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# Retention among First Year College Students: An Application of the Theory of Planned Behavior

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*It was proposed that attitudes toward college, subjective norms (pressure from family and important others) and perceived control over the ability to succeed in school influence students' intention to stay in school. Forty-seven students (39 females) completed an 88-item survey. Results indicated that students' attitudes and social pressure were the most important predictors of intention to stay in school. These findings suggest that active family involvement in students' education, as well as the incorporation of information regarding the value of a college education into programs such as freshman experience, could aid efforts in helping students succeed at staying in school.*

Attrition seems to be a prevalent problem among college students. The National Center for Education Statistics (2001) reported that 33% of students at community colleges and four year universities dropped out within five years. Moreover, a robust 25.8% of college students did not return for their second academic year (ACT, 2001). According to the U.S. Census Bureau (2008), only 19.1% of the U.S. population at or over the age of 25 had earned a Bachelor's degree. In order to combat this problem, higher education institutions have begun implementing retention programs such as Freshman Experience Programs (FEP) designed to help freshmen become acclimated with the college lifestyle and

environment. Nonetheless, results from seminal FEPs at various universities have been ambiguous. Noble, Flynn, Lee, and Hilton (2007) found that an intervention at the University of South Alabama designed to ameliorate retention and academic achievement among first year undergraduate students improved students' GPA and graduation rates. On the other hand, Hendel (2001) noted that participation in a first year seminar designed to mitigate student attrition did not significantly predict retention into the second academic year. Attrition from college, in addition to being a problem for institutions of higher learning, can be economically detrimental to those who forsake a college education

According to the Bureau of Labor Statistics (BLS), unemployment rate for college drop outs (age 25 or over) was at 5.1% compared to 2.8% for college graduates in 2008. Moreover, college graduates earned significantly more money per week than college drop outs (\$978 vs. \$645; BLS, 2008). Annually, this difference translates into an increment of \$15,984 in wages for college graduates as compared to college drop outs.

Research on college attrition has focused almost exclusively on academic, social, and personality factors. Among academic factors, the literature revealed a link between academic ability, first semester GPA, high school GPA, SAT scores, and student retention (Voelkle & Sander, 2008). Daugherty and Lane (1999) noted that academic ability, high school GPA, and SAT scores predicted persistence among first-year college students. McGrath and Braunstein (1997) reported that first semester GPA, in addition to high school GPA and SAT scores, predicted student attrition.

Furthermore, social factors linked to college attrition include social integration, parental and peer support, and satisfaction with the college experience. Noble et al. (2007) noted that social integration (integration into the campus environment) significantly improved graduation rates. Moreover, parental and peer support were positively correlated with college adjustment (Toews & Yazedjian, 2007). Dissatisfaction with the college experience also impacted attrition (Freeman, Hall, & Bresciani, 2007). Among personality factors, self-efficacy, apathy, and self-esteem have been linked to student persistence and adjustment to the college environment (Davidson & Hall, 2006).

Nevertheless, data regarding the combined role that factors such as students' attitudes, societal norms, and students' own perceived ability to control particular aspects of their lives remains scarce. Knowledge of the combined role of such factors can be crucial to ameliorate retention programs, which in turn may help mitigate the financial consequences that dropping out from school may represent to students.

In the current study, the paradigm used to examine the combined role that factors such as attitudes, norms and control may have on attrition among first year college students was provided by the theory of planned behavior (TPB). In the past, the TPB has been used successfully to predict a variety of behaviors and behavioral intentions in diverse populations including high school and college students. For instance, the TPB has been used to predict intention to graduate from high school and actual graduation (Davis, Ajzen, Saunders, & Williams, 2002), entrepreneurial intentions among college seniors (Gird & Bagraim, 2008), intention to quit smoking and actual quitting behaviors (Rise, Kovac, Kraft, & Moan, 2008), alcohol consumption and actual drinking behaviors among sorority members (Huchting, Lac, & LaBrie, 2008), heavy episodic drinking in college students (Collins & Carey, 2007), intention to engage in premarital sex among Korean college students (Cha, Doswell, Kim, Charron-Prochownik, & Patrick, 2007), and condom use (Jemmott, Heeren, Ngwane, Hewitt, Jemmott, Shell, & O'Leary, 2007).

