

## **Facebook Privacy Attitudes: A Comparison of Two Minority Groups**

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### **Abstract**

*Because of Facebook's ubiquitous nature, users who fail to properly configure their Facebook account privacy settings could be unintentionally revealing personal information to millions of people. This study analyzes data collected from African American and Hispanic college students regarding Facebook privacy setting attitudes and use. The findings indicate African American students have been members of Facebook longer and have more "Friends" than Hispanic students. Both ethnic groups spend about the same amount of time on Facebook during each session, although Hispanics log on more frequently. Virtually all the students claim awareness and use Facebook privacy settings. Hispanics have more restrictive Facebook privacy settings than African Americans. Neither ethnic group trusts Facebook to protect privacy, but African Americans show less concern while Hispanics indicate greater worry about Facebook privacy and data security. Both ethnic groups are more concerned about Internet privacy than Facebook privacy, Hispanics significantly more so.*

### **1. Introduction**

Facebook, founded in 2004, estimates that it now has over a billion monthly active users, of which nearly 20% live in the U.S. and Canada [4]. In a study issued by the Pew Internet Research Project and based on a sample of 1,445 U.S. Internet users, Duggan and Smith [2] reported that 71% of respondents had a Facebook account. Additional findings included: female Internet users are more likely to have a Facebook account than male Internet user; among three ethnic groups (White, Black and Hispanic), Blacks had a higher percentage of Facebook accounts; 16% of respondents who indicated an age category selected "between 18 and 29" (the youngest of four possible categorical responses); 84% of respondents in the 18-29 age category had Facebook accounts (the highest membership rate among age categories); more than half of the respondents with Facebook accounts were educated beyond high school, had incomes greater than \$50,000 and lived in urban or suburban areas.

Because of its ubiquitous use, Facebook has provided a rich setting for studies on a variety of topics. Many of these studies have focused on the Facebook usage by college students. Examples include explorations of issues involving gender, ethnicity and other demographics [5], [6], [10], [15], [18]; assimilation [7], [8]; privacy [12], [14], [15], [16], [21], [23]; stress [5]; social roles [13]; student engagement and academic performance [1], [5], [10], [17]. Of particular interest in this study are relationships between Facebook, ethnicity and/or privacy concerns.

## **2. Related literature**

### **2.1 Facebook use and attitudes**

There is a growing body of research focused on student use of social networks in general and Facebook in particular, and on the role that social networks play in the lives of college students. For example, in an examination of social networking behavior of students at a northeastern U.S. university, Case and King [1] found that approximately 65% of the respondents indicated social networking was somewhat or very important, females felt that social networking was more important than males, and the perceived importance of social sites fell as students rose in academic class. The findings also indicated that, at the time of the study, Twitter was not used as much as Facebook but was increasing in popularity.

Ellison, Steinfield and Lampe [3] looked at Facebook's importance in forming and maintaining social capital among college students. They reported a strong association between Facebook use and three types of social capital - bridging, bonding, and maintenance. An interaction between Facebook use and measures of psychological well-being suggested that Facebook can provide greater benefits to users having low self-esteem and low life satisfaction. A strong link was also found between Facebook use and maintaining connections with high school friends, leading the authors to hypothesize that Facebook helps in maintaining relationships as people move between various offline communities. Pempek, Yevdokiya and Calvert [20] added support to this view of maintaining social capital when they found that users tend to spend their time socializing with others based on pre-existing relationships.

While a number of studies have investigated use of and attitudes toward Facebook, little work has been done to assess the applicability of these findings among ethnic minorities. Study of minority groups is important as it gives insight into how groups learn, connect with others, and the values they hold. One study that included an ethnic dimension was conducted by Hargittai [6], who investigated social networking at the University of Illinois, Chicago. Her examination assessed the impact of gender, ethnicity, and parental influences on social network use. Included in her results were findings that 18-19 year old students were significantly more likely to use Facebook than 20-29 year old students, students whose parents were more highly educated were significantly more likely to use Facebook, students who lived with their parents were significantly less likely to use Facebook and Hispanic students were significantly less likely to use Facebook than others ethnic groups.

