Do Arabs Really Read Less?
"Cultural Tools" and "More Knowledgeable Others" as
Determinants of Book Reliance in Six Arab Countries

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Book reading in the Arab region is believed to be lower than in regions of similar economic status, but this has not been tested using nationally representative data. This study used the sociocultural theory of learning, particularly the concepts of "more knowledgeable others" and "cultural tools," to examine influences on Arabs' reported book reliance. The study examined print and e-book reliance among Internet users in six Arab countries: Egypt, Saudi Arabia, Tunisia, Lebanon, Qatar, and the United Arab Emirates (Arab respondents n = 3,510; Western and Asian expatriates n = 989). Arab respondents in Saudi Arabia and the United Arab Emirates, countries with large numbers of expatriates, reported lower book reliance than Asian or Western expatriates, but this was not the case in Qatar. Although numbers of expatriates suitable for similar comparisons were not among data samples collected in Egypt, Lebanon, and Tunisia, Arab respondents in those countries did nonetheless report markedly lower book reliance than non-Arabs elsewhere in the region. Use of news apps and reliance on in-person conversations for news positively predicted reliance, whereas time spent in person with family and friends and frequency of social media posts were negative predictors.

Keywords: book reading, sociocultural theory, Arab region, Middle East, e-books

Book reading is associated with greater academic success (Mol & Bus, 2011) and increased upward economic mobility. Book production is lower in Arab countries than in other regions of similar socioeconomic status and considerably lower than in most Organization for Economic Cooperation and Development countries (Schwartz, Helmus, Kaye, & Oweidat, 2009). Even in parts of the Arab region with considerable financial wealth and access to education, book reading is suspected to be low (Al Qasimi, 2011). Reasons for this are numerous: Lack of texts translated into Arabic, censorship, political instability, competing classical and colloquial Arabic dialects, weak library networks, and piracy all contribute to the diminution of reading in Arab countries (Harabi, 2009; Olson & Torrance, 2009).

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But research has yet to systematically examine whether book reliance is actually lower among Arabs than non-Arabs by using nationally representative data from multiple countries. This study tested the hypothesis that book reliance is, in fact, lower among Arab populations than among expatriate populations in the same countries, and also examined social, behavioral, and demographic correlates of book reliance in six Arab countries: Egypt, Lebanon, Saudi Arabia, Qatar, Tunisia, and the United Arab Emirates (UAE). This study used the sociocultural theory of learning, which maintains that social forces play a primary role in either accelerating or impeding the learning process. Numerous possible social and behavioral determinants of book reading, attitudinal indicators, and potential demographic correlates were explored, including social media and direct messaging use, interpersonal communication, news media use, conservatism/progressivism, news interest, and beyond. Book reading importance, what we call here "book reliance," is a four-item index assessing respondents' reliance on print and e-books for both knowledge and entertainment.

Journalist Ursula Lindsey articulated well what we think we know about book reading in the Arab world, and what we do not, in an opinion piece for the Arab higher education news publisher Al-Fanar Media titled "Why Don't Arabs Read?":

> Every time I hear someone complain that people don't read in the Arab world, I wonder: Is that true? And if so, why? . . . There are many indications that readership is relatively low in the region. But we don't know the extent of the problem, and partly because of that, we can't clearly tell what its causes and effects are. (Lindsey, 2016, para. 3)

This article is a step toward better understanding book reliance in six Arab countries and some of the basic contributors to reliance.

Application of Sociocultural Theory of Learning to Book Reading in the Arab Region: "Cultural Tools" and "More Knowledgeable Others"

The sociocultural approach to learning maintains that education cannot be understood outside its social context, and considers reading an output of social functions, behaviors, and interactions. In the sociocultural view, learning and reading are collaborative, social processes (Atwater, 1996). Lev Vygotsky (1978) maintained that learning takes place before, during, and after an individual is enrolled in a formal educational system, and that learning is shaped by interactions with numerous social influences, specifically with "more knowledgeable others." This study used two specific elements of the sociocultural framework relevant to patterns of book reading in the Arab region: cultural tools and more knowledgeable others.

The sociocultural notion of cultural tools is highly pertinent to a study of book reliance in Arab countries. Cultural tools are entities that either promote or impede reading and learning, and can be physical entities such as libraries, books, money, or smartphones (Neuman & Roskos, 1992), and also nonphysical entities such as a theory or language dialect. The Arab region has a number of specific cultural tools, both physical and nonphysical, believed to impede book reading, including weak library networks (Eschweiler & Goehler, 2010), financial and infrastructural barriers to Internet and mobile

broadband access (Schoenbach, Wood, & Saeed, 2016), censorship by governments and religious officials, and spoken colloquial dialects that vie for competency with Modern Standard Arabic. Sociocultural theory is related to social–cognitive theory (Bandura, 1989) in its recognition that social forces are central to learning processes, but the notion of cultural tools is one of the distinguishing factors, which argues that both physical and abstract tools advance and limit learning.