The TPB postulates (see Figure 1 for model) that behavior can be predicted by intention and perceived control over the target behavior (Ajzen, 1991). Antecedent to the behavior, intention is predicted by a person's attitude towards the behavior (negative or positive appraisal of the intelligible outcomes of a behavior), subjective norm (social pressure from family, peers, and other referent groups to engage in behavior), and perceived control over the intended behavior (a person's perceived ability to perform a specific behavior). In addition, the TPB proposes that attitudes, subjective norms and perceived behavioral control are predetermined by a set of salient behavior-related beliefs.

According to Fishbein and Ajzen (1975) and Ajzen (1991) there are three types of beliefs: behavioral, normative and control. The prevailing attitude towards the behavior is determined by behavioral beliefs, normative beliefs produce subjective norms, and control beliefs form the basis of perceived behavioral control (Ajzen, 2002a).

Behavioral beliefs are rated according to the desirability and likelihood of the possible outcomes associated with the particular behavior (Ajzen, 1991). Likelihood refers to the expected outcomes of the target behavior. Desirability is defined as the valuation of the target behavior's outcomes. Students attitude towards college graduation would for instance be determined by students' ratings associated with the outcomes likelihood (e.g., completing the requirements for a Bachelor's Degree will result in being able to obtain a higher salaried job) as well as the students' valuation of the specific outcome (e.g., a high-salaried job is highly cherished). If students perceive that graduation from college will help them find a higher salaried job and value a high salaried job, then students will tend to have a more positive attitude toward finishing college.

Normative beliefs, on the other hand, are impacted by family, peers and other relevant individuals who hold expectations about the person's expected behavior. The persons' motivation to meet those expectations impacts then his or her subjective norms (Ajzen, 1991). For instance, students whose parents expect them to complete college and who are motivated by that expectation will develop strong subjective norms toward completing college. Lastly, control beliefs are the factors that can either inhibit or facilitate the performance of a given behavior depending on their perceived power (Ajzen, 2002a). For example, students who expect that college will impose high demands on their time and who also expect that those demands will make it very difficult for them to complete college, will be less likely to perceive being in control over college graduation than those who do not.

According to Ajzen (1991), behavioral beliefs are estimated by multiplying the belief strength and evaluation for every single behavioral outcome, and then summing the products which consequently result in a prevailing attitude:  $A_b \propto \sum b_i e_i$ . Similarly, normative beliefs are calculated by multiplying the belief strength and motivation to comply with each perceived expectation, and by summing the product of each normative belief:  $SN \propto \sum n_i m_i$ .

Salient control beliefs are identified by multiplying the belief strength and power and summing the product of all the accessible control beliefs:  $PBC \propto \sum c_i p_i$ . In this study, the aforementioned steps were taken to obtain the behavioral, normative, and control beliefs composites. Behavioral, normative, and control beliefs cross-products were then correlated with behavioral intention and rank-ordered according to the magnitude of the correlation.

In sum, the problem of college attrition has been well documented. Researchers, however, have yet to examine the combined role that students' attitudes, subjective norms, and perceived behavioral control may play in predicting intention to stay in school. This study applied Ajzen's (1991) TPB in an attempt to better understand the role that these 3 factors may play in college attrition among first year college students. It was hypothesized that attitudes, subjective norm, and perceived behavioral control will predict intention to stay in school among first year college students. In addition, the underlying beliefs that compose students' attitude, subjective norm, and perceived behavioral control related to college attrition were also explored.

## Method

### Participants and Procedure

This study was conducted at a small, private, liberal arts university located in the Southeastern Region of the United States. Forty-seven, first year students participated in this study (39 females and six males). Respondents age ranged from 18 to 20 ( $M = 18.7$ ,  $SD = .53$ ). Thirty-five point six percent of the participants identified themselves as Black non-Hispanic, 33.3% as Hispanic, 17.8% as White non-Hispanic, 8.9% as Caribbean, and 4.4% as other. The ethnic makeup of the sample resembled the ethnic composition of the undergraduate student population at the university. In addition, the gender distribution of the participants sampled was also representative of the undergraduate student population at the current institution. The majority of the respondents majored in psychology (15.6%), followed by

by pre-medical (13.3%), biology (11.1%), and nursing (8.9%). A total of 2 majors out of 48 presently offered in the institution at hand were represented by at least one participant in the present study.