Gabre and Kumar [5] also included an ethnic dimension in their examination of the effects of stress on accounting majors, including the relationship between stress and Facebook use. Using samples drawn from accounting majors at two schools, one an HBCU (Historically Black College/University) and the other a metropolitan university, they examined the effect of perceived stress on academic performance. They found that African American students reported higher levels of stress than their peers, female students reported higher levels of stress than males, and students who used Facebook while studying had lower academic performance after controlling for stress.

Recent studies have begun focusing exclusively on students from minority serving institutions. These include investigations of Facebook assimilation and use by HBCU students across a variety of demographic categories [7], [8], [14], [15], [16], [17], and Facebook privacy and use issues among HSI (Hispanic Serving Institutions) students [15], [18], [23].

### **2.2 Facebook privacy**

Facebook contains a number of privacy controls that can be used to block or limit access to specific information. However, default privacy settings for new Facebook accounts are generally intended to provide the greatest

amount of sharing rather than the greatest amount of privacy. One major criticism of Facebook is that the default privacy options can lead to a higher degree of information disclosure than might be intended [21]. For example, Facebook Likes are publicly available information by default. Using a logistic linear regression modeling methodology, Kosinski, Stillwell and Graepel [11] found that Facebook Likes can be used to accurately predict a number of highly sensitive personal attributes such as gender, age, ethnicity, religious and political views, sexual orientation, intelligence, happiness, use of addictive substances, and parental separation. The authors note that, while such a predictive ability could be used positively in the provision of improved products and services, the predictions could also be used negatively, especially since they could be easily applied to large numbers of people without their individual knowledge or consent.

Facebook does provide some privacy controls, but these controls do not work if they are not used. Many college students misunderstand or misuse available privacy controls, or are unaware of best practices for protecting data within Facebook, resulting in a mismatch between what they think they are revealing and what they are actually disclosing [19], [22]. They routinely provide personal profile information and share large amounts of personal data that may be viewed by many unknown people, creating risk of privacy exposure that might be used in potentially harmful ways to compromise their online accounts [12], [21], [23]. Interestingly, some studies have found that female students tend to be more aware of these privacy and security risks than males [12], [15], [23].

### **2.3 Facebook use in MSIs**

Historically, little has been done to evaluate the use of Facebook within Minority Serving Institutions (MSIs). These studies can inform on how students learn in a digital, global environment, as the world population shifts in terms of which groups are becoming minorities and/or majorities. Additionally, as noted by White and Lester [24], traditional minority groups have lagged in technology acceptance for various reasons, including cultural relevance and ethnic values which informs learning communities. Several recent studies, however, have focused on Facebook use in HBCUs and HSIs.

For example, studies investigating gender differences in Facebook attitudes and use among HBCU students found that students were more trusting of Facebook privacy than they were of Internet privacy in general; that women were more trusting of Facebook than men; and that females considered Facebook to be a better tool for maintaining social capital and had integrated it into their lives to a greater extent than males [7], [14]. Studies looking at differences across majors and between traditional and non-traditional HBCU students found that non-traditional students had a greater affinity for Facebook and had a higher opinion of its role and impact; that traditional students tended to log on to Facebook less frequently than traditional students but stayed longer once logged in; that non-traditional accounting majors tended to use Facebook more for social outreach and social maintenance more than traditional accounting students; and that MIS majors used Facebook more for socialization and communicating about courses than accounting majors [16], [17].

A few studies also have evaluated the use of Facebook within HSIs. The findings indicate that HSI students check Facebook frequently from a variety of locations but do not tend to stay logged on long; that they use Facebook a lot for academically-related activities but seldom for communicating with instructors; that they feel they spend too much time on Facebook, but it doesn't impact them academically; that they are highly concerned about privacy and security on both the Internet and Facebook, females more so than males; and that they are aware of and use Facebook's privacy settings, females more so than females [15], [18], [23].

