hours when going out is permissible)" (Ministry of Health, 2020c, para. 2).

3. Research Questions

The conundrum underpinning this study is the requirement and expectation for active public participation in Saudi society (societal and commercial) at a time when society was shut down with a government-mandated "Stay-at-Home" initiative. Concurrently, Vision 2030 is dependent on all citizens' involvement as a catalyst for continued growth. Thus, the Vision focuses on the involvement of higher education students, who are future educators and leaders. This exploratory study focused on graduate students' perspectives about the importance of the "Stay at Home" initiative. Specifically, the following research questions were investigated:

1) What were Saudi education students' perspectives on the impact of the "Stay-at-Home" initiative?
2) What values and beliefs did participants exhibit during the "Stay-at-Home" initiative?
3) What were partcipants' main recommendations and innovative solutions for dealing with the impact of the "Stay-at-Home" initiative?

4. Methodology

4.1 Research Design

This exploratory investigation employed a qualitative research design involving written journal reflections. Exploratory enquiry involves investigating a phenomenon inductively, often with small samples to reach wide-ranging understandings of experiences (McGregor, 2018). Thus, a common purpose of qualitive research, to seek "understanding about the essence and the underlying structure of the phenomenon,"(Merriam, 2009, p. 23) is central and meaningful to this research about graduate students' perspective of the Stay-At-Home Initiative.

4.2 Study Participants

The primary researcher compiled a sample frame of 20 Saudi female graduate students aged 25-45 using convenience sampling. The students were enrolled in a Master of Education program specializing in arts education or basic sciences education at a large public Saudi university in the Eastern Province. Participants were at the end of their first year (second term, level 2) in their degree program. At this advanced level, students have a clear understanding of the program and the broader educational setting in SA. As with all other higher education students across the country, study participants started Term 2, 2019-2020 in-person and completed the term online.

4.3 Data Collection and Analysis

Data were collected in April 2020. Participants recruited for the study provided written journal answers based on the three research questions with an emphasis on the final question. Journal entries were translated from the students' native language of Arabic into English and checked for content validity by a different professor who studied in English but is a native Arabic speaker. Pseudonyms were assigned, and participants provided signed consent allowing their journals to be used as research data. After organizing the data by the three questions, data were analyzed thematically with discussion among co-authors. Findings were reported using direct quotations in concert with researchers' latent and manifest interpretations (McGregor, 2018). For authenticity in qualitative research, the exact English translations of the participants' responses were reported.

5. Results and Discussion

Findings and discussion points are integrated in this section and organized according to the three research questions.

5.1 Research Question 1: What were Saudi education students' perspectives on the impact of the "Stay-at-Home" Initiative?

Participants perceived three main issues associated with the mandated "Stay-at-Home" initiative, which was implemented in concert with university closures and imposed distance learning: boredom and loneliness, fear of infection, and financial concerns.

5.1.1 Boredom and Loneliness

Most of the respondents perceived negative effects of the initiative, specifically boredom and loneliness. One respondent said, "the long quarantine time made us psychologically distressed and bored." Another said "because of boredom, we are frustrated. We are restless and lethargic." The loneliness, discontent and distressing isolation from the physical world often proved to be related to feelings of confinement, absence of a regular schedule, and reduced contact with others. This frustration was compounded by not being able to perform ordinary daily tasks such as going to the university campus, shopping for basic needs, and regular social networking. Although the internet was readily available for participants, the isolation and online classes precluded their normal routine concerning online use. Studies across different countries have affirmed this finding wherein university students experienced boredom and loneliness due to imposed university closures, distance learning, and stay at home initiatives (Hagh Ghadam et al., 2020; Martarelli & Wolff, 2020; Mattioli et al., 2020; Sanghavi et al., 2020; Zhou & Leung, 2019).