An email requesting participation was sent to all first year students ( $N = 587$ ) currently enrolled at the university who had previously provided permission in writing to university officials to be contacted for purposes other than administrative. Out of the pool of prospective participants, 47 students (8%) responded to the request. The response rate was below acceptable norms (Baruch, 1999). Acceptable response rate for a sample of college students is between 40 to 70 percent. Interested students were instructed to click on a link that directed them to the Survey Monkey website which displayed the study's cover letter indicating the objective of the study, assuring respondents confidentiality and informing them about the voluntary nature of their participation. Participants proceeded then to complete an 81-item survey and 7-item demographic questionnaire. Respondents received no compensation for their participation.

### Measures

Davis et al.'s (2002) questionnaire was adapted using Ajzen's (2002b) guidelines to develop all scales in the present study. To identify the salient behavioral, normative, and control beliefs associated with college attritions, a literature review was first conducted. Databases such as Psycharticle, Psychinfo, and Proquest Psychology Module were used to search for articles related to students' attitude towards college, sources of social pressure, and perceived factors that can either inhibit or facilitate attrition from school in college and high schools students. An analysis of the literature revealed 18 behavioral, five normative, and eight control beliefs (see Tables 2, 3 and 4 respectively). This information was used to develop the behavioral, normative and control beliefs scales described herein.

*Behavioral beliefs* were measured by 36-items (half of which assessed the likelihood and the other half the desirability of all intelligible outcomes). To assess the likelihood or strength of a belief, participants recorded on a 7-point Likert-type scale (*extremely unlikely - extremely likely*) their response to questions such as "College graduation will improve my earning power potential." Items such as "Increasing my earning power potential is..." were used to assess the desirability of the behavioral beliefs. Participants indicated on a 7-point Likert-type scale (*extremely bad - extremely good*) their valuation of the beliefs. Behavioral belief products were computed by multiplying the scores on the likelihood and desirability scales. Higher scores denote beliefs (or outcomes associated with completing a college education) that are both more likely and desirable.

Ten items were used to assess *normative beliefs*, which were attached to 7-point Likert-type scales. Five items such as "My immediate family thinks that (*I should not - I should*) complete my college education" were used to assess belief strength. Moreover, items like "When it comes to completing college, how much do you want to do what your family thinks you should do? (*not at all - very much*)" were used to assess students' motivation to comply with the expectations formed by the referent individual or group. Normative belief products were attained by multiplying students' score on the belief strength and motivation to comply scales. Higher scores denote beliefs that are perceived by students as having a strong impact on their intention to stay in school (e.g., students' value the expectations formed by their immediate family and are therefore motivated to comply with their family's expectations regarding college graduation).

*Control beliefs* were appraised by 18-items also using a 7-point Likert-type scale. Nine items such as "I expect stress to be part of the college experience (*strongly disagree - strongly agree*)" measured the strength of every control factor. To assess the beliefs' power, participants were asked to rate nine items such as "The experience of stress would make it (*much more difficult - much easier*) for me to continue my college education."

Control belief products were computed by multiplying belief strength and power. Higher scores denote factors that students believe may strongly inhibit/facilitate their ability to stay in school.

Eight items were utilized to measure *attitude towards staying in school*. The same question was asked in all eight items: "Completing my college education is..." However, the anchors attached to the 7-point Likert-type scale changed. The anchors were: *punishing - rewarding, useless - useful, bad - good, harmful - beneficial, foolish - wise, unpleasant - pleasant, undesirable - desirable, boring - exciting*. The prevailing attitude was computed by calculating the mean of the eight items. Higher scores on the scale denoted a more positive attitude towards staying in school. Internal reliability test resulted in a Cronbach's alpha of .93.