## **2.4 Motivation for the study**

Prior researchers suggest that examination of social media use by minorities is a research area that has not been addressed [10]. This has prompted an interest in further assessment of Facebook's role in diverse segments of academia and motivated the collection of Facebook-related data from minority serving institutions, specifically HBCUs and HSIs. This investigation compares Facebook use by African American students at an HBCU and Hispanic students at an HIS. The study looks at student attitudes toward privacy and security and evaluates differences in attitudes between the two sets of students. To address these issues, a survey was developed from questions in earlier studies (Tuunainen, Pitkanen & Hovi [22] in an attempt to gain an understanding of minority student perception toward privacy for both the Internet and Facebook.

## **3. Methodology**

A survey was administered to students enrolled at two universities. The first institution was an HBCU located in southeastern U.S. The second institution was a HSI located in southwestern U.S. Students from the HBCU were enrolled in undergraduate and graduate Management Information System (MIS) and Accounting courses, but were not necessarily MIS or Accounting majors. Students from the HSI were enrolled in undergraduate and graduate business courses and were primarily business majors. Students at both institutions were given course credit but no financial incentives for completing the survey.

The respondents were asked to provide selected demographic and background information such as gender, age, ethnicity, school classification, GPA, and academic major. Respondents were also asked whether they had a Facebook account and, if they had an account, the year that they joined, how often then logged in, the length of stay for each log in, their approximate number of friends, and their awareness and use of Facebook privacy settings.

Additionally, the survey included perceptual questions about online privacy and security. Six questions were related to Internet Privacy and Data Security concerns and five questions were related to Facebook Privacy and Data Security concerns. Responses to each of these 11 items was measured on a five point Likert-type scale ranging from 1 = "Strongly Disagree" to 5 = "Strongly Agree."

## **4. Results**

### **4.1 Demographics**

A total of 345 complete and usable survey were collected - 239 from students at the HBCU and 106 from students at the HSI. All students who did not indicate their ethnicity as African American or Hispanic were dropped from the study. This resulted in an overall sample of 290 students composed of 187 African Americans (all from the HBCU institution) and 103 Hispanics (96 from the HSI and 7 from the HBCU). Table 1 shows relevant demographic data for the respondents.

The majority of respondents were female and most were business majors. About two-thirds of the African American respondents and nearly three-fourths of the Hispanic respondents were below the age of 23. The majority of the students are upperclassmen. A Fisher's Exact Test on each of the demographic categories reveals a statistically significant difference in distribution only for the Academic Major category ( $p < .01$ ). The proportion of Hispanic students identifying themselves as business majors is a significant higher than for African Americans.

**Table 1: Demographic information**

		African American N = 187	Hispanic N = 103
Gender	Male	67 (36%)	45 (44%)
	Female	120 (64%)	58 (56%)
Major	Business	147 (79%)	95 (92%)
	Non Business	40 (21%)	8 (8%)
Age	<18	1 (1%)	1 (1%)
	18-22	122 (65%)	73 (71%)
	23-26	31 (17%)	16 (15%)
	27- 30	8 (4%)	3 (3%)
	>30	25 (13%)	10 (10%)
Class	Freshman	17 (9%)	13 (13%)
	Sophomore	52 (28%)	24 (23%)
	Junior	60 (32%)	37 (36%)
	Senior	44 (24%)	27 (26%)
	Graduate	14 (7%)	2 (2%)

#### 4.2 Facebook usage

All of the respondents in the study had a Facebook account. Table 2 shows statistics regarding their account and usage information including the year of joining Facebook, log in frequency, length of stay per visit, and number of friends. Fisher's Exact Test was used to assess differences in distribution between ethnic groups within each category.

A statistically significant relationship exists between ethnicity and year of joining Facebook ( $p < .001$ ). Sixty-one percent of the African American students joined Facebook in 2008 or earlier as opposed to 42% of Hispanic students. The mean categorical value for year of joining is 4.40 (2009) for African Americans and 3.88 (2010) for Hispanics. A t-test of the difference in categorical means is also statistically significant ( $p < .001$ ). This indicates that African Americans are longer term users of the site.

