Facebook in Saudi Arabia: Some Aspects of Facebook Usage by Saudi University Students

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***Abstract*—This study, undertaken as part of a wider study of Facebook usage in Saudi Arabia, uses a self-report survey, and includes a thorough analysis of some aspects of Facebook usage by Saudi university students. The participants were 372 students (188 male and 184 female) at one university in Saudi Arabia. A self-reported survey was used to ask the participants where and how they like to access Facebook, the people whom they would not want to see their Facebook profile, and the number of Facebook friends they have. In addition, this study measures the differences between male and female university students in these variables. The study has revealed several significant results that contribute to the current knowledge of social network sites.**

***Index Terms*—Social media, social network sites, Facebook, online communication, Saudi Arabia, university students.**

I. Introduction

Social network sites have become some of the most popular online destinations in recent years [1] and Facebook is the most prominent example of such sites. Student life without Facebook is almost unthinkable. Since its inception in 2004, this popular social network service has quickly become both a basic tool for and a mirror of social interaction, personal identity, and network building among students [2]. Facebook has transformed social communication in the 21st century, with other Social network sites reaching hundreds of millions of people across the globe [3].

Despite the importance of online social networks, there is relatively little theory-driven empirical research available to address this new type of communication and interaction phenomena [4] especially in the Middle East. Therefore, this study, undertaken as part of a wider study of Facebook usage in Saudi Arabia, tries to fill a gap in this field. The study used a self-report survey, and included a thorough analysis of some aspects of Facebook usage by Saudi university students

To be specific, this study aims to answer the following questions:

1) How do Saudi university students prefer to access Facebook?
2) Where do Saudi university students prefer to access Facebook?
3) From whom would Saudi university students hide their Facebook profiles?
4) How many years of internet and Facebook experience do Saudi university students have?
5) How many Facebook friends do Saudi university students have?
6) F. What are the differences between males and females in the way and the place of accessing Facebook, years of internet and Facebook experience, and number of Friends?

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II. Methodology

Participants were recruited by visiting scheduled communication course classes in the Fall\Winter semester of 2011\2012 and asking the students to complete the survey. Permission was obtained from instructors prior to visiting the classes. A script to introduce the study, explain the consent process, and recruit participants was followed, and a note of the instructions was included at the start of the survey. The survey took approximately 30 minutes to complete. Students completed and returned the survey in class at the time of recruitment.

III. Participants

A cluster sampling methodology was used, with stratification according to gender. The communication course which all students attended is divided into 50 sections each having 30 students. Sections comprise either all female or all male students. Fourteen sections were randomly selected to take part in the study seven female and seven male. From the 420 completed questionnaires was distributed; 372 students (188 male and 184 female) which represents indicated that they are users of Facebook. These participants were at a university in Saudi Arabia who were enrolled in a basic communication course, their ages ranged from 18 and 22 (Mean = 19.45 years, SD = 1.24).

IV. Results

A. How Facebook is Accessed

TABLE I: How Facebook is Accessed

	Responses		Percent of Cases
	N	Percent	
Personal laptop	304	54.4%	81.7%
Personal mobile device	162	29.0%	43.5%
Personal PC	63	11.3%	16.9%
Shared PC	30	5.4%	8.1%
Total	559	100.0%	150.3%

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TABLE II: DIFFERENCES BETWEEN MALES AND FEMALES IN HOW FACEBOOK IS ACCESSED

Variable	Male N (%)	Female N (%)	Statistic Chi-square\ FET
Laptop	157 (83.51)	147 (79.89)	$\chi2 = 0.82$ (1), p = 0.37
Mobile device	83 (44.15)	79 (42.93)	$\chi2 = 0.06$ (1), p = 0.81
Personal PC	50 (26.60)	13 (7.1)	$\chi2 = 25.21$ (1), p = 0.00
Shared PC	26 (13.83)	4 (2.2)	FET = 17.04 (1), p = 0.00