Second, the concept from Vygotsky's (1978) work most enduring in education research is the notion of the zone of proximal development, wherein interaction and communication with more knowledgeable others is the primary way people learn. Media and digital technology can function as more knowledgeable others that facilitate learning (Wartella et al., 2016). Education research has for some time emphasized the influence of mediated communication as a knowledgeable other (Salomon, Globerson, & Guterman, 1989; Scardamalia & Bereiter, 1994).

The sociocultural framework has been used to study literacy and reading adoption among children but also is useful for contextualizing reading habits among adults (Alexander, 2005), particularly with regard to digital and cultural tools. Indeed, the notion of more knowledgeable others has recently been revisited in education literature with the rise of massive open online courses and other adult distance learning platforms (Kop, Fournier, & Mak, 2011). The outcome variable in this study, an index of respondents' reliance on books for information and entertainment needs, has clear sociocultural underpinnings, and responses may be informed by technological connections, communication with others, media use patterns, and so on.

Systematic examination of predictors of book reading among adults has been conducted at least since the late 1960s, when research found that variables such as professional ambition, openness to new technology, and individuals' numbers of organizational affiliations—the latter emphases are specific cultural tools—were positively associated with nonfiction book reading (Rees & Paisley, 1968). Such characteristics are often associated with the individual learner, but they are also beliefs and traits closely linked to individuals' larger communities and societies. Whereas reading behaviors in adolescence correlate with reading behaviors later in life, childhood attitudes about the importance of reading are poor predictors of attitudes toward reading in adulthood (Smith, 1990), suggesting that evaluations of the utility of reading may be more dependent on situational social and cultural influences than on innate cognitive characteristics.

Education theorists stress that media and communication technology can play the role of more knowledgeable others and strengthen learning processes and behaviors (Wartella et al., 2016). Zhao (2005) went so far as to argue that "knowledgeable others are relatively few in the offline world, for it is hard and often embarrassing for a person to confide his/her innermost thoughts . . . in a face-to-face situation" (p. 396). Indeed, as book reading, at least in adulthood, tends to be a solitary activity, and many members of Arab communities spend more time face to face with family and friends than individuals in some other societies (Nydell, 2012), it is plausible that in-person communication may be negatively associated with book reading.

Despite that reading culture is shaped by influences at familial and social levels, Dali (2015)

argues that there is a shortage of research examining reading habits as the output of broad, social forces: "There is a shortage of research on reading as a social phenomenon which would investigate ideological, political, cultural, historical, and technological forces that form and shape our reading practices" (p. 480). This study attempted to contribute to this literature by examining some of the broad cultural, social, and demographic correlates of book reading in a large portion of the Arab region.

Book Reading and Literacy in Arab Countries

Arab and Islamic regions were at the height of the educational world in much of the medieval era, and Islamic communities were among the world's most bookish (Hirschler, 2012). That is not believed to be the case today, and literacy rates vary considerably across the Arab region. Qatar has the highest adult literacy rate among countries in this study at 97%, and Egypt has the lowest at 75%. Tunisia's literacy rate is 81%, and the remaining countries achieve literacy rates in the low 90s (UNESCO, 2015). Although Arab countries have made significant gains in literacy in recent decades (Rugh, 2002), illiteracy is still a vexing problem in some Arab countries, especially among middle-age and older adults, particularly women. In Qatar, attending primary school became legally required only in 2001 (UNESCO, 2010).

A 2015 survey of 330 students at university foundation programs in Saudi Arabia found that 70% of respondents had not read an Arabic story or book from beginning to end, and more than nine in 10 said they had not read an entire English story or book. Just over 40% of respondents reported buying a book in the past three years, and only six in 10 said they intended to read a story or book in the future (Rajab & Al-Sadi, 2015).

Part of this may be due to low book production and distribution. Arab publishers release one new title for every 12,000 citizens each year; in comparison, UK publishers release one new title per 500 citizens. There are few, if any, popular bestseller lists in Arab states and little publicizing of new releases, and print runs of new titles tend to be brief, according to publisher Maher Al Kiyali (see Khoury & Duzgun, 2009). Ibrahim El-Moallem, head of the Arab Publisher's Union, deplored school textbooks in most Arab countries as "a means of torture for students . . . very badly written, very badly illustrated, poorly printed, too long and tedious" (quoted in Haeri, 2009, p. 424).

A greater challenge is that independent reading does not feature prominently among social traditions in the Arab region. A 2011 survey of undergraduates at North American college branch campuses in Qatar (Bendriss & Golkowska, 2011) found that one in four students had not been read to as a child, and 28% said they never or rarely saw their parents read for pleasure. Those who had never been read to were least likely to read for pleasure in adulthood and had the lowest levels of confidence in their English-reading abilities. Interviews with schoolteachers and principals in Jordan in 2015 suggest that many Jordanian schoolchildren have few reading role models given that "grownups hardly read either," and "parents do not value reading and do not encourage their children to read either," according to Banihani and Abu-Ashour (2015, p. 75). This may be a function of parental illiteracy or underliteracy: Khoury and Duzgun's 2009 study of female college students in the UAE revealed that only half had two literate parents, and one in five said neither parent could read. Yet, even among educated Arabs, Khoury and Duzgun maintain reading is limited to formal education settings. One teacher in the 2015 Jordanian

survey said, "Reading culture is not part of Jordanian culture. In fact, if one took a book to read in the bus or any public places, he would look rather strange" (Banihani & Abu-Ashour, 2015, p. 75).