**Table 2: Facebook account use statistics**

		African American N= 187	Hispanic N:103
Year joined Facebook	1: > 2012	0 (0%)	4 (4%)
	2: 2011	6 (3%)	6 (6%)
	3: 2010	28 (15%)	31 (30%)
	4: 2009	39 (21%)	19 (18%)
	5: < 2009	114 (61%)	43 (42%)
Log in frequency	1: Several times/day	35 (19%)	56 (54%)
	2: About once/day	48 (26%)	27 (26%)
	3: 3-5 days/week	24 (13%)	8 (8%)
	4: 1-2 days/week	26 (14%)	5 (5%)
	5: Every few days	15 (8%)	0 (0%)
	6: Less often	39 (21%)	7 (7%)
Stay length per visit	1: < 15 min.	109 (58%)	56 (54%)
	2: ≥ 15 but < 30 min.	52 (28%)	36 (35%)
	3: ≥ 30 but < 60 min.	17 (9%)	8 (8%)
	4: ≥ 1 but < 3 hrs.	8 (4%)	2 (2%)
	5: ≥ 3 hrs.	1 (1%)	1 (1%)
Number of friends	1: < 25	2 (1%)	3 (3%)
	2: 25-50	2 (1%)	4 (4%)
	3: 51-100	2 (1%)	12 (12%)
	4: 101-200	18 (10%)	19 (18%)
	5: 201-500	52 (28%)	31 (30%)
	6: >500	111 (59%)	34 (33%)

A statistically significant relationship exists between ethnicity and Facebook log in frequency ( $p < .001$ ). A majority (54%) of the Hispanic students logged into Facebook several times per day, as opposed to 19% of the African American students. The mean categorical value for log in frequency is 3.29 (3-5 days a week) for African American students and 1.90 (about once a day) for Hispanic students. A t-test shows this difference in categorical means is statistically significant ( $p < .001$ ), indicating that Hispanics tend to log in to Facebook more frequently than African Americans.

Fisher’s Exact Test indicates no relationship between ethnicity and stay length per visit. The mean categorical value for stay length per visit to Facebook is 1.61 for African American students and 1.63 for Hispanic students (both  $\geq 15$  minutes but  $< 30$  minutes). A t-test on the difference in categorical means is also not significant ( $p > .10$ ), supporting the lack of relationship.

A statistically significant relationship exists between ethnicity and number of Facebook friends ( $p < .001$ ). The mean categorical value for number of friends is 5.40 (201 to 500 friends) for African American students and 4.68 (101 to 200 friends) for Hispanic students. A t-test on the difference in means is also statistically significant ( $p < .001$ ). This indicates that African American students tend to do more “Friending” than Hispanic students.

**4.3 Privacy setting awareness and use**

Table 3 shows a comparison of Facebook privacy setting awareness and use among African American and Hispanic students. All the respondents had a Facebook account, almost all indicated they were aware that Facebook offered privacy settings, and almost all of those who were aware of the settings claimed to be using them. There are no statistically significant ethnic differences in awareness or use of the privacy settings.

**Table 3: Privacy settings awareness and use**

Facebook Privacy Settings	Yes	No
Aware of privacy settings:		
African American	180 (96%)	7 (4%)
Hispanic	97 (94%)	6 (6%)
Total (N = 290)	277 (95%)	13 (5%)
Use privacy settings:		
African American	171 (91%)	16 (9%)
Hispanic	96 (93%)	7 (7%)
Total (N = 290)	267 (92%)	23 (8%)

**4.4 Facebook friending restrictions**

In Facebook, a Friend is a user who is connected to another Facebook user through Facebook’s site. Friending is the term used for the process of granting Friend status to another user. Endowing people with Friend status gives them access and privileges in other parts of Facebook that may not be available to non-Friends. So for example, a user can restrict Facebook settings like “Who can see my stuff?” or “Who can contact me?” to Friends only.

