The Development of an Academic Risk Scale for Filipino College Students: Test Conceptualization and Item Analysis

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ABSTRACT

Academic risk is an increasing problem among college students and there is no available local instrument that can identify its behavioral indicators. This study details the test conceptualization and item analysis process in the development of a valid and reliable Academic Risk Scale (ARS) for Filipino college students. Based on the Risk-Focused Model which supports that there can be multiple risk factors behind a problem, it is believes that in taking steps to reduce or eliminate these risk factors, problems among the youth can be prevented. The purpose of the development of the ARS then is to identify the different behavioral indicators that may explain the reasons behind the problem of academic risk among college students. A thorough review of available literature and studies on academic failure and academic risk was first conducted in order to gather empirically supported information on the behavioral indicators of academic risk. Other than this, a survey was done with academically at-risk college students and college professors. Taken together, the results of the literature review and survey led to the conceptualization of the eleven components of academic risk. These components include academic habits, academic attitudes, academic unpreparedness, academic adjustment, academic goals, academic motivation, mental health, physical health, social relations, home environment and school environment. Items were written under each component, ensuring that items are reflective of behaviors of students that show their inability to manage, perform and fulfill their school responsibilities that lead to poor academic performance and failure. These items were then content validated by different experts in Psychology and Counseling, leading to the construction of the ARS Preliminary Form that was pilot tested to 442 academically at-risk college students to facilitate the process of item analysis.

Keywords: Test development, Academic risk, Academically at-risk, Academic failure, College students

INTRODUCTION

Academic failure, which leads to academic risk, is more than just the concern of students. It also affects their parents who finance their schooling, their teachers who handle them in the classroom, and even the higher educational institutions that accept them for enrollment. Academic failure can be a reflection of the students' abilities, but it can also be a reflection of an educational institution's quality of education. Indeed, it is a serious concern which eventually leads to a wider range of problems that afflicts not only the individual but society in general if it is not addressed. An academically at-risk student may later on completely dropout of school. Academic failure comes with the likelihood of engaging in high risk behaviors like drug or alcohol abuse, premarital sex that leads to early pregnancy, delinquency and crime (Lucio, Hunt & Bornovalova, 2011). The society at large can suffer from its long-term consequences when these academically at-risk adolescents would dropout and eventually become unemployed young adults. If these academically at-risk students happen to get jobs, they can bring to their workplace the faulty beliefs, habits and attitudes that have been in them when they were still studying. İndeed, the consequences of academic failure are long-term but there are limited studies done on this area, especially in higher education (Wimshurst & Allard, 2008).

İn this particular study, academic risk is viewed as having two indicators, one that is academic and the other being behavioral. Academic indicators are obvious, as evidenced by the fact that a student has failing grades and has poor academic status such as when the student is placed under academic probation. On the other hand, behavioral indicators of academic risk are reflected in school-related conduct and actions. The development of the Academic Risk Scale is focused more on the behavioral indicators of academic risk, which is more psychological in nature.

There is a wide array of factors that explain academic failure and academic risk as supported by the Risk-Focused Model (Bogenschneider, n.d.). Lucio, Rapp-Paglicci and Rowe (2011) mentioned that evidences from empirical studies reveal the multidimensionality of explanations why students fail and become academically at-risk. More so, these factors interact and influence each other. Each academically at-risk student can also have their own unique combination of factors that has led them to fail and do poorly in school. But what is common is that according to Lucio et al. (2011), these negative academic outcomes rarely occur without exhibiting warning signs. It is a process. It can begin early and then it accumulates and worsens. Just like when one failing grade leads to another. And then more serious consequences befall students. They are placed under academic probation or are no longer admitted in their school. Or they opt for the easy way out, that is to dropout of school. If being placed in academic risk entails a process, then it can be identified in its early stages and adequate educational and psychological interventions can be applied to assist the academically at-risk students. Thus, it led to this pioneering effort in the Philippines to develop an instrument which can assess academic risk with the hope of helping academically at-risk college students bounce back from academic failure and have a better future.

METHOD

Participants

For the survey, participants were 32 academically at-risk college students and 11 college professors. On the other hand, the sample for the pilot testing consisted of 442 academically at-risk college students who came from various universities and colleges in Metro Manila, Philippines. They were in their first to fifth year in college, taking various courses/degree programs in their respective schools and had an age range of 16 to 28 years old. As for gender distribution, they consisted of 226 female and 216 male participants.

All the academically at-risk student-participants in the study were obtained through purposive sampling. They had failing grades during the past year, and their failing grades either have or have not yet led them to be classified under academic probation or a non-readmission status. These classifications were assigned to them by their respective schools, based on their existing policies on academic failure and student retention.

Materials

Academic Risk Survey Form

It is a researcher-made survey form meant to obtain information on the perspectives of the academically at-risk students and their professors on the traits of students who fail and what are the probable reasons for their failure.

Demographic Data Sheet

This personal data sheet was utilized to gather information from the participants such as their name, age, gender, school, course, year level, and most importantly their academic status and if they had failing grades in the past year. The participants' names had to be obtained to ensure that no participant in the pilot testing became a part of the sample in the final administration of the ARS. All participants were provided with an informed consent and procedures to ensure anonymity and confidentiality of results were exercised.