The results of this study show that the vast majority of university students (both male and female) who responded to the survey (81.7%) access Facebook using a laptop. (When separate percentages for males and females, the gender difference is not significant ($p > .05$.) There is a difference between males and females in their use of personal PC (26.0% for males and 7.1% for females, $p < .00$). In addition, there is also a gender difference in the number of students who access Facebook via a shared PC (13.8% for males and 2.2% for females, $p < .00$). Although the absolute use rates are low, there are gender differences in the number of respondents who access Facebook via a personal PC (26.6% for males and 2.2% for females, $p < .00$) versus a shared PC (13.8% for males and 2.2% for females, $p < .00$). These low percentages for both males and females clearly reflect the importance respondents place on the sense of user privacy when browsing Facebook. The desktop device lacks, to an extent, the sense of privacy of a laptop, because it is usually situated in the home or in a shared space, in such a way that may not be able to be moved around. The desktop computer also does not enable the user to close the screen automatically and rapidly when the user does not want others to see what he or she is doing. The fact that the least number of people used a shared desktop device may indicate that these users are doing so simply because they do not have their own computer, laptop, or other smart device. This high ratio is, perhaps, unsurprising considering that students rarely use shared computers in contemporary Saudi university environments. This may also reflect the keenness of the sample to strengthen their sense of independence through individual ownership of their devices. A further inference we may draw is that the respondents place a great deal of importance on protecting their individual privacy when browsing the Internet. This can be seen with the use respondents who use smartphones to access the Internet. Specifically, 43.5% of both male and female respondents use smartphone devices to access their personal pages on Facebook. After laptops, Smartphones are the second most commonly used device. The limitations of the technology – including the Facebook smartphone application, the size of the screen, and keyboard usability – may explain why smartphones are less popular than laptops but they also offer more privacy.

B. Where Facebook is Accessed

TABLE III: WHERE FACEBOOK IS ACCESSED

	Responses		Percent of Cases
	N	Percent	
Home	355	66.9%	95.4%
University	65	12.2%	17.5%
Cafe	54	10.2%	14.5%
Friend's home	48	9.0%	12.9%
Other	9	1.7%	2.4%
Total	531	100.0%	139.8%

TABLE IV: OTHER RESPONSES FOR "WHERE DO YOU ACCESS FACEBOOK?"

	Frequency	Valid Percent
Anywhere/everywhere	4	44.4%
When I have free internet access	2	22.2%
Outside the home	2	22.2%
Car/waiting areas	1	11.1%
Total	9	100.0

TABLE V: DIFFERENCES BETWEEN MALES AND FEMALES IN WHERE FACEBOOK IS ACCESSED

Variable	Male N (%)	Female N (%)	Statistic Chi-square\ FET
Home	181 (96.28)	174 (94.57)	$\chi2 = 0.63$ (1), p = 0.43
University	37 (19.68)	28 (15.22)	$\chi2 = 1.29$ (1), p = 0.26
Café	47 (25)	7 (3.80)	$\chi2 = 33.67$ (1), p = 0.00
Friend's Home	33 (17.55)	15 (8.20)	$\chi2 = 7.31$ (1), p = 0.01
Other	3 (1.60)	6 (3.26)	FET = 1.09 (1), p = 0.33

Almost all the student respondents (97.0%), access Facebook from their homes. That respondents prefer to access their accounts from their homes rather than at university may be because they prefer the privacy and security of their own home. However, it may also be because the respondents do not spend much time outside the home. Few male and female respondents (17.5%) accessed their Facebook accounts from university. Males did access their Facebook via cafés but very few females did (25% compared to 3.8%, $p < .00$, respectively). This finding might reflect that females are less likely to be in cafés in the company of a companion with whom they are willing to share their Facebook activity. Males were also more likely to access Facebook in a friend's home than females (17.5% compared to 8.2%, $p < .01$, respectively). The strong preference for accessing Facebook via a personal laptop could reflect where respondents spend the most time or that they do not own their own smart devices. Only four respondents (2.5%) indicated that they log into their accounts at anywhere and everywhere. Two respondents preferred to access Facebook whenever there is a free Internet access. Two respondents stated they use it outside the home. Only one respondent stated that he logs into Facebook while waiting in line and when he is in the car.

