

Saudi-Media Dependency and Information seeking: Pilgrims' Knowledge, Attitudes, and Satisfaction with HRAHI during Covid-19

اعتماد الحجاج على وسائل الإعلام السعودي في توعيتهم
بمناسك الحج وإمدادهم بالمعلومات الصحية خلال فترة كورونا
واتجاهاتهم نحوها

Wagdy Helmy Eid Abdel-Zaher *

wagdy.helmy@media.menofia.edu.eg

whdahshory@iu.edu.sa

Abstract:

As COVID-19 continued to cause harm throughout the world, this article examined the theoretical approaches, to media dependency and the knowledge gap during Hajj rituals. To assess dependency impact, we ran an experiment involving local pilgrims (N = 800). The study aimed to define effective results from respondents' dependence on Saudi media awareness content to acquire knowledge of Hajj rituals. We tested whether awareness information on COVID - 19 provided by Saudi media to pilgrims correlated positively with dependency effects (cognitive, emotional, behavioral). We found pilgrims' positive attitudes about the awareness content of Hajj rituals presented in Saudi media. Together, these results indicated the importance of Saudi official media efforts during the Hajj season to inform internal pilgrims of awareness content related to the Hajj rituals. This, in turn, influenced participants' confidence and satisfaction with Hajj rituals' awareness content. These findings contribute to theory and practice in many different ways.

Keywords: Saudi-media, pilgrims, Health Awareness, Information seeking, Media Dependency, COVID-19.

* Menoufia University, Faculty of mass communication & Islamic University of Madinah.

ملخص:

حاولت الدراسة التعرف على دور وسائل الإعلام السعودي في تشكيل معارف الحجاج نحو المحتوى التوعوي لمناسك الحج خلال فترة كورونا، بالإضافة إلى دراسة العلاقة بين اعتمادهم على هذا المحتوى بوسائل الإعلام السعودي ودرجة رضاهم نحوه، وطبقت الدراسة على عينة متاحة قوامها (800) مفردة من حجاج الداخل، وخلصت النتائج إلى وجود علاقة ذات دلالة إحصائية بين تعرض المبحوثين للمحتوي التوعوي بوسائل الإعلام السعودي نحو مناسك الحج ومستوي معرفتهم بها، ووجود علاقة ارتباطية ذات دلالة إحصائية بين اعتماد الحجاج على وسائل الإعلام السعودية في الحصول المعلومات التوعوية والصحية بمناسك الحج ودرجة رضاهم عنها، ووجود فروق ذات دلالة إحصائية بين درجة اعتماد المبحوثين على وسائل الإعلام السعودي في حصولهم على المعلومات التوعوية الخاصة بمناسك الحج والخصائص الديموجرافية للمبحوثين، ووجود علاقة ذات دلالة إحصائية بين نوعية المعلومات الإرشادية والتوعوية التي تقدمها وسائل الإعلام السعودي للحجاج خلال جائحة كورونا والتأثيرات الناتجة عنها، كما أشارت النتائج أيضا إلى أهمية الجهود الإعلامية الرسمية في تعريف الحجاج بالمعلومات الصحية للتوعية بمناسك الحج.

الكلمات المفتاحية: الإعلام السعودي؛ الحجاج، التوعية الصحية؛ الاعتماد على وسائل الإعلام؛ كوفيد - 19.

One of the five pillars of Islam is the Muslim' pilgrimage. The Hajj to Makkah in Saudi-Arabia must be performed at least once in the lifetime of every financially secure and physically healthy Muslim (Alqahtani et al., 2016). Over two to three million pilgrims congregate from different nations throughout the world for the annual Hajj-Rituals. The Hajj is one of the greatest religious gatherings, and it is expected to cause major problems with mass exposure from around the world (Atique & Itumalla, 2020). The service of the Two Holy Mosques is historically linked to the Kingdom of Saudi Arabia (KSA), under the direct supervision of the Saudi leadership. The KSA has given great attention to the huge projects in the Two Holy Mosques for the success of the Hajj season (GOV.SA., 2022).

Considering the COVID-19 pandemic's spread, it has swept the globe in all nations. As a result of this widespread threat to human health, public anxiety over this new, dangerous virus is rapidly increasing (Li & Zheng, 2022). Additionally, information concerning this pandemic is changing dramatically. The KSA, like other countries all over the world, has been affected by COVID-19 during the past few years, which negatively affected the Hajj, Umrah, and visit systems. When it comes to the two holy mosques, procedures must be strict and doubled. The Saudi government faces many challenges because of Hajj. It also has plans to provide even more Muslims the chance to go on pilgrimage (Rehman & Felemban, 2022). Accordingly, the Saudi Ministry of Hajj & Umrah has followed all the health and preventative precautions. For safe pilgrimage, the ministry regularly assesses the situation of COVID-19 and discusses it with religious scholars to decide how to proceed with Hajj 2021. It limited Hajj to citizens and residents within the Kingdom to almost 60,000 pilgrims in 2021 (Ministry of Hajj & Umrah, 2022). It has continuously taken all feasible efforts to limit the pandemic (Atique & Itumalla, 2020). The creation of the Tawaklena & Etamrna smartphone applications, in collaboration with other relevant ministries, is one of the procedures the ministry foregoes to coordinate the safety of the Hajj & Umrah protocols. The studies came to the conclusion that there was a significant positive impact of the Tawaklena & Etamrna smartphone on Hajj-Rituals during COVID-19 in light of the Kingdom's vision 2030, which aimed to achieve the satisfaction of pilgrims and visitors (Aljuwaiber & Elnagar, 2022).