Facebook provides some control over the friending process through a Friend Request privacy setting labeled “Who can send you friend requests?” Two options are provided - Everyone (the default value) or Friends of Friends. Students were asked which value they had chosen. Table 4 shows a summary of their responses. While Hispanics are somewhat more likely to have friending restrictions, and African Americans are somewhat more likely not to know what their privacy settings are, the differences are not statistically significant.

**Table 4: Privacy setting for friending**

	Total N = 290	AA N = 187	H N = 103
Everyone	60 (21%)	41 (22%)	19 (19%)
Friends / Friends	156 (54%)	96 (51%)	60 (58%)
Don’t Know	74 (25%)	50 (27%)	24 (23%)

**4.5 Facebook posting restrictions**

While much of a Facebook user’s information is public by default, some control over the visibility of information is provided. An example is user posts, which may include messages, comments or media (pictures,

audio, video, etc.) displayed on the user’s Facebook page (wall). In the survey, students were asked what privacy settings they used to “control privacy when you post” (called “Who can see your future posts?” in Facebook). As shown in Table 5, a high percentage of both African American and Hispanic respondents have opted to establish some type of restrictions on the visibility of their post, limiting access to Friends only or to a Custom access setting. However, a Fisher’s Exact Test of independence indicates a significant relationship between ethnicity and privacy settings for posts ( $p=0.029$ ). A comparison of proportions within each privacy setting reveals that African Americans are more likely than Hispanics to allow public access to posts (7.5% v. 1.9%,  $p<.05$ ), less likely to use a custom setting (15% v. 23.3%,  $p<.10$ ) and more likely not to know what they have for privacy settings (14.4% v. 7.8%,  $p<.10$ ).

**Table 5: Privacy settings for posts**

	Total N = 290	African American N = 187	Hispanic N = 103	Sig. Diff.
Public	16 (6%)	14 (8%)	2 (2%)	$p<.05$
Friends	187 (64%)	118 (63%)	69 (67%)	
Custom	52 (18%)	28 (15%)	24 (23%)	$p<.10$
Don’t Know	35 (12%)	27 (14%)	8 (8%)	$p<.10$

**4.6 Facebook look up restrictions**

Facebook allows users to enter a variety of personal information such as gender, name, email address, relationship status, phone number and other personal information that can affect their privacy. Some protection of personal information is provided by Privacy Settings and Tools in the “Who can look me up?” section. Users can restrict “Who can look you up using the email address you provided?” and “Who can look you up using the phone number you provided?” where they have the option of assigning these capabilities to Everyone, Friends, or Friends of Friends. The students were asked “Who can look you up using phone number or email address?” Their responses are summarized in Table 6.

A Fisher’s Exact Test for independence indicates a significant relationship between ethnicity and privacy settings for look ups ( $p=.006$ ). A comparison of proportions within each look up privacy setting reveals that Hispanics are more likely than African Americans to use the Friends (61% v. 57%,  $p<.10$ ) and Friends of Friends restrictions (13% v. 3%,  $p < .05$ ) and less likely not to know their privacy settings (13% v. 23%,  $p<.10$ ). When looking at those who know they have created restrictions versus those who don’t know or who allow access to Everyone, the proportion of Hispanics with some kind of known restriction is significantly higher than for African Americans (74% v. 60%,  $p<.05$ ).

**Table 6: Privacy settings for look ups**

	Total N = 290	African American N = 187	Hispanic N = 103	Sig. Diff.
Everyone	45 (15%)	32 (17%)	13 (13%)	
Friends	170 (59%)	107 (57%)	63 (61%)	$p<.10$
Friends / Friends	19 (7%)	6 (3%)	13 (13%)	$p<.05$
Don’t Know	56 (19%)	42 (23%)	14 (13%)	$p<.10$

When looking at specific types of look ups, almost two-thirds of African Americans and three-fourths of Hispanics had restricted access on look ups using their email address and phone number to Friends or Friends of Friends. Interestingly, among respondents who knew their privacy settings, the percentage of respondents



with restrictions on look ups is significantly smaller than the percentage with restrictions on access to posts (65.2% v. 82.4%,  $p < .01$ ).