5.1.2 Fear of Infection

Study participants also highlighted a fear of infection during the "Stay-at-Home" initiative. One student said, "Because of the COVID-19 pandemic, though we are in 'stay at home' mode, we still fear infection." Another said, "We are hesitant because the vaccine for COVID-19 is still not developed." Participants clearly experienced a fear of infection as a negative perception or perhaps side effect of the "Stay-at-Home" initiative, which is ironic in some respects, because 'staying at home' means they are not likely to be exposed to the virus. That said, several participants expressed concern that they might miss the initial symptoms of COVID-19 during their stay-at-home period, and the infection could reemerge or continue several months later. Participants were quite worried that the virus might be still transferred to and by others. This finding confirms other studies showing that fear of being infected has been an intense worry during the pandemic (Chew et al., 2020; Holmes et al., 2020; Mazza et al., 2020; Zaka et al., 2020).

5.1.3 Financial Concerns

Financial and budget concerns were also identified as a negative effect of the "Stay-at-Home" initiative. One participant said, "Due to the initiative, most of our parents have no work, and we need to budget the food we have." Several concurred with this sentiment. One discussed financial distress claiming that, "for some families of students I teach, it is really very hard to live during the "Stay-at-Home" [initiative] since they have limited food and limited family income." As per the cultural norm,

some study participants depended on their family for financial assistance. One participant noted that even though her family receives a financial stipend from a company, the pandemic delayed receipt of the usually regular funds. Other studies have affirmed that the reduced or delayed receipt of finances has been problematic during "Stay-at-Home" and quarantine initiatives around the world with resounding ramifications (Coe et al., 2020; Irawan et al., 2020; Karpman et al., 2020; Powell, 2020; Susilowati & Azzasyofia, 2020).

5.2 Research Question 2: What values and beliefs did participants exhibit during the "Stay-at-Home" initiative?

The second research question explored the values students manifested during the "Stay-at-Home" initiative. As a society, Saudi depends on various values of societal solidarity including sympathy, accountability, and a belief system that considers divine intervention and protection (i.e., faith) as paramount. While COVID-19 has impacted the globe with devastating health and economic effects, findings suggest that study participants were reminded that Saudi Arabia is a faith-based country in every aspect (e.g., government, business, education, society). In particular, they identified two key values: divine protection and global unity to end the pandemic (i.e., solidarity).

5.2.1 Divine Protection

Sandars et al. (2020) affirm that mandated social isolation induces psychological concerns in different forms. Findings herein suggest that the pandemic highlighted and deepened participants' religious beliefs with the majority believing that (as one student put it), "During our time at home, our faith was strengthened." Regarding the impact of social isolation, another student spoke of the effect of mosque closures for daily prayers. "Though the pandemic caused closures of mosques, we opened prayer areas in our homes, and we prayed every day." A different participant clarified that people sought divine protection by "praying a lot for our safety, the safety of the frontlines [healthcare workers], the government, and the world that they may be able to find the cure for this disease." Paradoxically, COVID-19 allowed participants, often busy with their daily lives, to both find significance in faith and identify the role of faith in their daily life and well-being. Other studies have confirmed that religious beliefs, principles, ethics, and morals often support spiritual wellbeing (affected by isolation) in such events (Ahmed & Memish, 2020; Bramstedt, 2020; Drummond & Carey, 2020; Ebrahim & Memish, 2020; Galbadage et al., 2020).

5.2.2 Global Unity

Participants appeared to be united toward the value of global unity if there is any hope of stopping the pandemic. One participant expressively spoke of this unity. "This pandemic has taught us to become united and caring towards others. It helps us realize that we are part of the world, and we must work together to make it a COVID-free world for our generation and the next generation to come." Another believed that, "this pandemic makes us understand, to show concern for other people and other races. We know we are all in danger; therefore, we need to remind other people to become responsible and follow what the government asks us to do." This finding reflects the pervasive adage "we are in this together."