To understand the possible risks and begin thinking about preventive measures, people must have access to information about the

infection. It is critical for Saudi-Media to broadcast extensive health campaigns to inform the pilgrims of the precautionary measures against Corona during Hajj-Rituals. Therefore, this study deeply searches to identify the significance of Saudi-Media in shaping the knowledge of pilgrims toward Hajj-Rituals' Awareness Health Information (HRAHI).

Through influencing their perception of danger, Pilgrims' exposure to COVID-19 information encouraged the adoption of preventative attitudes and practises. The comprehension of the uptake of preventative actions and bridging the gap toward disseminating health information were seen as being significantly influenced by the knowledge, attitude, and practise of pilgrims (Goni et al., 2019a). This study clarifies how to recognize to what extent respondents relied on Saudi-Media to obtain HRAHI during COVID-19 from a practical point of view. So, the current study, we define the relationship between respondents' dependence on this content and their satisfaction.

The core focus of this study is to investigate HRAHI seeking and the effective results of respondents' dependence on Saudi-Media to acquire knowledge of pilgrimage, in addition to the relationship between HRAHI with their attitudes and health behaviors.

Theoretical Framework

Information seeking

Since the 1950s, researchers have been investigated the idea of information seeking behavior (Lambert & Loiselle, 2007). The 1980s' most popular model is presented. It has shown how the ideas of user, need, uses, and user behavior are related. According to Wilson (1981) and Krikelas (1983), a person seeks information sources; he may or may not be successful. If he succeeds, information sources will be used.

Information seeking and Processing Model was developed by Griffin et al (1999) to explain variability in information seeking and processing, particularly in the context of risk. The process of choosing a specific knowledge source to receive desired risk-related information is referred to as information seeking (Griffin et al., 2012). It is largely driven by a subjective gap between perceived existing knowledge and the sufficiency level, which is known as perception of information insufficiency (Kahlor, 2010).

Information seeking behavior is made by individuals who perceive they have health problems to determine their current health situation before finding and implementing a suitable cure (Azhar & Doss, 2018).

Media consumption, including access to awareness information through television, journal, social media, and other media sources, has been proven to facilitate infection knowledge in previous studies (He & Li, 2021). Krikelas (1983) noted classical sources of information including memory, other individuals, personal documents and written works. Wilson's approach is more effective in this case because the "other information sources" category may include internet information sources (Wilson, 1999).

In line with the extended planned risk information seeking model, studies investigating the impact of media on health information seeking differ (Kahlor, 2010). For instance, it has been shown that media-exposure among a Singaporean population directly affected risk perception and affective reaction, but indirectly affected seeking intention (Ho et al., 2014). Additionally, a Chinese sample's intention to seek out information on mental health was directly correlated with media-exposure. In this regard, He and Li (2021) explored the correlations between media-exposure and cancer information seeking. It has been discussed in this context of environmental interests How media consumption affects various cognitive and behavioral consequences. Contrary to expectations, some scholars located no significant differences between media usage and information seeking motivation (Hovick et al., 2014). Thus, we proposed the following **RQ1**: Do the pilgrims seek HRAHI in the Saudi-Media?

Covid-19 is a subject about which nothing is known, thus rumours, misleading information, and fake news have spread all over the world. On the other side, the media has made several trials to limit the spread of the virus, fake news, and false information. Due to the widespread record of COVID-19, there is now more understanding of the virus's safety and preventative measures. Currently, the media is important to the government, organizations, and individuals. (Wilfred et al., 2021). Any activity by persons who seek to obtain more information about a health status in order to better their health is considered to as health information seeking behavior (Deolia et al., 2020). People's attitudes and levels of knowledge can significantly influence how they seek out health care. According to Andersen's health behavior model,

people's health related behaviors may be influenced by how they perceive the outcomes of their activities (Bastani et al., 2022). Zhao (2012) stated that media consumption affected cognition, which then environmental problems have affected information seeking in terms of behaviors connected to information about climate change. In the current study, when Hajj season came during COVID-19 pandemic, pilgrims were likely to develop negative feelings about this mysterious infection, which could encourage them to seek HRAHI. Therefore, the need to perform safe pilgrimage rituals increased the possibility of actively seeking HRAHI from Saudi-Media. Thus, we hypothesize the following: In line with the premises of information seeking model, we posited **RQ3**: What HRAHI do pilgrims acquire from Saudi-Media during COVID-19?

When someone perceives his current level of knowledge is insufficient to deal with a situation, and then start looking for more information. The information seeking is completed when that perception disappears completely (Sawant, 2015). The result of information seeking behavior might be either successful or unsuccessful. The initial perceived needs (HRAHI & preventive measures) may be satisfied or unsatisfied as a result. Satisfaction occurs when pilgrims locate HRAHI and find it in Saudi-Media to achieve the initial need (safe pilgrimage). When the knowledge does not satisfy the initial need, there is non-satisfaction. The process of information seeking may be repeated until satisfaction takes place. We asked **RQ6**: To what extent are respondents satisfied with HRAHI they have acquired from Saudi-Media?

In sum, recent researches on health related information seeking have primarily focused on health-risk information seeking. This study makes an effort to concentrate some of that attention on pilgrims' variables that might affect HRAHI. Thus, HRAHI in Saudi-Media during COVID-19 is a major factor influencing whether pilgrims adopt a safe pilgrimage and refrain from activities that may raise their risk of spreading the virus.