#### 4.7 Internet privacy and data security

The students were asked to respond to six questions addressing concerns about privacy and data security while using the Internet. Their responses were measured on a 5-point Likert-type scale ranging from 1 = “Strongly Disagree” to 5 = “Strongly Agree.” Higher mean scores indicate higher levels of agreement with the statement. Table 7 summarizes the results, showing mean scores and standard deviations. Questions with significant differences in mean response scores between African American and Hispanic students are noted.

**Table 7: Internet privacy concerns**

	Total Mean (SD)	African American N:187	Hispanic N: 103	Sig. Diff.
I worry about my privacy & data security while using Internet	3.58 (1.14)	3.37 (1.18)	<b>3.95</b> (0.95)	$p < .05$
I worry if I use credit cards to buy something on the Internet, that my credit card # will be intercepted	3.42 (1.17)	3.23 (1.17)	<b>3.78</b> (1.09)	$p < .05$
I worry people online are not who they say	3.40 (1.11)	3.33 (1.14)	<b>3.54</b> (1.04)	
I worry if I use Internet with my mobile phone and someone steals it, he/she can find some of my personal information	3.40 (1.23)	3.24 (1.25)	<b>3.68</b> (1.14)	$p < .05$
I feel that identity theft could be a real privacy risk	3.99 (1.00)	3.86 (1.02)	<b>4.23</b> (0.90)	$p < .05$
I'm generally familiar with protection and data security while using the Internet	3.83 (0.98)	3.80 (1.04)	<b>3.87</b> (0.88)	

Hispanic students had higher mean values than African American students on all six items, showing that they had a higher level of agreement with the statements. This indicates that Hispanic students have greater concern about Internet privacy and security than African American students.

#### 4.8 Facebook privacy and data security

The students were asked to respond to five questions addressing concerns about privacy and data security while using Facebook. As with the previous set of questions, their responses were measured on a 5 point Likert-type scale ranging from 1 = “Strongly Disagree” to 5 = “Strongly Agree.” Higher mean scores indicate higher levels of agreement with the statement. Table 8 summarizes the results, showing mean scores and standard deviations. Questions with significant differences in mean response scores between African American and Hispanic students are noted.

**Table 8: Facebook privacy and data security**

	Total Mean (SD)	African American N:187	Hispanic N:96	Sig. Diff.
I worry about my privacy and data security while using Facebook	2.90 (1.12)	2.63 (1.03)	<b>3.39</b> (1.11)	p<.05
I worry I will be embarrassed by wrong information others post about me in Facebook	2.79 (1.05)	2.55 (0.97)	<b>3.23</b> (1.05)	p<.05
I feel privacy of my personal information is protected in Facebook	2.77 (0.94)	<b>2.88</b> (0.91)	2.55 (0.97)	P<.05
I trust that Facebook will not use my personal info for any other purpose	2.82 (0.99)	<b>2.57</b> (0.95)	2.57 (1.02)	P<.05
I feel comfortable writing messages on friends' walls	3.52 (0.95)	<b>3.45</b> (0.93)	3.46 (0.98)	

Hispanic students had higher mean values than African American students on the first two questions, phrased negatively as concern about Facebook. African American students scored higher on the last three questions, worded positively as trust or faith in Facebook. Four of the five scores differed at a significant level (p<.05). These differences in mean scores indicate that, in addition to being more concerned about Internet privacy and security, Hispanic students also have greater concerns about Facebook privacy and security than African American students.

The overall score for worry about Internet privacy (I worry about my privacy and data security while using the Internet, mean = 3.58) is higher than worry about Facebook privacy (I worry about my privacy and data security while using Facebook, mean = 2.90). The difference is statistically significant (t=7.246, p<.001), indicating that the respondents fear the Internet more than Facebook. This difference in levels of worry exists within both the African American (t=6.339, p<.001) and Hispanic (t=3.890, p<.001) ethnic groups.