It is worth noting that in this same survey in Jordan, the share of respondents who said they were never told stories as a child was a meager 3%. Oral storytelling has a rich history in Arab cultures (Sherman, 2008), but the literary novel has a short one. The first widespread Arabic novel in the Arab region was Muhammad Husayn Haykal's 1914 *Zaynab* (Colla, 2009). The more contemporary Arab novelist Abd al-Rahman Munif is insistent: "The Arabic novel has no heritage. Thus, any contemporary Arab novelist has to look for a means of expression for himself, with hardly any guidance to aid him" (quoted in Allen, 1995, p. 7). Consumption of novels, of course, represents just one type of book reading. And although Arabs may read fewer books than individuals in other parts of the world, it does not necessarily mean that they are not consuming important information. Martin (2010) argued that although book reading is not as popular in Arab countries as it is elsewhere, many Arabs are voracious consumers of news—the latter can be consumed in group or communal settings, whereas the former is more of a solitary activity, at least since the rise of TV in the 1950s (Littau, 2006).

Libraries in the Arab region have a long, rich history (Green, 1988), yet outbreaks of war in the region during the latter half of the 20th century robbed some Arab states of expatriate professionals who previously staffed their libraries. Economic challenges deprived some non–oil-producing states, such as Egypt, of funding needed for library investment (see Aman, 1992, pp. 447–449). Elsayed and Saleh (2015) found financial efficiencies in the lending practices of some Arab academic library systems. Only recently have the Arab Gulf states of Kuwait, Qatar, and Oman established university-level library science programs. University College London offers a master's degree in library and information studies in Doha, but this occurred only in the past five years ("UCL Qatar Launches," 2013).

Hypothesis and Research Questions

For this study, we posed the following hypothesis and research questions:

H1:   *Arab respondents will report lower levels of book reliance than Western and Asian expatriates in Saudi Arabia, Qatar, and the UAE.*

RQ1a: *Do Arabs rely less on books than on TV, interpersonal sources, or the Internet for information and entertainment?*

RQ1b: *Do Arab respondents rely more on TV, interpersonal sources, or the Internet than do Western expatriates?*

RQ2:   *Which predictors related to more knowledgeable others and cultural tools—social media and direct messaging use; time spent face to face with family and friends; news consumption; frequency of international travel; and more—are associated with book reliance among Arab respondents?*

RQ3:   *Which sociopolitical attitudes are associated with book reliance among Arab nationals and Arab*

expatriates in the six countries? Possible predictors are cultural conservatism/progressivism, openness to global news, belief in media credibility, and news interest.

RQ4:   *Which demographic predictors—age, gender, education, whether respondents have children in the home, whether respondent is a student, nationals versus Arab expatriates (in some countries)—are associated with book reliance in the six Arab countries?*

Method

This study examined book reliance among Internet-using Arab nationals and Arab expatriates (Arab nationals *n* = 3,510; Asian and Western and Asian expatriates *n* = 989) aged 18 years and older in six Arab countries: Egypt, Saudi Arabia, Tunisia, Lebanon, Qatar, and the UAE. The study is a secondary analysis of data collected in 2015 by Northwestern University in Qatar for its annual report *Media Use in the Middle East* (Dennis, Martin, & Wood, 2015). Analyses here involved Internet-using respondents, as large majorities of respondents—more than 84% of respondents in four of the six countries—use the Internet. Also, two of the items in the dependent variable index related to e-book use, allowing for a more comprehensive assessment of contemporary reading options. Data were collected in face-to-face interviews—except in Qatar, where telephone interviews were conducted via random-digit dialing[1]—under the direction of Northwestern University in Qatar and the Harris Poll/Nielsen Company in February and March 2015. Data collection was funded at 50% by a grant from the Qatar National Research Fund's National Priorities Research Program.

Researchers used multistage random probability sampling of households, and interviews were conducted with members of the general population aged 18 years and older. Survey response rates in the five countries were robust: Saudi Arabia = 77%, Tunisia = 85%, Egypt = 97%, Lebanon = 54%, Qatar = 53%, UAE = 86%. One thousand respondents or more in each country were interviewed, although regression models in this study included only Internet-using Arab nationals and Arab expatriates (Saudi Arabia *n* = 749/81% nationals; Tunisia *n* = 439, 96%; Egypt *n* = 485, 100%; Lebanon *n* = 787, 100%; Qatar *n* = 545, 40%; UAE *n* = 505, 45%).