Media Dependency Theory

Dependency theory is one of the first theories of its sort that treats people as an active participator in communication. The dependence hypothesis postulates that when people become more reliant on the media to meet needs and achieve goals, the media will become more

important to them (DeFleur & Ball-Rokeach, 1989). The main emphasis of dependency theory is on the relation between media and people. Individuals rely on the media to satisfy a variety of requirements, ranging from knowledge to entertainment (Lin, 2015). According to theory, a person becomes more critical of the media and is more affected by it the more they depend on it for self-fulfilment (Wilfred et al., 2021).

Media Dependency have three types of effects: cognitive, emotional, and behavioral. Modifications in individuals' beliefs, opinions, and values are known as cognitive effects. The development of feelings of fear and anxiety because of excessive news exposure about violent events is one example of emotional effects. Specific audiences' behavior has changed when they do not act, as they would have (Lin, 2015).

The degree of media dependence is influenced by two factors: Individual reliance on media that satisfies a variety of his needs rather than a select few needs increase first. Social stability is the second source of dependency. Individual is forced to rethink his options and make new decisions when societal change and conflict are prevalent and existing institutions, ideas, and practices are being questioned. He will become more dependent on the media during these times for information. His reliance on media may drastically decrease during other, more stable times (Ball-Rokeach et al., 1990). Thus, RQ2 is posited as follows: What is the degree of respondents' dependency on Saudi-Media for HRAHI? In addition, hypothesized that higher respondents' dependency on Saudi-Media for HRAHI will yield increased knowledge of it (**H1**).

There are three factors affecting Media Dependency: (a)**Individuals**: will become more reliant on media if it meets their demands, (b)**Social Stability**: During the period of social change, conflicts, riot or election media dependence increases significantly due to the intense need for information (Ball-Rokeach & DE Fleur, 1976), and (c)**Active audience**: who chooses the media dependence according to their needs (Mquail & Windhal, 2005).

Media Dependency process have three steps: **First**, people is attracted to media content that can satisfy their needs for knowledge, enjoyment, and education. **Second**, cognitive motives help people keep their attention levels up, while emotional motivation helps people increase their degrees of satisfaction. **Third**, the audience is becoming more involved to enable knowledge acquisition through both cognitive

and emotional motivation (University of Twente, 2004). It was discovered that young children's cellular dependency, cognition, and behavioral patterns were all impacted by the extended usage of digital devices. (Genimon, 2021). In the same context, Kwak and his colleagues (2011) asserted a positive significant correlation between the importance of mobile phone usage and participation in life of Korean society. Two scholars, Melki and Kozman, found that media-exposure predicts specific attitudes and behaviors; however, the effects are greater when related to message content (Melki & Kozman, 2019). In the same context, Zixue and his colleagues (2018) examined the media-exposure, dependency, behavior, and attitude shifting in risky conditions.

As discussed above, according to Media Dependency, we asked **RQ4**: what are the effects of respondents' dependency on Saudi-Media?

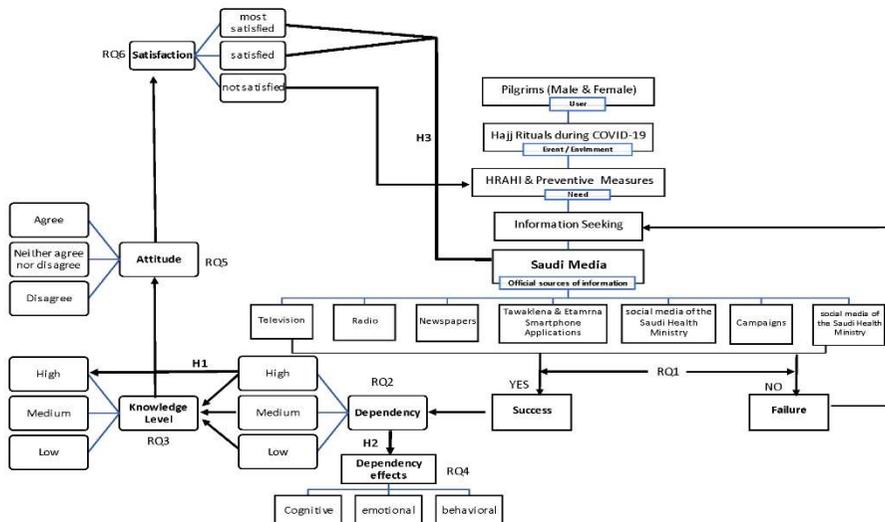
During times of crisis, people rely on the media for information, which makes them more accessible to the media's supposed impacts on audience. For instance, frequent coverage on COVID-19 has helped to increase awareness of safety and precaution measures (Wilfred et al., 2021). Together, we formulate the following hypothesis on Media Dependency theory: Greater pilgrims' dependency on Saudi-Media for HRAHI during COVID-19 will be positively correlated with effects (cognitive, emotional, behavioral) (H2), Higher pilgrims' dependency on Saudi-Media for HRAHI will be related to increased satisfaction with it (H3).