C. People from Whom Saudi University Students Would Hide Facebook Profile

TABLE VI: PEOPLE FROM WHOM PARTICIPANTS WOULD HIDE FACEBOOK PROFILE

	Responses		Percent of Cases
	N	Percent	
relatives	62	16.7%	16.7%
father	61	16.4%	16.4%
mother	54	14.5%	14.5%
teachers	49	13.2%	13.2%
sisters	39	10.5%	10.5%
brothers	35	9.4%	9.4%
employers	30	8.1%	8.1%
significant other	19	5.1%	5.1%
others	19	5.1%	5.1%
Total	368	100%	100%

TABLE VII: OTHER RESPONSES FOR WHOM PARTICIPANTS WOULD NOT WANT TO SEE THEIR FACEBOOK PROFILE

	Frequency	Valid Percent
people I don't know	8	44.4%
some friends (curious, not close)	6	33.3%
people I don't like	2	11.1%
people that may tell my parents and get me in trouble	2	11.1%
Total	18	100.0

TABLE VIII: DIFFERENCES BETWEEN MALES AND FEMALES IN HIDING FACEBOOK PROFILE

Variable	Male N (%)	Female N (%)	Statistic Chi-square
Relatives	36 (19.15)	26 (14.13)	$\chi2 = 1.69$ (1), p = 0.19
Father	40 (21.28)	21 (11.41)	$\chi2 = 6.60$ (1), p = 0.01
Mother	40 (21.28)	14 (7.61)	$\chi2 = 13.99$ (1), p = 0.00
Teachers	23 (12.23)	26 (14.13)	$\chi2 = 0.29$ (1), p = 0.59
Sisters	27 (14.36)	12 (6.52)	$\chi2 = 6.09$ (1), p = 0.01
Brothers	7 (3.72)	28 (15.22)	$\chi2 = 14.41$ (1), p = 0. 00
Employers	18 (9.57)	12 (6.52)	$\chi2 = 1.17$ (1), p = 0.28
Significant other	14 (7.45)	5 (2.72)	$\chi2 = 4.29$ (1), p = 0.38
Other	12 (6.38)	17 (9.24)	$\chi2 = 1.50$ (1), p = 0.22

About 83% of all respondents express no need to hide their profiles from their immediate and extended family. There is no significant difference ($p < .19$) between males and females on the extended family item. In general, females are less reluctant to share their profile with family than males (The exception is men sharing with brother(s), where less than 4% of the males would prefer that their brother(s) not see their profile). Males (21.28%) are more reluctant to share their profile with their father than females (11.41%, $p = .01$) and males (21.28%) are also less willing to share their profile with their mother than females (7.61 %, $p < .00$). As might be expected, all respondents are more willing to share with their same sex siblings than their opposite sex siblings. Males (14.36%) are more reluctant to share their profile with their sisters than females (6.52 %, $p = .01$). But, males much less reluctant (3.72%) to share their profile with their brothers than females are (15.22%, $p < .00$). Both males and females are more willing to share with their significant other than with any other recipient (excepting men sharing with brothers).