*Subjective norm* was assessed by three items using a 7-point Likert scale (*strongly disagree - strongly agree*). Participants were asked to rate statements such as "Most people important to me think I should complete my college education." Higher scores denote norm strength and a strong motivation to comply with those norms. Overall subjective norm was computed by calculating the mean of the three items. One item was dropped in order to improve the internal consistency of the scale. The Cronbach's alpha increased from .64 to .67.

To measure *perceived behavioral control*, three items were used. The items were anchored to a 7-point Likert scale (*strongly disagree - strongly agree*). A sample item is: "I have complete control over completion of my college education." Perceived behavioral control was calculated by estimating the average of the three items. To improve internal reliability of this scale, one item was dropped. The Cronbach's Alpha improved to .70.

Lastly, *intention to complete college education* was assessed by five items that asked participants to indicate on a 7-point Likert scale (*strongly disagree - strongly agree*) whether or not they intend, expect, will try, are determined, and might not be able to complete their college education. To identify the prevailing behavioral intention, the mean of the

five items was computed. The Cronbach's alpha was .75. Demographic information such as age, gender, ethnicity, academic major, total number of credits earned, academic year and transfer status was also gathered the end of the questionnaire

## Results

Descriptive statistics and correlations among variables of interest are shown in Table 1. As expected, attitude, subjective norm, and perceived behavioral control were correlated with the dependent variable, i.e., behavioral intention. None of the demographic variables were significantly related to the dependent variable.

### *Prediction of Intention*

Multiple regression analysis revealed that attitude, subjective norm, and perceived behavioral control significantly predicted behavioral intention,  $F(3, 44) = 18.34, p < .001$ . Notably, students' attitude, social pressure, and perceived control over completing college predicted 56% of the variance in intention to complete college ( $Adj. R^2 = .53, p < .001$ ). Nonetheless, only attitudes ( $\hat{a} = .48, p = .002$ ) and subjective norms ( $\hat{a} = .29, p = .03$ ) significantly contributed toward explaining the variance in behavioral intention.

### *Behavioral, Normative, and Control Beliefs*

The mean cross-product was computed to identify the most salient behavioral, normative and control beliefs. Moreover, the mean of each behavioral, normative and control belief product was correlated with behavioral intention (see Tables 2, 3 and 4 respectively). In terms of behavioral beliefs, the following outcomes were significantly related to behavioral intention: allows me to do something positive in life, gives me a sense of accomplishment or success, provides new challenges, requires hard work, helps me to acquire new knowledge, and provides job training. For the normative beliefs assessed, immediate family, friends, academic advisor and significant other (order listed based on the magnitude of the correlation) were significantly correlated to behavioral intention. Vacation/breaks and the experience of stress were the only control beliefs significantly correlated with behavioral intention.

According to Ajzen (1991), the behavioral, normative, and control beliefs determine the respective attitude, subjective norm, and perceived behavioral control. The products of the 18 behavioral, five normative, and eight control beliefs were summed and correlated with the mean of the direct measures of attitude, subjective norm, and perceived behavioral control to examine these predictions. The correlation between the behavioral belief composite and attitude ( $r = .35, p = .016$ ) and the normative belief composite and subjective norm ( $r = .43, p = .004$ ) were both significant. However, the aggregate of the products of the eight control beliefs was not significantly correlated to the direct measure of perceived behavioral control.

### Discussion

The current study aimed to investigate student retention by assessing students' attitudes toward college, social pressure, and perceived control over staying in school, and the underlying behavioral, normative, and control beliefs as proposed by the TPB (Ajzen, 1991). This study is indeed the first to apply the TPB (Ajzen) to investigate the combined role that such factors have on first year college students' retention. Results supported the hypothesis that students' attitudes toward college, social pressure, and perceived control over staying in school predict intention to stay in school. The data, nonetheless, indicated that only student's attitudes toward college and perceived social pressure to stay in school significantly predicted intention to stay in school.

Namely, students who positively valued a college education or possible outcomes of a college education (e.g., improved earning potential) and perceived strong social pressure to stay in school (e.g., from their immediate family) were more likely to intend to stay in school than students who did not value a college education and perceived little or no social pressure to stay in school.