During the H1N1 Flu pandemic, Zhang et al. (2015) investigated whether perceived knowledge affected the correlation between media consumption and health precautions. They proved that media-exposure increases people's desire to adopt health related precautionary measures by increasing their perceived knowledge of the hazards connected with the disease. Various studies on health communication have confirmed the significant correlation between attitude and behavioral intention (Catalano et al., 2017). Likewise, Li and Zheng (2022) revealed affective responses had a positive relation with risk information seeking, and had a positive influence on attitude toward prevention. As such, in the knowledge effects context, observed information scanning was an accurate indicator of dietary behaviors in reducing cardiovascular diseases (Hovick & Bigsby, 2016). In addition, the authors found a significant positive correlation between perceived knowledge and the levels of both television and social media-exposure (Melki et al., 2022).

Presumably, during COVID-19 is widespread, pilgrims who decided to seek out and view HRAHI in Saudi-Media may have developed a positive attitude toward prevention and a strong motive to perform the Hajj safely. Hence, we asked **RQ5**: What attitudes do pilgrims have toward HRAHI is presented in Saudi-Media?

According to Information seeking model and Media Dependency, pilgrims perceive an information need in a specific environment or event (e.g. Hajj season during COVID-19). The user will seek information (awareness information) as a result of the perceived need, making demands on different official sources of information (Saudi-Media: Television, Radio, Newspapers, Campaigns, social media of the Saudi Health Ministry, social media of the Saudi Hajj & Umrah Ministry, and Tawaklena & Etamrna Smartphone Applications). As COVID-19 continued to cause harm throughout the world, pilgrims will depend on official Saudi-Media to acquire HRAHI and preventive measures. Thus, the dependency-effects (cognitive, emotional, and behavioral) will occur. Dissatisfaction occurs when HRAHI does not accomplish the initial need. If not, the process of information seeking may be repeated until the needed outcomes are reached. (See figure 1).

Figure 1. HRAHI according to media dependency & information seeking.



Note. The bold lines represent the hypothesis relationships

Method and Design

This descriptive study employed a survey as a quantitative method to monitor HRAHI seeking and the dependency-effects on Saudi-Media in shaping the knowledge and attitudes of pilgrims concerning the rituals of Hajj during COVID-19. A questionnaire was used to collect data from local pilgrims. It included a questions list to examine hypotheses and respond to the research questions. The survey helped the researcher gather data directly from pilgrims so that an accurate study could be done by evaluating their awareness, attitudes, and satisfaction toward Saudi-Media content on Hajj-Rituals by using a quantitative scale.

The survey examined different variables such as respondents were asked if they seek HRAHI in Saudi-Media, and their responses were (Yes=2, No=1) (**RQ1**). Respondents' dependency on Saudi-Media for HRAHI, the answering ranged from High dependency (3), medium dependency (2) to low dependency (1) (**RQ2**). To probe the degree of awareness the answering ranged high (3), medium (2), and low (1) (**H1**). To measure the sample's attitudes toward HRAHI in Saudi-Media. We distinguished the answering, agree (3), neither agree nor disagree (2) and disagree (1) (**RQ5**). To measure the sample's Satisfaction with HRAHI, three-point scale questions were constructed. Including the alternatives from "most-satisfied" (3), "satisfied" (2), and "not-satisfied" (1) (**RQ6**).

We measured pilgrims' acquiring HRAHI from Saudi-Media during COVID-19 with eight statements such as "Precautionary measures against Covid-19 during Hajj-Rituals", "usage of Etamrana & Tawakkalna applications for Hajj & Umrah" and "Identifying the requirements for pilgrims' entrance and departure from KSA during COVID-19" the answers were (Yes=2, No=1) (**RQ3**). We further examined the effects of respondents' dependency on their knowledge level (**RQ2 & H1**), and dependency-effects (cognitive, emotional, and behavioral) on Saudi-Media by using the χ^2 test (**RQ4**). We examined the differences between males and females in dependency-effects on Saudi-Media by using T-Test (**RQ4**). Relationship between HRAHI about COVID-19 and dependency-effects (cognitive, emotional, behavioral) on Saudi-Media was tested via Correlation coefficient (**H2**). Finally, we investigated the relationship between pilgrims' satisfaction and their reliance on Saudi-Media information by using Correlation coefficient (**H3**).

The population consists of approximately 60,000 local pilgrims (citizens & residents) of the KSA, who were vaccinated against the Coronavirus according to the Saudi Ministry of Hajj & Umrah for Hijri year (Dhul-Hijjah 9,1442 - July 19, 2021) (GOV.SA, 2022). Nonprobability sample has been drawn of available sample (Levy & Lemeshow, 2013) consisted of (800) local pilgrims (citizens & residents) were vaccinated according to the restrictions and arrangements of KSA for the categories of immunization against Corona-virus. The data was collected through the locations of pilgrims in Makkah Al-Mukarramah in fifteenth of Dhul-Qi'dah until the end of Dhul-Hijjah 1442-AH (Ministry of Hajj & Umrah, 2022).

The sample contained 800 valid participants (local pilgrims), 63.5% of whom were men and 36.5% of whom were women. Nearly a third of the participants (27%) were between the ages of 30-40, followed by those between 40-50 (21.1%), pilgrims between 20-30 (20.3%), people above the age of 50 (16.8%), and finally those 20 (14.9%). Regarding the distribution of education, graduates were the majority of respondents (46.5%), followed by high school graduates. More than half of participants were residents' pilgrims (56.25%) and 43.75% were Saudi citizens. (See table 1).