In all countries, the survey included both citizens and expatriates, and the survey script was available in Arabic and English in all countries, and also in French in Tunisia and Lebanon. Three of the five countries—Saudi Arabia, Qatar, and the UAE—have considerable expatriate populations, and the percentages of nationals in each country were Saudi Arabia = 63%, Qatar = 28%, and the UAE = 25%. Bases for these percentages include Asian and Western expatriates and thus differ from percentages reported above for Arab nationals and Arab expatriates only. Rim weighting was applied in all countries to increase representativeness, and weighting factors were gender, age, and nationality. Respondents were classified as nationals if they were citizens of the country in which the survey took place. Arab expatriates were those with a primary passport from another Arab country. Western expatriates were respondents visiting from the European Union, Western Europe, Canada, or the United States. Asian expatriates were

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[1] Only one entity in Qatar, the Social and Economic Survey Research Institute at Qatar University, is permitted to conduct in-person household surveys in Qatar.

those respondents with primary passports from non-Arab Asian countries.

Sampling did not include a number of subgroups of each country's population, where applicable, including visitors with no residence permits; farmers; the mentally disabled; and individuals in military barracks, hospitals, university dormitories, prisons, or labor camps. In Qatar, however, where interviews were conducted via telephone rather than in person, some members of these populations were reachable and were included in the sample, provided they could complete the interview in Arabic or English.

Interviews

In-person interviews were conducted at regular intervals (of four domiciles) following randomization as follows: The interviewer was directed to the geographic starting point in a given neighborhood initially defined by the researchers. The interviewer skipped a number of homes equal to the sample interval (four houses) and conducted one interview in the next selected household. The interviewer asked for a list of the household members who were 18 years and older, starting with the eldest to the youngest member, and used a random numbers table (or Kish grid) to select the prospective respondent for the interview. The counting of households was continuous, uninterrupted starting from the top floor, clockwise in descending order, from one building to the next following a random path indicated in advance, while documenting passage through the block in a detailed fieldwork register.

In Qatar, the telephone interviews were conducted by human callers. The country's telephone number database comprises mobile lines. The lists are sourced from local official directories. Prior to extracting a sample for the survey, the records were reshuffled to keep all numbers in random sequence within each stratum, and a special extraction program was then used to select phone numbers at regular intervals within the structured list. A multistage random probability selection of telephone numbers from the tele-database was thus performed that yielded a representative sample for the interview. If the respondent was unavailable at first call, five further attempts were made, at different times, when the respondent was more likely to be available. If this failed, the number was skipped and another number was selected at random.

Dependent Variable

Book reliance was the extent to which respondents said they rely on print and e-books for both news/information and entertainment. Reliability alphas for this four-item index, run separately for each country in the study, were robust (Cronbach's α in Egypt = .86, Saudi Arabia = .841, Tunisia = .88, Qatar = .72, Lebanon = .853, UAE = .86). The four items were "For news and information, how important is each of the following to you as a source?" (both books and e-books) and "For entertainment, how important is each of the following to you as a source?" (both books and e-books). These variables were assessed using 5-point Likert scales with answers *5=very important*, *4*=somewhat *important*, *3=neutral*, *2=not very important*, or *1=not important at all*.

Items assessing both print and e-book reading were included to cover both traditional and more modern reading options. Most Arabs living in Arab countries are Muslim, and asking respondents how

much time they spend reading may assess how much time some individuals spend reciting or studying certain religious texts. For this reason, book reliance was used as the outcome variable rather than time spent reading.

Independent Variables

Predictors Related to More Knowledgeable Others and Cultural Tools

Number of hours spent in-person with friends and family was assessed with the question "During a typical week, how many hours or minutes do you spend face to face with. . . ?" for both friends and family. Number of hours spent online with friends and family was assessed with the question "During a typical week, how many hours or minutes do you spend socializing online with. . . ?" for both friends and family. International travel was assessed with the question "Within the past three years, how many times have you traveled outside the country?"

Importance of social media/direct messaging as a source of news/information combined two 5-point Likert items (Cronbach's α = .861): "For news and information, how important is each of the following to you as a source?" was asked for both social media and instant/direct messaging (for the latter, e.g., WhatsApp, Google Chat, Facebook Messenger). Importance of social media/direct messaging as a source of entertainment combined two 5-point Likert items (Cronbach's α = .89): "For entertainment, how important is each of the following to you as a source?" was asked for both social media and instant/direct messaging. Importance of interpersonal sources for news/information was a 5-point Likert item: "For news and information, how important is each of the following to you as a source?— Interpersonal sources (e.g., face to face with family, friends)." All items were rated *5=very important*, *4=somewhat important*, *3=neutral*, *2=not very important*, or *1=not important at all*.

Newspaper and magazine reliance combined four 5-point Likert variables (Cronbach's α = .81): "For news and information, how important is each of the following to you as a source?" was asked for both newspapers and magazines; "For entertainment, how important is each of the following to you as a source?" also was asked for both newspapers and magazines. Television use combined two 5-point Likert items regarding TV (Cronbach's α = .72): "For news/information, how important is TV to you as a source?" and "For entertainment, how important is TV to you as a source?" Use of news apps combined two 5-point Likert items (Cronbach's α = .75) regarding news apps/applications (mobile or Web): "For news/information, how important are news apps/applications to you as a source?" and "For entertainment, how important are news apps/applications to you as a source?" Importance was rated *5=very important*, *4*=somewhat *important*, *3=neutral*, *2=not very important*, or *1=not important at all*. Posting on social media/direct messaging combined items for each social media and instant/direct messaging (Cronbach's α = .71): "How often do you use the Internet for the following purposes?" Religious information-seeking asked "How frequently do you use the Internet for the following purposes?—Look at religious/spiritual sites." Frequency of use was rated on a 6-point scale with the answers *6=several times a day*, *5=once a day*, *4=once or more a week*, *3=once or more a month*, *2=less than once a month*, *and 1=never*.

