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## **Ajzen's Theory of Planned Behavior and Social Media Use by College Students**

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### **ABSTRACT**

*The Theory of Planned Behavior (TPB) predicts that planned behaviors are determined by behavioral intentions which are largely influenced by an individual's attitude toward a behavior, the subjective norms encasing the execution of the behavior, and the individual's perception of their control over the behavior (Ajzen, 1975). Ajzen's theory has been used to predict an array of behaviors (Martin et al., 2010; Quine & Rubin, 1997; Stone, Jawahar, & Kisamore, 2010). Social networking sites are defined as online products such as Facebook, MySpace, Twitter, or other websites focused on maintaining and/or building relationships. The current study surveyed 221 participants about their use of these sites and projected assistance offered to others with social networking among hypothetical friends and relatives at ages: 20, 40 and 60 years. Participants' age varied from 18 to 27 years or older ( $M = 20.37$ ) and was comprised of 71 males, 148 females. The purpose of this study was to assess the effectiveness of the TPB in predicting students' use of social networking sites (SNS). Hypotheses were: (1) factor analysis will show that items for each of the TPB's components will correlate with the other items within the same component and (2) the factor analysis will lead to a regression model showing that SNS use conforms to Ajzen's model. Results showed that Ajzen's model was not supported. Factor Analysis showed that Intention and Behavior factors were highly correlated and not separate factors. These findings suggest that the TPB does not predict routinized SNS use behaviors; other studies reported either novel behaviors (Quine &*

*Rubin, 1997) or the cessation of addictive behaviors (Hoie, Moan, & Rise, 2009). Although the age demographic above 50 years is the fastest growing SNS user age (Madden, 2010), our results showed possible age stereotyping in assisting older individuals in the use of SNS.*

*Keywords:* Ajzen, TPB, social media, social network

## INTRODUCTION

Ajzen (1991) proposed the Theory of Planned Behavior (TPB) wherein the individual's behavior is best predicted by one's intentions; intentions are, in turn, predicted by attitudes about the behavior, the subjective norms (a person's perception of important others' beliefs that he or she should or should not perform the behavior) encasing the execution of the behavior, and the individual's perception of their control over the behavior. Ajzen's TPB has been used to predict many different behaviors ranging from gambling behaviors to the use of hormone replacement therapy. Stone, Jawahar, and Kisamore (2010) conducted a study in Oklahoma which studied the Theory of Planned Behavior predicting academic misconduct intentions and behavior. They studied the cheating intentions and behavior of a sample of 241 business undergraduates. They found that the TPB accounted for 21% of the variance in cheating intentions and 36% of cheating behavior. The finding of their study was that the TPB model is a valuable tool for predicting cheating behaviors and could further research on academic misconduct.

Robinson and Doverspike (2006) applied the Theory of Planned Behavior to individuals' intentions to enroll in either an online version or a traditional classroom version of an experimental psychology class. A sample of 112 psychology majors, ages ranging from 18 to 51 years old, completed a questionnaire which included a fabricated description of an experimental psychology course at the university. The questionnaire

measured each of the components of Ajzen's theory. General attitudes and subjective norms directly predicted intentions to register for an online course.

Women's intentions to receive hormone replacement therapy were measured using Ajzen's theory in a study performed at the Center for Research in Health in Canterbury, England. Questionnaires were sent to a random sample of women, aged 38 to 58 years old, found in the Kent Family Health Services Authority records. This questionnaire was designed to measure each component of the Theory of Planned Behavior. A hierarchical multiple regression analysis was done and showed that past behaviors were shown to induce behavior through attitude and perceived behavioral control. They also found that the beliefs of their loved ones, their perceived behavioral control, and their personal beliefs were all important in predicting their intention to receive hormone replacement therapy (Quine & Rubin, 1997).

The Theory of Planned Behavior has also been used to predict gambling behaviors. A survey was given to 80 college students which attempted to assess the utility of Ajzen's theory in predicting gambling behavior and frequency. The results of this study support the efficacy of using this theory to clarify gambling behavior in this population. They found that perceived behavioral control and subjective norms predicted past gambling, and subjective norms, attitudes and perceived behavioral control predicted the frequency of gambling behaviors (Martin et al., 2010).