Table 1. Sample Demographics

Variable		F	%	Variable		F	%	Variable		F	%
Internal pilgrims	Citizens	350	43.75	Age	> 20	119	14.9	Education	Intermediate education	89	11.1
	Residents	450	56.25		20 - 30	162	20.3		High school	230	28.8
	Total	800	100		30 - 40	216	27		Graduate	372	46.5
Gender	Male	508	63.5		40 - 50	169	21.1		Postgraduate	109	13.6
	Female	292	36.5		< 50	134	16.8		Total	800	100
	Total	800	100		Total	800	100				

Results

RQ1 Do the pilgrims seek HRAHI in the Saudi-Media? When we asked the sample (N=800), if they seek HRAHI, the descriptive results showed that respondents answered (Yes) (n=690, 86.3%), while respondents answered (No) when they didn't seek HRAHI in Saudi-Media (n=110, 13.7%) pilgrims. There was significant difference between (Yes, No) in seeking HRAHI on Saudi-Media ($X^2=125.876, SE=0.001, P<0.001, df=1$). In addition, the results assessed that Saudi television ranked as the first source (M=2.76), while social media of the Saudi Health Ministry ranked second (M= 2.58). At the same context, Kim and Jung (2017) study, social media is becoming more crucial for participants to achieve their action orientation and social cognition goals. According to Tustin (2010), 35% of the sample preferred Internet as a source for health information, while 19% of them turn to their oncologist for advice. He found a negative correlation in the choice of the Internet and their health awareness. As Media Dependency involves some type of relationship (Ball-Rokeach, 1985) between the audience and the media, trust is expected to be a major element in how people select the media they depend on. However, asked to what is the degree of respondents' dependency on Saudi-Media for HRAHI (**RQ2**). 39.1% was high dependency on Saudi-Media for HRAHI, 54.5% medium and 6.4% low. There was a significant ($X^2=7.018, SE=0.05, P<0.05, df=1, C=0.100$).

H1 presumed that higher respondents' dependency on Saudi-Media for HRAHI will yield increased knowledge of it. The results as showed in table 2 emphasized statistically significant differences between the respondents' dependency on HRAHI in Saudi-Media and increase their level of knowledge. Higher dependency was the higher knowledgably about HRAHI ($X^2=72.783, SE=0.001, P<0.001, df=3, C=0.311$). Higher degree of dependency on Saudi-Media overload higher knowledge about HRAHI, which supported **H1**.

Table 2. Respondents' dependency on Saudi media for HRAHI & their level knowledge

Knowledge Level	High		Medium		low		CHI-SQUARE (X ²)	Significance (SE) df=3	Contingency coefficient
	n	%	n	%	n	%			
High	269	78.6	203	67.9	31	64.6	72.783	0.001	0.311
Medium	258	75.2	185	61.9	26	55.1	47.574	0.001	0.252
Low	137	39.9	129	43.1	13	27.3	0.021	0.917	-

n =690, * $p < .05$. ** $p < .01$. *** $p < .001$.

In addition, low dependency on Saudi-Media led to a decrease of respondents' knowledge level (X²=0.021,SE=0.917,df=3). Individuals with lower degree of dependency on Saudi-Media were lower levels of knowledge about HRAHI less frequently (27.1%).

RQ3 asked what HRAHI do pilgrims acquire from Saudi-Media during COVID-19. The results (Table 3) showed that 55.5% of participants indicated that they acquire information about "Precautionary measures against Covid-19 during Hajj-Rituals". While 51.9% knew "Protocols for entering the Two Holy Mosques during Covid-19 in Hajj-Rituals" from Saudi-Media and 51.2% informed about usage of "Etamrana&Tawakkalna applications for Hajj & Umrah". In addition, 50.9% knew about "Inform pilgrims about a Create strategy for safety and health to protect them from the Coronavirus".

Table 3. Pilgrims' acquiring HRAHI from Saudi media during COVID-19:

Gender variable	Males = 445		Females = 245		n = 690		CHI-SQUARE (X ²)	Significance (SE) df=1	Contingency coefficient
	n	%	n	%	n	%			
Precautionary measures against Covid-19 during Hajj rituals	235	52.8	184	75.1	388	55.5	3.695	0.055	-
ensuring physical distance	196	44	132	53.9	328	47.5	6.125	0.05	0.094
Reducing personal contact between pilgrims in two Holy Mosques	186	41.8	123	50.2	309	44.8	4.151	0.05	0.081
usage of Etamrana & Tawakkalna applications for Hajj and Umrah	238	53.5	155	46.9	393	51.2	2.708	0.100	-
Protocols for entering the Two Holy Mosques	239	53.7	189	48.6	428	51.9	1.670	0.196	-

during Covid-19 in Hajj rituals									
Providing pilgrims with a hotline phone for the symptoms of Corona virus	1 2 7	38 .7	1 3 1	53 .5	3 0 3	43 .9	14.086	0.001	0.141
Inform pilgrims about a Create strategy for safety and health to protect them from the Coronaviruses.	2 3 2	52 .1	1 1 9	48 .6	3 5 1	50 .9	0.803	0.370	-
Identifying the requirements for pilgrims' entrance and departure from kingdom of Saudi Arabia during COVID-19	2 1 2	47 .6	1 3 2	53 .9	3 4 4	49 .9	2.459	0.117	-

* $p < .05$. ** $p < .01$.

We can see also significant differences between male and female participants in some variables, such as "ensuring physical distance" ($X^2=6.125, SE=0.05, P<0.05, df=1, C=0.094$), "Reducing personal contact between pilgrims in two Holy Mosques" ($X^2=4.151, SE=0.05, P<0.05, df=1, C=0.081$), "Providing pilgrims with a hotline phone for the symptoms of Corona-virus" ($X^2=14.086, SE=0.001, P<0.001, df=1, C=0.141$). While, Chi-Square indicated no further significant differences in the other variables.