Attitudinal Predictors

Openness to global news was a Likert item: "People benefit from consuming news from foreign news organizations," where 5=strongly agree and 1=strongly disagree. News interest combined four 5-point items (Cronbach's α = .84): "How closely would you say you follow each type of news and current events?" was asked separately for local news, national news, regional news, and international news, with answers 1 = *not at all closely* to 5 = *extremely closely*. Conservatism/progressivism was assessed with the question, "Compared with most people in your country, how would you describe yourself?" and the answers 1=*culturally very conservative*, 2=*culturally conservative*, 3=*neither*, 4=*culturally progressive/not conservative*, and 5=*culturally very progressive/not conservative*. Media credibility combined three 5-point Likert items (Cronbach's α = .72): "The quality of news reporting in the Arab world has improved over the past two years," "News media in your country are credible," and "The media in your country can report the news independently without interference from officials," where 5=strongly agree and 1=strongly disagree.

Demographic Predictors

The following demographic variables were assessed: gender (1 = *male*), age (interval/ratio-level variable), student (1 = *yes*), national of country versus Arab expatriate (1 = *national*), education (coded on a scale from 1 = *no formal education* to 15 = *postgraduate study*), monthly household income (coded on a scale from 1 = *less than U.S.$800* to 12 = *more than U.S.$12,000*), and have children in the household (1 = *yes*).

Results

Hypothesis 1 stated that Arab respondents will report lower levels of book reliance than Western or Asian expatriates in Saudi Arabia, Qatar, and the UAE. This hypothesis was partially supported. Arabs' book reliance was lower than that reported by Western and Asian expatriates in Saudi Arabia and the UAE, but not in Qatar. Table 1 shows F tests from one-way analyses of variance. Arab nationals and expatriates in Saudi Arabia and the UAE reported lower book reliance than Western expatriates in those countries: Qatar, $F(3, 698) = 1.90$, p value on the threshold of significance ~.05. Bonferroni post hoc comparisons found book reliance to be higher among Western expatriates than among Arab respondents in Saudi Arabia and UAE Egyptians ($M = 10.81$). Lebanese ($M = 12.68$) and Tunisians ($M = 13.99$) reported lower book reliance than either Arabs or non-Arab expatriates in the other three countries. Bonferroni comparisons can be found in the Appendix. Western expatriates in Saudi Arabia and the UAE reported the highest levels of book reliance of any nationality assessed in this study.

Table 1. Book Reliance Index (Scale Ranges from 4 to 20).

Country	Arab nationals M (SD)	Arab expatriates M (SD)	Asian expatriates M (SD)	Western expatriates M (SD)	F
Egypt	10.81 (5.36)				
Lebanon	12.68 (5.44)				
Qatar	15.34 (4.58)	14.55 (5.31)	15.01 (4.98)	15.83 (4.66)	~1.90[1]
Saudi Arabia	14.47 (4.63)	14.59 (4.72)	15.42 (4.18)	18.56 (3.69)	**11.00***[2]**
Tunisia	13.99 (5.40)				
United Arab Emirates	15.28 (5.11)	15.24 (4.64)	15.93 (4.97)	18.69 (4.08)	**15.38***[3]**

Note. Bold type indicates statistically significant F ratios. ***p<.001.
[1] degrees of freedom (3, 698)
[2] (3, 876)
[3] (3, 923)

The dependent variable, book reliance, was an index of four items: "For news and information, how important is each of the following to you as a source?" was asked for both books and e-books. "For entertainment, how important is each of the following to you as a source?" also was asked for books and e-books. Possible responses ranged on a 5-point scale from *5=very important*, *4=*somewhat *important*, *3=neutral*, *2=not very important*, or *1=not important at all*. Expatriates in the samples from Egypt, Lebanon, and Tunisia were too few for similar comparisons.

Research Question 1a asked whether Arab respondents rely less on books than on TV, interpersonal sources, or the Internet for information and entertainment. See the vertical bar chart in Figure 1. Paired-sample *t*-test results found that Arab respondents' reliance on books is lower than that for TV, $t(3,869) = -20.1$, $p = .000$; interpersonal sources, $t(3,876) = -16.7$, $p = .000$; and the Internet, $t(3,874) = -21.1$, $p = .000$.