Hoie, Moan and Rise (2009) did a study which supported the TPB in the context of the intention to quit smoking. They hypothesized that the predictive utility of the TPB model on intentions would be enhanced by past experiences with the behavior. The

Theory of Planned Behavior components accounted for 12.3% of variance in the intention of quitting with the strongest impact coming from past behaviors.–

Ajzen's Theory of Planned Behavior was recently applied to social networking. Baker and White (2010) conducted a study examining the use of the Theory of Planned Behavior to predict adolescents' use of social networking. A questionnaire was given to 160 students that measured the components of Ajzen's theory and then they were asked to return a week later to report their social networking site use in the preceding week. Their study found support for the TPB's components of attitude, perceived behavioral control, and group norms in predicting intentions to use social networking sites. They then found support that intentions predict behavior.

The purpose of this study was to assess the effectiveness of the Theory of Planned Behavior in predicting college students' use of social networking sites (SNS). Social networking sites are defined as online products such as Facebook, Myspace, Twitter, or other websites which focus on maintaining and/or building relationships. The hypothesis was that a factor analysis will show that items for each of TPB's components will correlate within the component and the factor analysis will lead to a regression model showing that SNS use as a planned behavior conforms to Ajzen's model.

## **METHOD**

### **Participants**

Approval from the Institutional Review Board (IRB EXP2010T1845) was obtained prior to conducting the study. There were 221 participants (71 men and 148 women) along with two participants who did not report their gender. The ages of the participants ranged from 18 to 27 or older, with a mean of 20.37 years; five participants

did not report their age. Participants had the following ethnicities: 131 were Caucasian, 3 were Native American, 9 were African-American, 3 were Asian, 49 were Latino, 16 were multi-racial, 4 identified themselves as other, and 6 preferred not to answer. Participants were compensated by receiving extra credit in their Human Sexuality class.

### **Materials and Procedure**

The participants were given one of two different packets, each with a different form number and corresponding packet color. Participants were told to complete the entire questionnaire provided to them even if they did not use social networking sites. Participants were provided no identifying information; their responses were anonymous.

The first section was comprised of biographical items. Responses to all subsequent items were based on a 10-point scale, ranging from low (1) to high (10). Items about social networking are shown in Appendixes A and B, there were 4-5 items for each category: (a) participants' estimates of their own social networks' use of social networking e.g., the participant, relatives' and friends (Use); (b) estimates of how much the participant helped their peers/relatives use social networking (Help); (c) attitudes about use of social media (Attitude); (d) participant's perception of important others' beliefs that he or she should or should not perform the behavior (Subjective Norms); (e) participant's perceived ease or difficulty of performing a particular behavior (Perceived Behavioral Control); (f) intentions to use social networks in the future (Intention) and (g) participant's reported behaviors related to the use of social media (Behavior).

### **RESULTS**

A factor analysis was performed to determine whether the data for Attitudes, Social Norms, Perceived Behavioral Control, Intention and Behavior conformed to

Ajzen's Theory of Planned Behavior. A varimax, non-forced factor analysis with a cut-off point of .400 did not show factors consistent with Ajzen's theory. The factor analysis showed that 4 Intention and 5 Behavior items loaded in the same factor. All of the Attitudes items and one Intention item comprised the second factor. All five of the Perceived Behavior Control items loaded in the same factor. The Social Norms items were all in the same factor as well. The pattern matrix for the factor analysis is shown in Table 1.

### DISCUSSION

Intentions were not significantly predicted by Attitudes, Subjective Norms, and Perceived Behavioral Control. Intentions were grouped with the Behaviors in the factor analysis; in Ajzen's theory Intentions and Behaviors should be separate factors so this hindered further analysis; perhaps an outcome resulting from the Behaviors being reported at the same time as the Intentions. The participants did not have time to make their actual Behaviors different from their Intentions. Therefore, Intention and Behavior scores were too similar to test Ajzen's model. Other studies which have found support for Ajzen's theory examined activities which an individual planned to do or planned to stop doing. In this study participants were asked to plan an activity in which they were already engaged, which may have made it difficult to differentiate the Intention from the Behavior responses. In the past, the TPB has been criticized due to the lack of a prior experience component. For example, in a study performed by Bentler and Speckart (1979) it was determined that factors other than intentions were more important in predicting behavior. Perhaps our study would have supported Ajzen's theory if there was a component consisting of the participants' prior experience included in the model.

By contrast, the participants in the Baker and White (2010) study were asked to report their behavior a week later, thus giving the respondents time to differentiate their intentions from their behavior. This is a large difference between the current study and Baker and White's study, and could account for Ajzen's model being supported in one study but not in the other.