The fourth research question (RQ4) explored the effects of respondents' dependency on Saudi-Media. Table 4 showed the cognitive effects were that 49.3% of respondents knew "Information for entering the Two Holy Mosques to protect coronavirus". In addition, 47.8% explored that "prayer and supplication to God" were the cognitive dependency-effects on Saudi-Media. In the case of behavioral effects, 34.1% stated that they "Interact with topics of Hajj-Rituals".

Table 4. Effects of respondents' dependency on Saudi media.

Dependency effects	Response		Ranking	CHI-SQUARE (X^2)	Significance (SE) df=1
	n	%			
Information for entering the Two Holy Mosques to protect coronavirus	340	49.3	1	0.145	0.703
information of Etamrana & Tawakkalna applications for Hajj and Umrah	294	42.6	2	15.078	0.001
Cognitive Information of facing crises	277	40.1	3	26.806	0.001
Information of health protocols to protect pilgrims from the Coronavirus.	233	33.8	4	72.719	0.001
Information of safety strategy	215	31.2	5	97.971	0.001
em Listening, advice, and guidance	277	40.1	3	26.806	0.001

	through Saudi media					
	Feeling comfort during Hajj rituals	269	39	4	33.484	0.001
	Feeling peace between pilgrims.	221	32	5	89.136	0.001
	prayer and supplication to God	330	47.8	1	1.304	0.253
	Discussion about Hajj rituals	186	27	5	146.557	0.001
	Interact with topics of Hajj rituals	235	34.1	1	70.145	0.001
behavioral	Informing Hajj rituals through Etamarnna and Tawkalnna apps	220	31.9	3	90.580	0.001
	Follow the precautions recommended for Coronavirus	228	33	2	79.357	0.001
	No smoking in the holy places	213	30.9	4	101.009	0.001

*** $p < .001$.

Chi square tested dependency-effects measurement, the results indicated a significant effect for Cognitive effects (SE=0.001, $P < 0.001$, $df=1$), except "Information for entering the Two Holy Mosques to protect coronavirus. In addition, Behavioral effects were significant (SE=0.001, $P < 0.001$, $df=1$). The only no significant effects of emotional was on "prayer and supplication to God", but all were significant. The theory of dependence effects is examined in this study that explores how helpful it is for Saudi-Media to inform HRAHI pilgrims about COVID-19.

There were no significantly differences between males and females in cognitive and behavioral effects of dependency on Saudi-Media for HRAHI, (T=-1.884, SE=0.06, $df=668$), (T=-0.97, SE=0.332, $df=668$). Whereas, there were significantly differences between of males and females in emotional effects resulting from this dependency (T=-4.528, SE=0.001, $P < 0.001$, $df=668$) in favour of females. At the connotative level, total dependency-effects (T=-

2.641,SE=0.01,P<0.01,df=668) was significantly associated with gender (see table 5).

Table 5. T-Test of the differences between males and females in effects of respondents' dependency on Saudi media.

Gender Dependency effects	Male = 445		Female = 245		T	Significance (SE) df= 668
	M	SD	M	SD		
Cognitive	1.9	2.016	2.2	2.215	- 1.884	0.060
emotional	1.7	2.052	2.5	1.892	- 4.528	0.001
Behavioral	1.5	2.149	1.7	2.285	- 0.970	0.332
Total effects	5.1	5.676	6.3	5.914	- 2.641	0.01

n= 690, ***p < .001.

H2, which predicted that Greater pilgrims' dependency on Saudi-Media for HRAHI during COVID-19, will be positively correlated with effects (cognitive, emotional, and behavioral). Before the hypothesis is tested, we measured HRAHI's dependency-effects. To test the hypothesis, we conducted Correlation coefficient between pilgrims' dependency on Saudi-Media for HRAHI during COVID-19 and effects (cognitive, emotional, and behavioral). Results indicated a strong positive correlation between them ($r > 0.7, P < 0.01$) and medium ($0.3 < r < 0.7, P < 0.01$) for all the three dependency-effects (see Table 6).

Table 6. Correlation between HRAHI about COVID-19 & dependency effects (cognitive, emotional, behavioral) on Saudi media during Hajj rituals.

HRAHI	dependency effects (n=690)			
	Cognitive r	Emotional r	Behavioral r	Total r
Precautionary measures against Covid-19 during Hajj rituals	0.843**	0.680**	0.639**	0.786**
ensuring physical distance	0.881**	0.784**	0.676**	0.850**

Reducing personal contact between pilgrims in two Holy Mosques	0.703**	0.693**	0.793**	0.798**
usage of Etamrana & Tawakkalna applications for Hajj and Umrah	0.721**	0.672**	0.536**	0.700**
Protocols for entering the Two Holy Mosques during Covid-19 in Hajj rituals	0.756**	0.615**	0.586**	0.711**
Providing pilgrims with a hotline phone for the symptoms of Corona virus	0.565**	0.388**	0.373**	0.482**
Inform pilgrims about a Create strategy for safety and health to protect them from the Coronavirus.	0.576**	0.398**	0.398**	0.499**
Identifying the requirements for pilgrims' entrance and departure from kingdom of Saudi Arabia during COVID-19	0.692**	0.620**	0.496**	0.621**

Results stated the increased pilgrims' dependency on Saudi-Media, the effectiveness of HRAHI during COVID-19 caused an increase in their cognitive, emotional, and behavioral effects Thus, H2 was supported. The concept of trust is directly related to the theoretical fields of Media Dependency and selective exposure. In its largest context, trust refers to a relationship between audience and media in which the former, due to uncertainty, places trust in the latter (Jackob, 2010). Thus, this assessed our previous results.