## 5. Conclusion

Using survey data, this study examines and compares Facebook privacy settings and attitudes toward the risks associated with both Facebook and Internet usage among minority students. The sample was drawn from U.S. college students attending a Historically Black College or University (HBCU) in the southeast U.S. and a Hispanic Serving Institution (HSI) in the southwestern U.S. Since the intent of the study is to focus on minority student attitudes and usage, only African American and Hispanic students were included in the analysis. The surveys were collected from students enrolled in business courses. Even though all the students were taking business courses, a greater proportion of African Americans respondents identified themselves as business majors.

All the students completing the survey had Facebook accounts. African Americans indicated longer term use of Facebook than Hispanics and, perhaps because of this, tended to have more Facebook Friends. Hispanics logged in to Facebook more frequently than African Americans, but there was no significant difference in the amount of time they stayed on Facebook once logged in.

Almost all the students claimed to be aware of and use Facebook’s privacy settings. Looking at specific privacy settings, most of the respondents had established restrictions on who could send Friend requests. There was no significant difference in this setting between African Americans and Hispanics. A large majority of respondents

had restrictions on who could post to their walls. A larger proportion of African Americans either allowed public access to their walls or didn't know if they had restrictions on posting, while a larger proportion of Hispanics tended to use Custom settings to establish restrictions. Hispanics were also more restrictive on whom they allowed to perform lookups using email addresses or phone numbers. The proportion of Hispanics who restricted lookups to Friends of Friends was higher than for African Americans, while the proportion of African Americans who did not know if they had restrictions on lookups was higher. It is interesting to note that 92% of students indicated that they used Facebook's privacy settings, even though the percentage of students who did not know their settings on specific privacy items ranges from 12% to 25%. This result could be indicative of problems with the ease of use or understanding of the privacy settings.

Even though students tended to agree that they knew about data protection and security while using the Internet, they still indicated concern about their Internet vulnerability. Hispanics were more likely than African Americans to worry about privacy and data security. They were also more likely to be concerned about identity theft, credit card interceptions and loss of personal information if mobile phones that had been used for Internet connections were stolen.

Concern about privacy and data security on Facebook showed a greater ethnic divide than attitudes toward the Internet. African American students tended to disagree with the notion that they were worried about Facebook privacy or data security or about embarrassing information about them being posted, even while indicating that they did not feel Facebook was protecting their privacy or personal information, nor that Facebook could be trusted not to improperly use their personal information. Hispanic students, on the other hand were worried about Facebook privacy and security and the effect of incorrect postings (their scores were positive and significantly higher than African Americans). Hispanics were also significantly less trusting of Facebook than African Americans. This result could give insight into what minority groups feel is culturally relevant to them, such as the possibility of identity theft/damage through the use of Facebook and the Internet, trust issues of social media use, and the possibilities of negative impacts of decision-making based on generalizations of unprotected personal data.

Overall, students were more concerned about privacy and security on the Internet than about privacy and security on Facebook. This finding held true across both ethnic groups, an indication that students might feel that they have more control of their personal information on Facebook specifically than on the Internet in general. All of these findings are interesting in that they highlight differences in understanding and use of technology, in particular social media, as it pertains to cultural relevance of minority groups.

## **6. Study Limitations and Future Research**

As with other academic studies that use college students, there are weaknesses in this study. The analyses are based on data collected from convenience samples taken at two universities. As a result, the findings may not be applicable to the larger population. To improve generalizability, larger samples should be taken from a more diverse set of institutions. Additionally, while this examination included information disclosure and privacy for some of the items that a user may share, it must be noted that there are other items that can affect privacy.

Despite these shortcomings, we did have some interesting findings. We are currently in the process of expanding the generalizability of our findings through the use of a larger data set as well as through the use of a student population with different demographic characteristics.

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