Our findings are consistent with past research findings applying the TRA (the forerunner of the TPB) and the TPB (Ajzen, 1991) to the study of college students' behavior. For instance, Bean (1982) reported that attitudes based on beliefs impacted

student persistence, and Cabrera, Nora, and Castaneda (1993) noted the impact that family and friends can also have on student persistence. Yet, behavioral control was surprisingly not predictive of intentions in the present study. Behavioral control was added to the TRA to account for the impact that factors such as stress and financial difficulties can have on one's intention to engage in a certain behavior and actual participation in the behavior (Ajzen). For example, Kalsner (1991) indicated that financial difficulty can adversely impact student persistence. One possible explanation for our findings may be respondents' socioeconomic status. Even though socioeconomic status was not assessed in this study, the sample may have been composed of individuals for whom financial struggles were not as prevalent given that the sample was gathered at a private institution.

Results also indicated that behavioral and normative beliefs appear to have captured the prevailing attitude and subjective norms towards college amongst first year students as predicted by the TPB (Ajzen, 1991). Yet, control beliefs failed to predict perceived behavioral control in the present study. Among the salient behavioral beliefs assessed, the top expected outcomes associated with college graduation were as follows: Allows me to do something positive in life, gives me a sense of accomplishment, provides new challenges, requires hard work and provides job training. Overall, it seems that the outcomes relating to completing college that students most valued are related to future job performance and a sense of accomplishing something positive in life through hard work. Even though control beliefs (overall) seemed to have failed to capture the factors associated with students' perceived control over staying in school, vacation/breaks and stress individually did significantly impact intention to stay in school. Thus, these two factors may also play a role in college students' intention to stay in school.

Furthermore, students perceived strong social pressure to stay in school from their immediate family, followed by their friends, academic advisor and significant other. It seems that the

advisee-academic advisor relationship may hold valuable information relevant to student attrition that is only preceded by immediate family and friends. On the other hand, the data suggests that professors' opinions may not be relevant to college retention. This finding contradicts previous research in the area of student attrition (e.g., Davis et al., 2002). The extent and quality of student-professor interactions may determine whether a particular student would be motivated to comply with a professor's expectations (Lunberg & Schreiner, 2004). As Kuh and Hu (2001) noted, there is a difference in the frequency of student-professor interactions between freshman and seniors (seniors reporting a higher number of student-professor interactions). Students' reported indifference towards professors' opinions may be therefore due to their status as first-year students rather than a lack of importance of the student-professor interaction.

#### *Limitations*

One of the limitations of the present study was the low response rate; hence, the small sample size ( $n = 47$ ). According to the guidelines set by Cohen (1992), the appropriate sample size was 77. Due to the low sample size, power decreased considerably and the probability of a Type II error increased. The actual power obtained was .55. Nevertheless, the data still captured a sizeable effect in the population. Furthermore, the low response rate limits the external validity or generalizability of this study's findings. The fact that the sample was mostly composed of female participants (83%) also limits the generalizability of the results. However, a skewed gender distribution was expected due to the actual gender distribution in the institution from which participants were sampled. A future study should attempt to obtain a more representative sample of the population in question.

A methodological limitation of this study results from the use of a literature review to identify the salient behavioral, normative, and control beliefs. Ideally, a pilot study should be conducted to identify these beliefs as suggested by Ajzen (1991). The upshot would be a set of salient behavioral, normative, and control beliefs regarding the target behavior

among the population of interest. This may, in part, explain the relationship or lack thereof between the control beliefs composite and students' perceived control over staying in school. Therefore, future investigations should focus on the development of such measures. Furthermore, the study failed to gauge participants' financial information; thus, its impact on the relationship between fiscal difficulties and intention to persist could not be examined.

The ultimate purpose of the TPB is to predict actual behavior. However, owing to the lack of access to attrition data, actual student persistence was not assessed and predicted. A future longitudinal study is therefore needed to assess and predict actual student behavior. Another limitation is the use of self-report measures. Self-report measures are impacted by response bias (Sulsky & Smith, 2005). Respondents may enter socially acceptable responses which may skew the results. In addition, the wording and format of the items on the questionnaire may also impact respondents' responses (Schwartz, 1999). Because self-report measures are affected by these factors, they may not provide an accurate measurement of the constructs they purport to measure.