RQ5 examined what attitudes did pilgrims had toward HRAHI was presented in Saudi-Media. To scrutinize the attitudes furthermore, we estimated the predicted participants' attitudes with different statements (negative and positive) according to Likert scale.

Looking at table 7, we can first see that the results illustrated pilgrims' positive attitudes about HRAHI presented in Saudi-Media, the majority of participants' attitudes statements were positive. In line with

our expectations, the attitudes statements toward HRAHI on Saudi-Media indicated that the respondents' opinions coincided with the positive attitudes.

Table 7. Pilgrims' attitudes toward HRAHI.

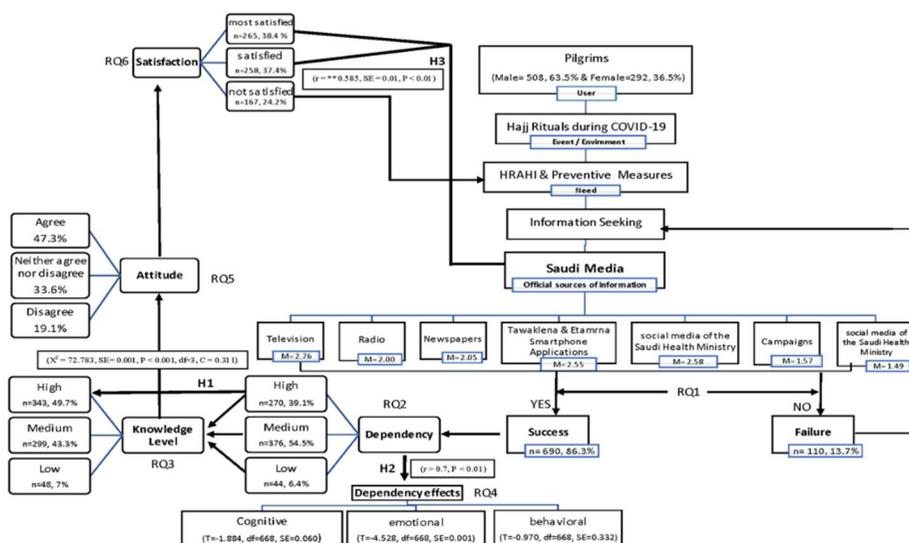
Statements	Attitudes (n= 690)						Weighted mean
	Agree		Neither agree nor disagree		Disagree		
	n	%	n	%	n	%	
HRAHI helped me to know all health precautions about CovID-19 during Hajj rituals.	423	62.6	210	31.1	42	6.2	2.52
Saudi media provided me with sufficient information about Hajj rituals.	408	60.4	235	34.1	32	4.7	2.49
Saudi media provided me with information about entering to holly Mosques.	366	53.8	314	46.2	0	0	2.49
Saudi media provided me with HRAHI about visiting politeness to holly Mosques.	289	50.3	202	35.1	84	14.6	2.34
I think that HRAHI provided by the Saudi media is insufficient.	150	22.2	78	11.6	447	62.2	0.91
Most of HRAHI was translated into different languages.	202	29.7	300	44.1	178	26.2	1.95
I think that HRAHI was repeated.	96	14.5	223	33.8	341	51.7	1.68
Most of HRAHI was not clear.	530	76.8	160	23.2	0	0	0.98
Saudi media helped me to use “Etamarnna & TwaklInna” apps.	272	54.2	291	42.9	15	2.9	2.51

RQ6 asked to what extent the individuals were satisfied with HRAHI they have acquired from Saudi-Media. The descriptive results showed that 38.4% of individuals were most satisfied (male n=171, 24.8%–female n=94, 13.6%), 37.4% of individuals were satisfied (male n=144, 20.9%–female n=114, 16.5%) and 24.2% of individuals were not satisfied (male n= 130, 18.8%–female n=37, 5.4%). There was a significant in satisfaction with HRAHI provided by Saudi-Media ($X^2=21.487, SE=0.001, P<0.001, df=2$).

Our final hypothesis (**H3**) postulated that higher pilgrims' dependency on Saudi-Media for HRAHI will be related to increased satisfaction with it. An analysis of Correlation Coefficient indicated that pilgrims' dependency on Saudi-Media in obtaining HRAHI ($M=2.3, SD=0.670$), satisfaction with HRAHI ($M=2.1, SD=0.779$). Results revealed pilgrims' dependency on Saudi-Media correlated positively with their satisfaction ($r=**0.585, SE=0.01, P<0.01$), so the higher pilgrims' dependency on Saudi-Media, the more satisfaction with HRAHI. Thus, H3 was supported.

The findings summarized in figure 2 regarding the information seeking model and Media Dependency.

Figure 2. RQs & hypothesis results



Note. The bold lines represent the hypothesis relationship.