Overall, participants agreed that, as expressed by one student, "All nations must work together to find a cure for COVID-19. Now is the time to work together." This finding suggests that values of unity

and compassion were prevalent in these unprecedented times, especially where public health was concerned. Addiss (2016) argues that public health involves a culture of interconnection and acknowledges the need for regional collaboration. COVID-19 has both created a sense of cohesion and connection in the culture of many countries and driven organized unity at the global, national, and local levels. Study participants were cognizant of this trend.

5.3 Research Question 3: What were participants' main recommendations and innovative solutions for dealing with the impact of the "Stay-At-Home" initiative?

Participants offered a full range of innovative solutions to tackle issues that arose during the "Stay-at-Home" initiative. The 148 proposed ideas (ranging from 1-17 ideas per participant; seven on average) were collapsed into 13 themes (see Figure 1). Each participant, with only one exception, wrote about at least two themes in their journal (for example, education and technology). Approximately 14% of the proposed ideas represented a synthesis of two or more themes, such as economic activities and international efforts, home and technology, or games and family-based activities. Given that the COVID-19 pandemic is about public health, it is not surprising that three themes concerning "health" emerged from the data (highlighted in Figure 1).

Analysis further revealed that the public (government/society) and private (family/home) spheres (Yezli & Khan, 2020) were the crux of creating solutions to tackle issues created by COVID-19 and the "Stay-at-Home" initiative.

5.3.1 Government and Society-Related Solutions

Virtually all participants (except one) mentioned the importance of the continuity of education as paramount during the "Stay-at-Home" lockdown. As part of this solution, several participants suggested that a university/school emergency plan and protocol be developed and used for the current and future scenarios. Participants overwhelmingly mentioned using distance learning and even virtual reality for continued education. Scholars concur that technology can be used to respond to the needs of the economic and social world (Mykhailyshyn et al., 2018; Smith et al., 2018; Yunus, 2018). One participant suggested "educational competitions" done virtually with students of similar ages and interests. Another recommended the "use of artificial intelligence technology where an algorithm is produced to conduct assessments from a distance and reduce the chance of cheating among students. Also, building virtual schools based on project-based learning can hit 'two birds with one stone' [meaning virtual and project-based learning]." As most people watch television or movies through various satellite programming in Saudi, one participant recommended that the government offers family entertainment for all by "broadcasting on the internet and being creative to support continuous learning in a fun and positive way that benefits families."

Several participants focused on the role of society and community services and activities during the imposed lockdown. One mentioned "competitions to challenge people to stay at home," while another participant suggested "sending vehicles loaded with supplies to go around the neighborhood to meet people's needs at scheduled hours." Similarly, she recommended installing "big cinema screens showing popular movies in the neighborhood encouraging people to stay at home, which could combat boredom."

Several participants recommended using competitions or gaming as a motivator to encourage people to stay at home. One recommended that "games offered as mobile applications could be created especially for the youth educating them about the danger of a virus spread. The game characters may die when they fail to fight the pandemic, but they will get high scores when they reach their targets." Another suggested "creating a remote Olympic Games for teenagers who are e-game players." Others recommended drawing on various sectors' expertise through continuing education to support Saudi citizens and residents. Examples included "carpentry and construction" and "sharing their knowledge and expertise with others by giving online lessons and demonstrations so that we can all benefit from their knowledge and teaching." Van Bavel et al. (2020) affirmed the importance of intersectoral participation, expertise, and contributions during the pandemic.

Other recommendations and solutions focused on rewards and punishments for abiding by or breaking the "Stay-at-Home" mandate. One participant suggested that those who leave their house during the curfew should be made to "offer community service by serving in the nearest health center or hospital for a period of time, such as 30 hours," or the government could "raise fuel prices to discourage people from going out." Still, other ideas focused on rewards for compliance. "Those who observe the curfew and stay at home will be rewarded with prizes and lower prices for online orders to discourage people from actually going to the stores and shopping." Another participant recommended that the Saher, a traffic management system implemented by the Saudi Ministry of Interior (2020), could be re-purposed to deter inter-city travel or maybe connected with the inner-city traffic systems and security patrols to monitor any travel violation within neighborhoods.