Research Question 1b asked whether Arab respondents rely more on TV, interpersonal sources, or the Internet than do Western respondents. Arab citizens and expatriates rely less than Western expatriates on books for information/entertainment, $t(1,892) = -8.4$, $p = .000$, and Arab respondents rely more on interpersonal sources, $t(2,223) = 2.45$, $p = .014$, than do Westerners. Arabs' Internet reliance was significantly lower than that of Western expatriates, $t(2,223) = -2.5$, $p = .012$. Arabs and Western expatriates do not differ in reliance on TV, $t(2,196) = .054$, $p = .957$ (see Figure 1).
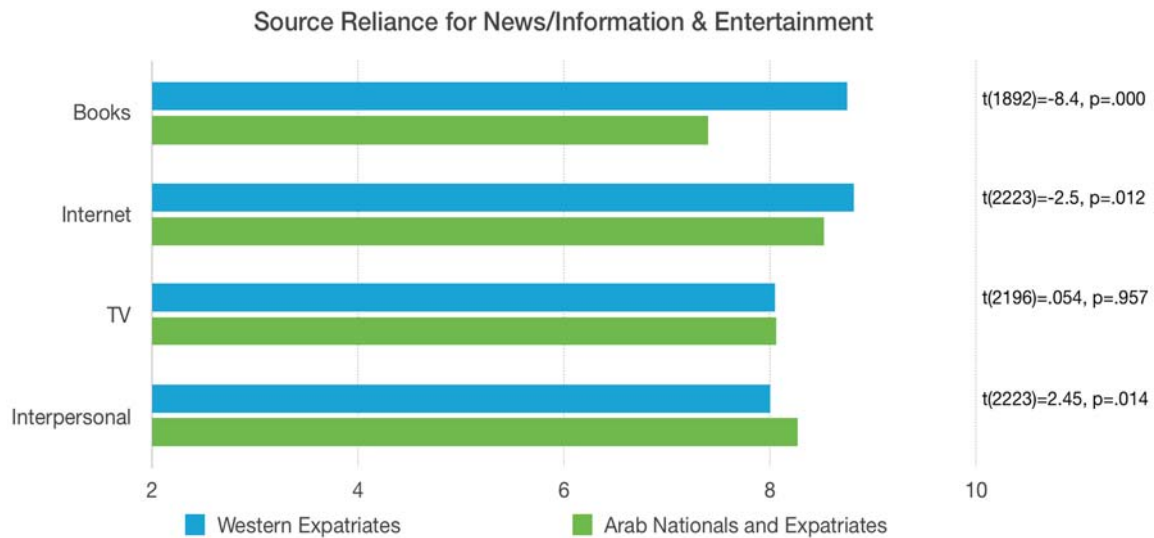
Figure 1. Arab respondents' and Western expatriates' reliance on books, the Internet, TV, and interpersonal sources for information and entertainment in Saudi Arabia, Qatar, and the UAE only—countries with expatriate populations suitable for comparison. The measure for book reliance was an index of four items: "For news and information, how important is each of the following to you as a source?" asked for both books and e-books; "For entertainment, how important is each of the following to you as a source?" also asked for books and e-books. Possible responses ranged on a 5-point scale from 5=very important, 4=somewhat important, 3=neutral, 2=not very important, or 1=not important at all. The resulting index ranged from 4 to 20. The same two questions were asked of respondents for the Internet, TV, and interpersonal sources, and the scale on the x-axis, 2–10, is visualized accordingly. The x-axis was adjusted to reflect the number of scale questions asked for books to make it comparable with the other media.

Predictors of Book Reliance

The models here explain considerable amounts of variance in book reliance in five of the six countries: 68% of the variance in Saudi Arabia, 64% in Tunisia, 59% in the UAE, 52% in Lebanon, and 51% in Egypt, although just 31% in Qatar. Regression models were run separately for each of the six countries in the study, and standardized betas for all models are shown in Table 2. Research Question 2 asked which, if any, predictors related to more knowledgeable others and cultural tools—factors such as social media/direct messaging use, news consumption, time spent in person with family and friends, frequency of international travel—are associated with book reliance among Arabs in the six countries.

Table 2. Predictors of Book Reliance in Six Arab Countries.

Predictor	Egypt	Lebanon	Qatar	Saudi Arabia	Tunisia	United Arab Emirates
More knowledgeable others and cultural tools						
Time spent w/ family/friends in-person	.000	.034	.085	**−.226*****	−.046	**−.122*****
Time spent with family/friends online	−.015	**−.14*****	−.020	−.011	−.068	.006
Importance of social media/direct messaging for news/information	.068	**.097***	−.033	.078	**.244****	.025
Importance of social media/direct messaging for entertainment	−.016	.017	−.119	−.030	.026	−.027
Importance of in-person sources for news/information	.043	**.064***	.068	**.087****	.040	**.161*****
Frequency of international travel	−.019	.011	−.072	−.043	.040	.001
TV use	−.074	**−.074***	.006	.051	−.030	**−.075***
News apps use	**.110***	−.062	**.210*****	−.017	.082	**.216*****
Posting on social media/direct messaging frequency	.029	**−.083****	−.059	**−.130*****	**−.155****	**.085***
Religious information-seeking	.014	.038	−.051	**.118*****	.069	.019
Attitudinal						
Openness to global news	−.022	**.089****	−.003	**.137*****	.065	−.038
News interest	−.006	**−.139*****	.087	**−.085***	−.032	−.007
Conservatism	.041	**−.099*****	**.213*****	.038	.062	**−.061***
Media credibility	.014	−.009	NA	−.008	.052	.007
Demographic						
Language of interview (Arabic)	NA	NA	.104	−.014	−.013	−.002
Gender (male)	−.004	.000	.107	**.066****	.032	.004