D. Years of Internet and Facebook Experience

TABLE IX: YEARS OF INTERNET AND FACEBOOK EXPERIENCE

	< 1 year	1-2 years	2.5-3 years	>3 years
Internet	14 (3.8%)	30 (8.1%)	48 (12.9%)	280 (75.3%)
Facebook	87 (23.4%)	133 (35.8%)	68 (18.3%)	84 (22.6%)

TABLE X: DIFFERENCES BETWEEN MALES AND FEMALES IN EXPERIENCES

Variable	Mean Rank	Mean Rank	Kruskal-Wallis
Internet	178.74	194.43	$\chi2 = 3.47$ (1), p = .063
Facebook	182.87	190.21	$\chi2 = 0.47$ (1), p = .494

The majority of respondents (75.3%) stated that they had been using the Internet for more than three years, 12.9% said they had been using the Internet for two and a half to three years, 8.1% said one to two years, and only 3.8% said one year or less. That the vast majority of respondents have been using the Internet from an early age indicates that they are highly experienced and that they likely began using the Internet when they entered high school. Later adopters may have been motivated by the pressures of transition to university, including the need to get ready for the qualifying examinations for university, to access government services, and to present information in electronic form. Of the respondents who use Facebook, 22.6% have been using it for more than three years, 18.3% from two and a half to three years, 35.8% from one to two years, and 23.4% for one year or less. Like computer usage, Facebook was taken up by most respondents during high school. However, the majority of respondents began using Facebook later than internet, showing that Facebook usage corresponds with burgeoning social maturity and the importance of standing out from the crowd at this age. It is probably fair to say that the significant number of respondents who began using Facebook at an earlier stage were influenced to do so by older siblings, as they would not have fully understood the role of social network sites (e.g., using it mainly for entertainment). On the other hand, respondents who started using Facebook later probably did so for both academic and entertainment purposes.

E. Number of Facebook Friends

TABLE XI: NUMBER OF FACEBOOK FRIENDS PER ACCOUNT

	N	≤ 50	51-250	251-500	501+
Main account	372	149 (40.1%)	156 (41.9%)	40 (10.8%)	27 (7.3%)
Second account	62	34 (54.8%)	15 (24.2%)	11 (17.7%)	2 (3.2%)
Third account	20	6 (30.0%)	6 (30.0%)	5 (25.0%)	3 (15.0%)

TABLE XII: DIFFERENCES BETWEEN MALES AND FEMALES IN FRIENDS NUMBER OF THE MAIN ACCOUNT

Variable	Male Mean Rank	Female Mean Rank	Kruskal-Wallis
Friends' number	198.21	274.54	$\chi2 = 5.24$ (1), p = .022

For the main Facebook account, 40.1% of respondents reported having less than 50 friends, 41.9% had between 51and 250 friends on Facebook, 10.8% of respondents had between 251-500 friends, and only 7.3% had more than 500 friends. That the majority of respondents had a smaller rather than a greater number of Facebook friends may indicate that the main Facebook account is often used to strengthen existing relationships rather than to create new relationships. For the second Facebook account, 54.8% of respondents reported having less than 50 friends, 24.2% had between 51 and 250 friends, 17.7% had between 251-500 friends, and only 3.2% had more than 500 friends. The greater proportion of respondents with a small number of friends on their second account indicated that this account is largely created for specific and well-known friends. For example, this may be a dedicated account, as stated by some respondents, only for family or work. For the third account, 30% of respondents had less than 50 friends, 30% had between 51-250 friends, 25% had between 251-500, while 15% reported more than 500 friends. It is notable that the percentages of those who have between 51-250 friends and those who have more than 500 friend are the highest. Females tend to have more friends in their main accounts than males.

V. Discussion

The results of this study show that Internet access is available to this sample of university students with about 82% accessing via a laptop (probably their own personal laptop) and about 44% accessing via a smartphone. First, it is noteworthy that so many of these students even have personal laptops and smartphones; the Internet was not introduced into the Kingdom of Saudi Arabia until the late 1990s. This ease of Internet access represents a substantial change from previous research. For example, in their study of Internet use among Saudi female faculty, Al-Kahtani, Ryan, and Jefferson (2006) noted "Overall, it is rare for schools to have Internet access in Saudi Arabia. Even in male educational institutions"[5]. The use of personal laptops and smart phones is comparable for both males and females. Given the extreme differences between the opportunities for social interaction for Saudi males and females, it is remarkable that the females have as many personal laptops and smart phones as the males do. The gender differences are consistent with the data of the researcher's main study in that females take more precautions for privacy than males. If, for example, a female does not want her name associated with her Facebook account, she cannot access her Facebook account in situations where others can see both her and her profile name.