#### *Practical Implications*

Davis et al. (2002) concluded the following from a study that applied the TPB to predict actual high school graduation:

For actual graduation...students need to be convinced of the long-term value of their...education in terms of such implications such as job prospects and monetary benefits. However, to keep them in school in the short-term, it is important to emphasize the short term benefits of attending school. (p. 817)

Thus, information regarding the values of a college education relevant to students' should be highlighted and incorporated into any FEP or first year seminar. More specifically, veracious information regarding the short and long-term outcomes associated with the college experience and eventual college graduation as identified in the present study (e.g., improved job training) should be presented early during students' college careers. Furthermore, university administrators should consider assessing



assessing incoming students' attitudes toward college. By gauging students' attitude, administrators may be able to pinpoint students who are at risk of attrition and intervene. The information gathered from these assessments can then be incorporated into FEPs or first year seminars. Attitudes have been found to be malleable and success of such programs may be promising (Carpenter & Banaji, 2001). Follow up assessments will be necessary to assess the efficacy of such actions.

College administrators should also actively encourage family involvement in students' education because for a segment of the student population acute separation from their family can increase the possibility of early attrition (Nora, 2001). Moreover, university administrators should seek to increase awareness among academic advisors regarding their role in student retention (Davis et al., 2002). A future study may need to be conducted that documents interactions between students and academic advisors. Information gathered can then be used to examine the impact of the student-academic advisor relationship on student retention. In addition, obstacles that may impede students' academic progress such as vacation/breaks and stress experienced need to also be discussed, and methods to overcome these obstacles need to be formulated and shared with incoming students.

Overall, the present study provided insight into the combined role that attitudes, subjective norms and certain aspects of perceived behavioral control may play in increasing college students' retention. Moreover, the salient behavior-related beliefs that comprise students' attitudes, subjective norms, and perceived behavioral control were also identified. Even though student attrition (especially among first year students) remains a problem at institutions of higher learning, these findings may help college administrators and educators better understand the psychological components that underlie attrition. This insight can then be used to improve graduation rates by designing intervention programs that target students at risk. An upsurge in the number of college graduates will not only provide students with an advantage in life but society

in general will benefit from the contributions of an educated workforce.

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Table 1

*Descriptive Statistics and Correlations*

Variable	<i>M</i>	<i>SD</i>	A	SN	PBC	BI
Attitude (A)	6.57	.83				
Subjective norm (SN)	6.68	.81	.63**			
Perceived behavioral control (PBC)	5.83	1.08	.58**	.38**		
Behavioral intention (BI)	5.89	.65	.71**	.62**	.39**	

Note. \*\*  $p < .01$ .

Table 2

*Means and Standard Deviations for Behavioral Beliefs Products and Correlations with Behavioral Intention*

Outcomes	<i>M</i>	<i>SD</i>	Correlation with BI
Allows me to do something positive in life	45.48	8.03	.62**
Gives me a sense of accomplishment or success	45.35	8.78	.59**
Improves my earning potential	41.45	10.51	.25
Wastes my time (R)	40.43	11.77	.25
Provides new challenges	39.86	11.11	.40**
Requires hard work	39.32	10.43	.36*
Helps me to acquire new knowledge	39.27	10.88	.34*
Prepares me to enter the workforce	38.93	12.78	.22
Provides job training	33.91	14.29	.32*
Provides opportunity to join clubs or participate in sports	33.07	14.46	.17
Allows me to acquire material goods	32.86	13.67	.23
Keeps me out of trouble	32.07	14.75	.08
Provides me the opportunity to see friends	27.98	16.29	.13
Leads to cynicism (R)	23.09	10.68	.20
Involves having to take orders from academic advisor	20.77	12.66	.22
Leads to perception of academic inability and frustration (R)	20.00	13.20	-.19

*Means and Standard Deviations for Behavioral Beliefs Products and Correlations with Behavioral Intention*

Outcomes	<i>M</i>	<i>SD</i>	Correlation with BI
Involves having to take orders from professors	18.77	11.87	.21
Reduces my leisure or fun time (R)	18.61	10.23	-.07
$A_B \sum b_i e_i$	552.66	167.85	.25

Note. BI = Behavioral Intention. (R) indicates that responses on item were reversed.  $A_B \sum b_i e_i$  = Sum of all cross-products.