Age	−.033	.003	−.074	.014	**−.102***	−.070
Student	**.077***	**.086****	.053	**.081****	**.088***	.037
Nationality (Arab national)	NA	NA	.042	−.034	−.024	**−.101***
Education	.043	.017	.091	**.157****	−.043	−.065
Income	−.02	**−.089****	.098	.029	**.083***	**.096***
Child(ren) in household	.033	−.047	−.079	.016	.020	.044
R^2	**.509**	**.522**	**.313**	**.675**	**.644**	**.590**
Minimal n	457	724	253	586	308	428

Note. Bold type indicates statistically significant betas.
*$p < .05$. **$p < .01$. ***$p < .001$.

In Lebanon, Saudi Arabia, and the UAE, greater importance assigned to in-person conversations for news and information, a traditional predictor of learning from Vygotsky's (1978) framework, was associated with increased book reliance. Actual time spent in person with family members, however, negatively predicted book reliance in Saudi Arabia and the UAE, so being communicative with loved ones may be associated with reading behaviors, whereas spending large amounts of time with others may not; book reading is, after all, typically a solitary activity. Social media/direct messaging use for news and information was also a positive predictor of book reading in Lebanon and Tunisia: Those who rely more on social media for news reported higher book reliance.

Frequency of posting to social media/direct messaging services, however, was negatively associated with book reliance in Lebanon, Saudi Arabia, and Tunisia; however, it was positively associated with book reliance in the UAE. Using social media to read or consume information was positively associated with reading, whereas excessive messaging on the same platforms may be a negative correlate. Use of news apps was positively correlated with book reliance in three countries (Egypt, Qatar, and the UAE). Newspaper and magazine use was associated with greater book reliance in all six countries. TV use was associated with reduced book reliance in Lebanon and the UAE.

Research Question 3 asked which, if any, sociopolitical attitudes are associated with book reliance. Cultural conservatism was associated with book reliance in Lebanon, Qatar, and the UAE, but not in the same direction. In Qatar, conservatism was associated with greater book reliance, whereas book reliance was lower among cultural conservatives in Lebanon and the UAE. Openness to global news (agreeing that "people benefit from consuming news from other parts of the world") was associated with increased book reliance in Lebanon and Saudi Arabia. High news interest—interest in local, regional, and global news—was associated with less book reliance in Lebanon and Saudi Arabia, which is perhaps intuitive: Those who feel the greatest need for breaking news are not inclined to access books to get it.

Research Question 4 asked about demographic characteristics associated with book reading. Being a student was associated with increased book reliance in four of the six countries. Preference for Arabic or English, measured by the proxy of whether respondents chose Arabic or English for survey completion, was not associated with book reliance. Income was associated—modestly—with increased book reliance in Tunisia and the UAE, but with less book reliance in Lebanon. Education level was not associated with book reading importance in any country in the study except Saudi Arabia.

Discussion

Arabs in two of the three countries with large expatriate populations—Saudi Arabia and the UAE—reported significantly lower levels of book reliance than Asian and Western expatriates. The study also found that Arabs rely less on books than on TV, interpersonal sources, or the Internet for information and entertainment. Answering Lindsey's (2016) question—"How do we know that Arabs read less than other demographics?"—this study affords some systematic evidence that Arab residents of Arab countries use books for learning and leisure less than some other demographics in those countries. The next part of Lindsey's question—"Why is this the case?"—is far more complex, but we derive from this study an understanding of some variables that contribute to book reliance among Arab media consumers, and also to less of it.

This study suggests that the ways people in Arab countries communicate and interact with each other, both in person and through mediated channels, may more significantly affect book reading tendencies than demographic variables such as formal education, gender, age, or income. Although income varies dramatically across the six countries in this study, income was used as a control variable in each of six regression models separately, so the influence of monthly household income on book reliance was relative to the distribution of income in a given country. Still, income was only a weak predictor of book reliance in a handful of countries, and in different directions.

The study serves in part as a reminder that cultural tools of learning, especially digital media tools, can either encourage or impede reading, depending on how they are used (see Neuman & Roskos, 1992), something that appears particularly true in the Arab region. Use of social media as information-seeking tools was positively associated with book reliance in the current study, whereas excessive posting to social networks appeared to be a negative predictor of book reliance. Reliance on the cultural tools of social media/direct messaging for entertainment was also not positively associated with book reliance in any of the countries. Reliance on in-person interactions with friends and family for news and information was positively associated with book reliance, whereas actual time spent with family and friends was a negative predictor. This suggests differing influences of more knowledgeable others, depending on the quality of those interactions; in-person conversations were positively correlated with book reliance, whereas overall time spent with others was a negative factor.

The broad implication could be that conversations with others and social media activity are typically associated with more book reliance in Arab states, as long as they do not take up too much time. In the context of the Arab family and community, it could be that demands for in-person social time placed on community members may inhibit other prosocial activities such as reading. Engaging with

knowledgeable others in physical and digital zones of proximal development, then, is associated with greater book reliance, but only to a point.