5.3.2 Family and Home-Related Solutions

Study participants also offered ideas related to the more private sphere of family and home. The CDC concurs that non-pharmaceutical interventions will be crucial in the effective management of COVID-19 (National Center for Health Statistics, 2017). Virtually all (n=19) participants mentioned at least two subthemes pertaining to family and home. Examples include family and international efforts, family and community or government efforts, and family and education. Several private sphere ideas also required public sphere support to be implemented, a finding reflective of participants' appreciation for the need for further cooperation and collaboration between various sectors to deal with the impact of the "Stay-at-Home" initiative (Van Bavel et al., 2020).

One participant suggested that "families participate in challenges making use of resources available around the house to create new items (i.e. recycling) and then showcase them on a designated online platform for evaluation and feedback involving the whole community." She further recommended that families "should share their pandemic stories and family diaries and compile them together [as a community], which will benefit Saudi families by learning others' different views and situations."

Another participant recommended that the "government could give awards to those families who can invent something during the pandemic from the resources available at home that could possibly solve the problems created by the pandemic." She, like several others, focused on educational ideas while staying at home "to develop critical thinking and problem-solving skills." Another participant commented on "how electronic libraries could be activated inside the home, and the use of the libraries could be self-directed by family members." Scholars have affirmed the need for problem solvers and citizens who are willing to support their lifelong, self-directed learning, especially in such exceptional circumstances (Alzahrani, 2017; Baslom & Tong, 2019; Qahl et al., 2019).

Several participants discussed additional innovative ideas related to technology both at home and abroad, again emphasizing the value of unity. One participant suggested "reaching out to the global community by joining family members with extended family members via technology to share views and ideas in the form of a global project." Similarly, another participant mentioned creating "remote children's book clubs and reading clubs sharing stories and reading together through Zoom meetings or a similar online app."

6. Conclusion and Recommendations

The conundrum underpinning this study was the requirement and expectation for active public participation in Saudi society at a time when society was shut down with a government-mandated "Stay-at-Home" initiative. Appreciating that creativity, innovation, and collaboration will be the crux of ending the global pandemic, future educational leaders were approached to discern their thoughts about the impact of the "Stay-at-Home" initiative in Saudi Arabia.

This exploratory study affirmed that Saudi graduate students felt strongly about this phenomenon. They expressed discontent with staying at home due to boredom and fear of infection. Above all, financial concerns and instability dominated their discontent. Two values were apparent: the religious side of the Saudi character (divine protection) and a sense of human responsibility towards others on local and international levels (global unity). Participants seemed to draw strength from these aspects of their value system. Their recommendations for innovative solutions to alleviate the negative aspects of the lockdown and take advantage of new opportunities reflected two main spheres of Saudi life — public (governmental/societal) and private (family/home). Per Figure 1, participants' appreciation for the wide-ranging array of interlocking factors and possible solutions to deal with the COVID-19 "Stay-at-Home" initiative is encouraging and impressive. While this study resulted in positive initial findings, future studies could also include other Saudi universities and male graduate students as well.

6.1 Participants' Recommendations

Highlights from participants' recommendations that merit further consideration through research, SMOE initiatives, government policy changes, or teacher education curricula innovations include (a) developing and implementing a university/school emergency plan and protocol for educational crises; (b) purposefully using technological innovations (especially distance learning platforms) to deliver Saudi education; (c) drawing on innovations in teaching pedagogy to shift from lecture format to project-based learning, virtual learning, artificial intelligence, and/or gaming; (d) facilitating inclusion of the Saudi family and private sphere to ensure educational effectiveness and continuity; (e) reinforcing the role of the Islamic faith in strengthening Saudi society (through solidarity, protection and unity); and (f) facilitating intersectoral collaboration to avail commercial, cultural, religious, technological and social expertise when developing and implementing curricula during normal and exceptional circumstances.

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