\*  $p < .05$ , \*\*  $p < .01$ .

Table 3

*Means and Standard Deviations for Normative Beliefs Products and Correlations with Behavioral Intention*

Normative referent	<i>M</i>	<i>SD</i>	Correlation with BI
Immediate family	42.05	10.09	.48**
Friends	36.61	13.26	.43**
Academic advisor	34.82	12.81	.38*
Significant other	33.66	14.55	.32*
Professors	32.95	13.04	.27
SN $\alpha^2$ ? $n_i m_i$	177.64	52.71	.41**

*Note.* BI = Behavioral Intention. SN  $\alpha^2$  ?  $n_i m_i$  = Sum of all cross-products.

\*  $p < .05$ , \*\*  $p < .01$ .

Table 4

*Means and Standard Deviations for Control Beliefs Products and Correlations with Behavioral Intention*

Control factor	<i>M</i>	<i>SD</i>	Correlation with BI
Vacation/breaks	34.83	13.43	.46**
Academic workload	19.29	10.44	.12
Experience of stress	17.69	8.11	.31*
Changes in sleeping and eating habits	12.55	9.59	.05
Burnout	11.29	8.73	-.06
New responsibilities	9.70	7.75	-.14
Financial difficulties	7.93	6.40	.29
Loneliness	7.85	5.19	-.13
PBC $\alpha^2$ ? $c_i p_i$	115.23	35.11	-.19

*Note.* BI: Behavioral Intention. PBC  $\alpha^2$  ?  $c_i p_i$  = Sum of all cross-products.

\*  $p < .05$ , \*\*  $p < .01$ .

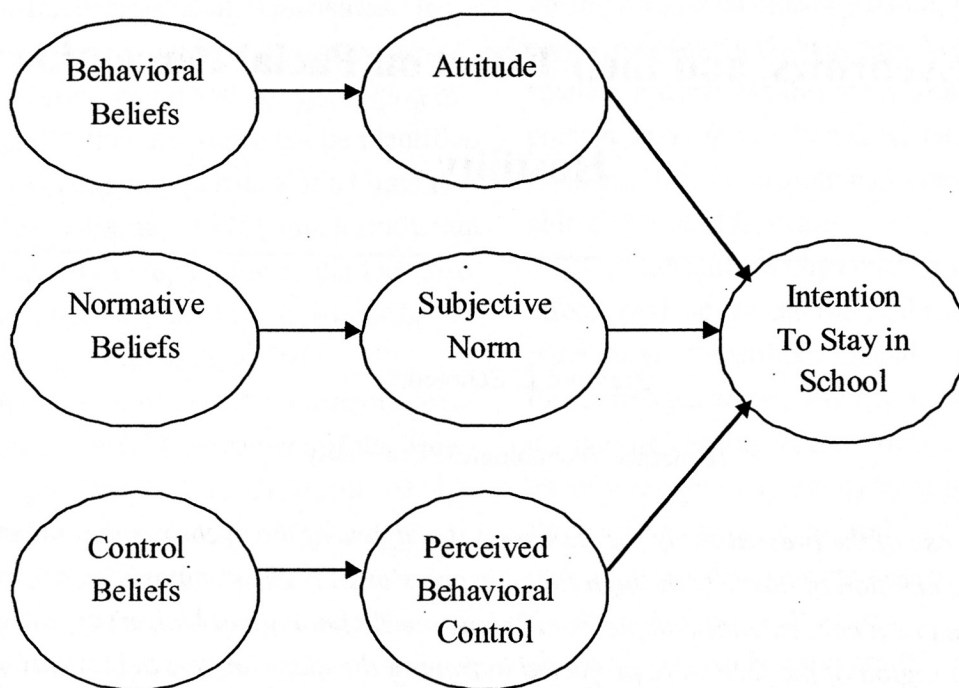


Figure 1. Illustration of Theory of Planned Behavior