Concluding Discussion

To conclude, this study presented the following salient takeaways. First, the study confirmed the importance of Saudi official media efforts during the Hajj season to inform pilgrims of HRAHI. These efforts included supplying brochures and publications to the campaign's target pilgrims, preparing news reports with major current news, and inviting qualified religious officials to explain Hajj-Rituals. For a similar discussion on Saudi official media in Hajj-Rituals, see (Al-Sadiq & Ahmed, 2019), (Qazzaz, 2015). Second, the study revealed a high percentage of pilgrims' HRAHI-seeking in Saudi-Media. Third, it actually proved that significant enhancement in the pilgrims' dependence on Saudi-Media for HRAHI, their confidence in it, the depth of treatment, clarification for every ritual's explanation, and the accessibility of information. These results so demonstrated the value of HRAHI to both of them. Another explanation of this study proved that information insufficiency was positively related to pilgrims' seeking HRAHI. Therefore, pilgrims were motivated to search for relevant information in Saudi-Media when they believed their current knowledge of COVID-19 was insufficient during Hajj-Rituals. This result Consistence with previous studies, which concluded that seeking information about COVID-19 will be positively correlated with confusion (Al-Attar, 2021; Shahin, 2021). Additionally, Hwang et al. (2021) and Liu (2020) assessed preventive behaviors against contracting COVID-19 and tested media consumption. Li and Zheng (2022) explored that it had a significant positive influence on predicting accurate online health information seeking and precautionary motives during public health risk.

A more important indicator of media credibility is Media Dependency. When individuals must obtain information from specific media, confidence in these media is extremely important since there are fewer alternatives available to help them achieve their goals (Jackob, 2010). These results match those mentioned in earlier studies of Pulideo and his colleagues (2020), Alan and his colleagues (2020), and Liu (2021) that the people may have a little option and will depend on these information sources, particularly in situations like the COVID-19 epidemic when some knowledge can only be acquired through trusted authorities and experts. The findings demonstrated the significance of live Hajj ritual broadcasting on Saudi television. It acquired the trust of

the audience while providing audiences with accurate and comprehensive information about this event. Saudi television has remained the most trusted and reliable information source. Also, it has worked well as a qualified team (Cameramen, reporters, and technicians). According to the findings, news has a significant impact on the audience, forming their opinions and attitudes. In addition, in-depth information, interviews, live documentaries, influence, and timeliness are just a few of its other distinguishing qualities, as assumed by previous studies (Essawi, 2015; Melki & Kozman, 2019; Qazzaz, 2015).

The current study contributed to the understanding of several key determinants that promote HRAHI on COVID-19 provided to pilgrims and Saudi-Media Dependency (cognitive, emotional, and behavioral) effects. From a theoretical viewpoint, the current study's findings stated that the increased dependency on Saudi-Media and the effectiveness of HRAHI during COVID-19 caused an increase in the cognitive, emotional, and behavioral effects. Contrary to prior findings, Brashers (2001) observed that individuals might decide to reject knowledge in order to reduce the level of their negative feelings in a risky condition. This assumption has also been supported by several studies, which show that people may turn to fear control and withhold information when they perceive a threat or danger and believe there is nothing, they can do about it (Brashers et al., 2006; Witte, 1994). In this context, Li and Zheng (2022) found that affective participants were positively correlated with the desire for COVID-19 risk information. Lu and Chu (2022) proved that heavy Chinese and American media-exposure was associated with a more positive perception of information-gathering capability.

In addition to the above, a further result of the study should be noted. It revealed that most pilgrims' attitudes toward HRAHI in Saudi-Media were positive. This illustrated how keen the Saudi-Media was to produce good quality media content associated with social responsibility, as this was the fastest and most effective way to deliver information clearly and persuaded pilgrims on the duties of Hajj-Rituals. Therefore, the designated authorities increased the media campaigns intended to inform pilgrims, merging them with awareness initiatives to provide them with information before, during, and after the completion of Hajj-Rituals.

This result seemed to reinforce Helmy and Gharib (2018) pilgrims' attitudes positively associated with the performance of the communication activities of General Presidency for the Affairs of the Masjid al-Haram and Masjid an-Nabawi during Hajj-Rituals. In addition, Aziz and colleagues (2018) asserted that pilgrims' Positive attitude toward health seeking activities had strong correlation with pre-travel healthy behaviors during Hajj season. According to Li and Zheng (2022), risk information seeking was positively related to attitude toward prevention and such attitude further exerted a strong and positive impact on prevention intent. Information utility postulated that people would engage with information if they believe the source to be beneficial, despite the acceptance or rejection of the message (Knobloch-Westerwick & Kleinman, 2012). Similar findings revealed that social media messaging had an impact on attitudes toward and behaviors related to driving safety (Stefanidis et al., 2022). In addition, the adoption of preventative attitudes and behaviors was influenced by social media-exposure to Coronavirus information through risk perception (Zeballos Rivas et al., 2021). Contrary to previous research, it was discovered that a huge number of social networking blogs and internet sites conveyed bad attitudes on speed limit signs (Mooren et al., 2014). According to research by Dauda Goni and colleagues (2019b), Malaysian pilgrims have a good knowledge of respiratory tract infections (RTI). However, their preventative practice behaviors revealed a negative attitude.

The results of this study call for research on investigating how Islamic countries' media influence pilgrims' awareness and attitudes toward Hajj-Rituals before they arrived in the KSA. In addition, conducting content analyses to determine the qualities of Saudi-Media content present to internal and external pilgrims. Future studies will be benefited from our results to compare between HRAHI of Saudi-Media and Islamic nations' media provided to pilgrims. Furthermore, we recommend making an effort to focus on media analyses of new media and its influence on how pilgrims' attitudes and knowledge of the Hajj-Rituals are perceived.

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