A key theme in the results of this study is that proximity to more knowledgeable others can either encourage or impede book reliance in Arab countries, depending on what is derived from such engagement. And certain digital media behaviors in the current study were more predictive of book reliance in Arab countries than formal education, which goes to the core of what has puzzled observers of education and literacy in the Arab region: the question of why reading habits are weak in some Middle East states despite reasonably high literacy rates and access to education. Part of the answer may be that economic status and education in Arab countries are not the best predictors of book reading behaviors. Being a current student was associated with book reliance in many countries, but amount of education was not, which recalls Khoury and Duzgun's (2009) assertion that book reading in the Arab region is mostly limited to formal education settings.

Use of newspapers, magazines, and news applications was associated with greater book reliance, whereas TV use was associated with reduced book reliance. Formal education was not a significant predictor of book reliance in any country except Saudi Arabia, and having a child in the household was also not predictive of book reliance in this study, a finding that invokes Arab education scholars' criticism of a lack of literacy modeling in Arab communities (Banihani & Abu-Ashour, 2015; Khoury & Duzgun, 2009).

News app use positively predicted book reliance in Egypt, Qatar, and the UAE, whereas frequency of posting to social media and direct messaging services was negatively associated with book reliance in half of the countries in the study. Also, news interest—a strong desire to keep up with local, national, and international news—was a negative predictor of book reliance in several of the countries in the study. This invokes Martin's (2010) argument that just because Arabs may read books less than some other groups does not necessarily indicate they are not consuming important information. Arabs who are voracious consumers of news tend to rely less on books for information. It seems that respondents who use news apps specifically tend to report greater reliance on books, and those who are the heaviest consumers of headlines report lower levels of book reliance.

Based on the findings across the six countries, a few modest recommendations can be made regarding promoting and encouraging reading habits in the Arab region. Given that use of news apps was positively associated with book reliance in several of the countries studied, schools and policymakers in Arab countries could encourage the downloading and use of news apps on students' and citizens' phones and tablets. A forthcoming Northwestern University study (Dennis, Martin & Wood, 2017) shows that smartphone penetration is robust across the region, even reaching 80% in Lebanon. That study also shows that Internet users, the sample examined in this current study, represent 80% of the population or more in most countries, even in some middle- and lower-income Arab states.

Second, given that this study found a specific kind of social media use, posting but not accessing for news, was negatively associated with book reading, schools, parents, and policymakers could promote specific "nudge" policies (Thaler & Sunstein, 2008) to encourage news-seeking on social media versus mere

posting. And this study provides additional justification that in-person interaction is associated with healthy intellectual behavior, and so discouraging overuse of tablets and smartphones may not be a bad idea.

The key limitation to the current study is that the dependent variable involved respondents' assessments of book reliance rather than how much time they actually spent reading. The dependent variable index assessing book reliance, which had strong reliability coefficients in all six countries studied, is an acceptable proxy for book reading habits. But ideally, a future survey of book reading practices in Arab countries would also ask separately about time spent reading core religious texts and that spent reading books for information and leisure. Another admitted limitation is that the study examined book reliance among Internet-using Arabs and Asian and Western Expatriates. To include e-book reading variables for a more robust book reliance index, we chose to examine Internet users. Also, there are not enough non-Internet users in the countries of Saudi Arabia, Lebanon, Qatar, or the UAE to afford valid comparisons.

Another challenge in conducting research on self-reported book reading involves the social desirability of literacy; survey respondents often overreport their reading habits so as to appear more sophisticated to researchers. Yet, this study did not ask respondents to enumerate how many hours they spend reading each week, but rather how important book reading is to them on a relative scale. For this reason, we did not suspect that social desirability would affect results of this analysis to any inordinate extent or beyond that cautioned in other surveys assessing reading habits.

Although data from these six countries may be considerable for a single multinational analysis, we understand that the countries studied here represent only a fraction of the larger Arab region. Book reliance may differ systematically from the countries featured in this study in Jordan, Morocco, Iraq, Palestine, Algeria, and elsewhere in the Arab region. Although the countries in the current study represent a cross-section of three nations from the Arab Gulf, one from the Levant, and two from North Africa, the final word of this article should nonetheless state that the results here tell us only about perceptions of book reading and correlates of book reliance in these six countries.

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Appendix

Table A1. Bonferroni Post Hoc Comparisons of Book Reliance Among
Arab Nationals and Arab, Asian, and Western Expatriates.

Country	Nationality	Significance
Saudi Arabia		
Arab nationals	Arab expatriates	1.00
	Asian expatriates	.415
	Western expatriates*	**.000**
Arab expatriates	Asian expatriates	1.00
	Western expatriates*	**.000**
Asian expatriates	**Western expatriates**	**.002**
United Arab Emirates		
Arab nationals	Arab expatriates	1.00
	Asian expatriates	.733
	Western expatriates*	**.000**
Arab expatriates	Asian expatriates	.475
	Western expatriates*	**.000**
Asian expatriates	**Western expatriates***	**.000**

Note. Bold type indicates groups with statistically significant differences.
**$p < .01$. ***$p < .001$.