In future investigations, behaviors should be measured at a later time than the other components of Ajzen's theory. Even though the routinization of social networking is an important aspect of our results, the instant feedback on behavior may have impacted the results in our study. Also, a more accurate measure of estimated Time required would be advantageous to avoid any problems associated with the varied perception of time. Further studies could incorporate lab observations to investigate the Success and Time required facilitating another's SNS use. This could show how a participant's perception could affect their estimates of Success and Time required facilitating SNS use.

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**Table 1***Correlations for Components of Ajzen's Theory of Planned Behavior and Social Media**Use among College Students (n=231)*

	Component			
	1	2	3	4
Intention 4	.871			
Behavior 2	.860			
Behavior 1	.814			
Behavior 3	.795			
Behavior 4	.781			
Intention 2	.779			
Behavior 5	.720			
Intention 5	.683			
Intention 3	.488			
Attitudes 4		.733		
Attitudes 3		.720		
Attitudes 5		.701		
Intention 1		.656		
Attitudes 2		.585		
Attitudes 1		.544		
Perceived Behavioral Control 3			.886	
Perceived Behavioral Control 4			.851	
Perceived Behavioral Control 2			.802	
Perceived Behavioral Control 5			.801	
Perceived Behavioral Control 1			.712	
Social Norms 2				.867
Social Norms 3				.601
Social Norms 4				.587
Social Norms 1		.445		.544
Social Norms 5				.426

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 12 iterations.

## Appendix A

**On the answer key, please do not fill out any personal information (e.g. name, id number).**

This is an anonymous survey about the use of social networking. Social networking refers to services such as Facebook, MySpace, Twitter, or other online services that have a primary focus of keeping/building relationships. It is impossible to identify any individual in this survey because the surveys and answer sheets are completely anonymous and have no identifiers in them. The data will be analyzed as a whole group and no individual can or will be identified.

Questions are divided into five sections: (a) Participants' characteristics (b) Use of Social Networking Sites (c) Predictors of Behavior (d) Behavior and (e) Hypothetical scenarios.

**PLEASE ANSWER THE ANONYMOUS SURVEY QUESTIONS HONESTLY AND FAITHFULLY. YOUR SINCERE TRUTHFULNESS IS NECESSARY.**

### 1. Form

(1) Yellow (2) Purple

### Section A: Participants' characteristics

#### 2. Age in Years

(1) 18 (2) 19 (3) 20 (4) 21 (5) 22 (6) 23 (7) 24 (8) 25 (9) 26 (10) 27 or older

#### 3. Sex

(1) Male (2) Female

#### 4. Ethnicity

(1) White (2) Native American (3) Black (4) Asian (5) Latino  
(6) Bi-Racial/Multi-Racial (7) Other (8) Prefer not to answer

#### 5. Do you use social networking sites?

(1) Yes (2) No

**In this survey, social networking refers to services such as Facebook, MySpace, Twitter, or any other online service that is focused on keeping/building relationships.**

**Section B: Use of Social Networking**

**If any item on this page does not apply to you (for example, you are an only child with no siblings), then leave the item blank.**

**In the following section, evaluate the amount of time spent using social networking (1) being low to (10) being high.**

<-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10----->

6. On average, estimate the amount of time that **you** use social networking each day.
7. On average, estimate the amount of time your **siblings** use social networking each day.
8. On average, estimate the amount of time your **parents** use social networking.
9. On average, estimate the amount of time your **grandparents** use social networking.
10. On average, estimate the amount of time your **close friends** use social networking each day.

**In the following section, evaluate how much that you agree with the statements presented with (1) being low and (10) being high.**

<-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10----->

11. I have helped a **sibling** by answering questions about how to use social networking.
12. I have helped a **parent/guardian** by answering questions about how to use social networking.
13. I have helped a **grandparent** by answering questions about how to use social networking.
14. I have helped a **friend** by answering questions about how to use social networking.