For all of the hide account items, no more than 21% of the respondents were reluctant for anyone to see their Facebook account. There are several possible explanations for this greater than expected willingness to disclose. It may be that respondents do not put information on their main Facebook page that they would not want their family to see. That information could be reserved for additional accounts. It is also possible that the participants have disclosed the information in their profile to their family. Alternatively, 80% of the respondents might be using privacy settings that would prevent family members from seeing information they did not want to disclose. It would be interesting to know the differences between disclosing and non-disclosing respondents on other variables in the study.

The fact that males and females are more willing to share with their significant other than with any other recipient (excepting men sharing with brothers) is consistent with the literature that finds greater disclosure with intimate friends than with others [6], [7]. Although the means on the significant other item are in the right direction, the failure to find a statistically-significant gender difference contrasts with the literature showing that females are more disclosing than males [6], [8]. That females are generally less restricting of their intended audiences than males would not have been predicted on the basis of gender roles in Saudi Arabia. On the other hand, females make more extensive use of the privacy features in Facebook; so that the information in the profile to be shared may be less disclosing for women than men.

Finding comparable means for these variables in the literature is extremely difficult. Although the curve may be levelling off in some modernized countries, children, in general, are encountering the Internet at earlier and earlier ages. Thus, it does not take long for data regarding years of Internet experience among university students to become outdated. As older siblings encounter the Internet in high school, they bring the skills home to siblings and family. Secondly, the numbers will depend on when the Internet is introduced in the curriculum. In the USA, for instance, the intranet is often a component of the curriculum from the very first year of school. It would be interesting to know more about these Saudi *early adopters*. Individuals introduced to the Internet (or even Facebook) at home early in childhood may have different demographic characteristics compared to those who encounter the Internet for the first time in high school.

Friends are one of the more frequently researched aspects of Facebook use [9]-[30]. In the present study, 82% of the respondents reported having 250 or fewer friends; this mean falls within the range of most other studies. Ellison, Steinfield , and Lampe (2007) report a mean number of friends between 151-200 and 201-250 in a sample at a Midwestern university in the USA [11]. Walther, Van Der Heide, Kim, Westerman, and Tong (2008), reported a mean of 246 friends among university students in the USA [29], and Vanden Boogart (2006), reported a mean of 272 [27]. The mean of 429 reported by Kim and Roselyn Lee (2011) in their sample of undergraduates at a large Midwestern university in the USA is somewhat higher than other studies but this is also the most recent report in the published literature [14].

VI. Conclusion

In conclusion, this study has revealed that the majority of cases (81.7%) reported using a personal laptop to log in to Facebook, while about half (43.5%) reported using a personal mobile device. Few respondents reported accessing Facebook via a personal PC (16.9%) or a shared PC (8.1%). The vast majority of cases reported accessing Facebook at home (97.0%). This was followed by at university (17.8%), at a café (14.8%), at a friend's home (13.1%) or "other" venues (2.5%). The largest percentages of the people Saudi university students would not want to see their Facebook profile were for relatives (34.1%), father (33.5%), mother (29.7%) or teachers (26.9%).

Over three quarters of respondents had more than three years of experience using the internet (75.3%). In contrast, experience with Facebook was more evenly divided between less than one year (23.4%), 1-2 years (35.8%), 2.5-3 years (18.3%), or more than 3 years (22.6%). Substantially fewer had 251-500 friends (10.8%) or more than 500 friends (7.3%) for the main account. For the second account, over half had fewer than 50 friends (54.8%). For the third account, 6 (30%) had fewer than 50 friends, 6 (30%) had 51-250 friends, and the remainder (n = 8) had over 251 friends. In addition, several significant differences have been revealed between male and female university students in these variables.

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