**In the following Sections C & D, evaluate how much you agree with the statements presented with (1) being low and (10) being high.**

<-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10----->

**Section C: Predictors of Behavior**

**Attitudes –Attitudes represent an individual's likes, dislikes, beliefs and opinions regarding a particular behavior.**

15. I think that using social networking sites is enjoyable.

16. I think social networking sites are useful.

17. I think it is important to check my social networking site often.

18. I think using social networking sites will benefit my social life.

19. I think using a social networking site will positively impact the way others see me.

**Subjective Norm – Subjective Norms represent a person's perception of important others' (family friends) beliefs that he or she should or should not perform the behavior.**

20. People that are important to me recommend and/or encourage that I use social networking sites.

21. If I use a social networking site people that are important to me would approve.

22. Others feel that I am more accessible because I use a social networking site.

23. I think most of my acquaintances use social networking.

24. I think my use of social networking is typical for my age group.

**Perceived Behavioral Control – Perceived Behavior Control represents an individual's perceived ease or difficulty of performing a particular behavior.**

25. For me, participating in social networking is easy.

26. I feel capable enough to use the site to do what I want to do.

27. I feel competent enough to use all the functions of social networking sites.

28. I rarely encounter problems that I cannot overcome when using a social networking site.

29. I know how to use social networking sites.

**Intention – Intention represents an indication of an individual's readiness to perform a given behavior.**

30. In the future I intend to use social networking sites as often as I do now.

31. I plan to log on to a social networking site sometime within the next week.

32. I believe I will be using social networking sites as much or more this time next year.

33. I plan to communicate with others using a social networking site in the next week.

34. I intend to post more content for others to view in the next week (e.g. upload photos, change statuses, etc.).

**Section D: Behaviors - Behavior represents how likely an individual will perform a given behavior.**

35. I use social networking sites...

36. I communicate with others using a social networking site...

37. I check to see if anyone has sent me anything on my social networking site...

38. I check for updates on people that are important to me...

39. I update my own social networking site...

**Section E: Hypothetical Scenarios**

**In the following section, evaluate the level of success or amount of time spent offering assistance in the scenarios presented with (1) being low and (10) being high.**

<-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10----->

**In the following scenarios KW is a college student and is a person just like you. KW uses social networking to keep in touch with friends and family.**

KW has a **sibling** in their **20's** that has never used social networking. KW asks the **20 year old sibling** to join a social network and offers any assistance the **sibling** might need.

40. Estimate how much success KW will have with getting the **20 year old sibling** to engage in social networking.

41. Estimate how much time KW will spend offering assistance to the **20 year old sibling**.

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KW has an **acquaintance** in their **20's** that has never used social networking. KW asks the **20 year old acquaintance** to join a social network and offers any assistance the **acquaintance** might need.

42. Estimate how much success KW will have with getting the **20 year old acquaintance** to engage in social networking.

43. Estimate how much time KW will spend offering assistance to the **20 year old acquaintance**.

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KW has a **parent/guardian** in their **40's** that has never used social networking. KW asks **the 40 year old parent/guardian** to join a social network and offers any assistance the **parent/guardian** might need.

44. Estimate how much success KW will have with getting the **40 year old parent/guardian** to engage in social networking.

45. Estimate how much time KW will spend offering assistance to the **40 year old parent/guardian**.

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KW has an **acquaintance** in their **40's** that has never used social networking. KW asks the **40 year old acquaintance** to join a social network and offers any assistance the **acquaintance** might need.

46. Estimate how much success KW will have with getting the **40 year old acquaintance** to engage in social networking.

47. Estimate how much time KW will spend offering assistance to the **40 year old acquaintance**.

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KW has a grandparent in their **60's** that has never used social networking. KW asks the **60 year old grandparent** to join a social network and offers any assistance the **grandparent** might need.

48. Estimate how much success KW will have with getting the **60 year old grandparent** to engage in social networking.

49. Estimate how much time KW will spend offering assistance to the **60 year old grandparent**.

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KW has an acquaintance in their **60's** that has never used social networking. KW asks the **60 year old acquaintance** to join a social network and offers any assistance the **acquaintance** might need.

50. Estimate how much success KW will have with getting the **60 year old acquaintance** to engage in social networking.

51. Estimate how much time KW will spend offering assistance to the **60 year old acquaintance**.

## Appendix B

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9. On average, estimate the amount of time your **grandparents** use social networking.
10. On average, estimate the amount of time your **close friends** use social networking each day.

**In the following section, evaluate how much that you agree with the statements presented with (1) being low and (10) being high.**

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13. I have helped a **grandparent** by answering questions about how to use social networking.
14. I have helped a **friend** by answering questions about how to use social networking

**In the following Sections C & D, evaluate how much you agree with the statements presented with (1) being low and (10) being high.**

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**Section C: Predictors of Behavior**

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38. I check for updates on people that are important to me...

39. I update my own social networking site...

**Author Note**

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