ARS Preliminary Form

The ARS Preliminary Form was the primary instrument in this study. It provides a measure of the behavioral indicators of academic risk or the school-related behaviors manifested by academically at-risk students that are likely to contribute to their academic failure. It utilized a verbal frequency scale, thus the participants' responses to the items showed how often they do an action. The response options and their corresponding scale points are as follows: always descriptive of me (5 points), often descriptive of me (4 points), sometimes descriptive of me (3 points), rarely descriptive of me (2 points), and never descriptive of me (1 point). Items that were reverse scored are those which do not reflect typical behaviors of academically at-risk students.

It has 323 items and comprised of eleven components namely academic habits, academic attitudes, academic unpreparedness, academic adjustment, academic goals, academic motivation, mental health, physical health, social relations, home environment and school environment. The different components are operationally defined as follows:

Academic Habits

This component pertains to how college students typically approach their school responsibilities, handle their school tasks and manage their time.

Academic Attitudes

It include students' feelings, beliefs and behavioral responses towards getting a college education, going through the learning process in college and handling academic failure.

Academic Unpreparedness

The component which refers to whether college students' possess the basic academic skills needed for the rigors of college. Such includes their skills in communication, mathematics, reading, listening, presentation, critical thinking, and technology.

Academic Adjustment

It refers to the degree to which students are able to meet the academic demands of college.

Academic Goals

This speaks of college students' ability to set clear aims or desired academic results, their belief in their ability to achieve them, how others support them in their aims, how engaged they are in pursuing what they aimed for and if they evaluate the extent they are able to achieve them.

Academic Motivation

This includes the intrinsic or extrinsic reasons that may influence college students to attend school and finish their degree.

Mental Health

The psychological problems, in particular, depression and anxiety among college students that can contribute to academic risk.

Physical Health

A component referring to college students' bodily health condition that can contribute to academic risk to include chronic illness, alcohol drinking, drug use, sleep deprivation, poor nutrition and lack of physical exercise.

Social Relations

It covers the ability of the student to establish new relationships in college, and their daily interaction resulting from participation in extra-curricular activities and changes in living arrangement that has an impact on their studies. The quality of friends and their influence on the student are also covered.

Home Environment

It refers to the conflicts and expectations within the family, the support they provide, how they supervise the children, and the family responsibilities which college students have that may affect their studies and put them under academic risk.

School Environment

It includes the quality of student-teacher interactions, understanding of school policies on student failure, utilization of school resources and school services, as well as the kind of study environment available to students.

Procedure

There were two steps under the test conceptualization phase namely item generation and content validation. Item generation was facilitated by two procedures namely literature review and survey. A comprehensive review of empirical studies and existing literature concerning academic failure and academic risk was conducted. This enabled the test developer to have a full understanding of the nature of academic risk, and likewise the behaviors which are commonly manifested by academically at-risk students.

Another step in the test conceptualization phase is the survey conducted with academically at-risk college students and college professors. Both groups were surveyed in order to obtain the perspective of students who know from experience how it is like to have academic failure and be in academic risk. It was also important to obtain the perspective of the college professors who have the firsthand experience of handling academically at-risk students, thus they serve as external sources of information regarding the typical behaviors exhibited by them

From the thorough literature review and survey that were carried out, academic risk was operationally defined, its 11 components were identified, and every component was also given its own operational definition. After accomplishing this, item writing was done ensuring that there are more than enough items for each of the components of academic risk. This yielded the first draft of the ARS which consisted of 321 items.

After successfully generating a sufficient pool of items, the next step in the test conceptualization phase was the content validation of the first draft of the ARS. Five experts with specialization in Psychology and Counseling were consulted, and they evaluated the items contained in the first draft of the ARS. The results of the content validation were collated by means of an inter-rater agreement, and from these decisions on whether the item

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is accepted, rejected or needs revision were made. Moreover, the remarks from the experts were considered when revisions of the items were done. From this step, the ARS Preliminary Form came about; this still consisted of 11 components but with 323 items.

The ARS Preliminary Form was pilot tested with a preliminary sample of 442 academically at-risk college students. Pilot testing was essential for the item analysis process. Results of the pilot testing determined the good items that were retained and the poor items that were rejected. This step yielded the ARS Final Form.

All statistical computations were made using the Predictive Analytics Software (PASW) Version 18.

RESULTS

Other than the thorough review of the available literature and studies in order to conceptualize the components of academic risk and generate items, the results of the survey with academically at-risk college students and college professors were also considered.

Table 1 shows the prominent responses from the purposively selected 32 academically at-risk students who were asked of the traits of college students who fail and the reasons for their academic failure.

Table 1. Survey results of academically at-risk students (N=32)

Rank	f	%	Response
1	23	71.88	Laziness
2	17	53.12	Attendance, including cutting classes, absences and tardiness
3	10	31.25	Peer pressure or bad influence of friends
4	8	25.00	Playing or getting addicted to computer games
5	6	18.75	Alcohol drinking and vices

As seen in Table 1, the academically at-risk students who participated in the survey identified laziness as the primary reason for their being in academic risk. This was followed by problems with their attendance in school, which covers their absences and tardiness, as well as engaging in cutting classes. Being exposed to negative peer influence came in as the third reason why college students believe they are in academic risk. Finally, the academically at-risk students also identified alcohol drinking and having other vices as the fifth topmost reason why they are in academic risk.

It can be noticed in the succeeding table that college professors were able to identify a wide array of reasons behind academic risk, and most of the responses ended up in the same rank. First among these reasons shown in Table 2 are absences in school, family problems and the negative influence of peers. Ranking second are laziness and the students' lack of interest in the subject or course they are taking. Being lax and inattentive in class, as well as lack of motivation and lack of time management came in third. Fourth in the rank was the lack of focus in studies, same with lack of ambition. Also in the fourth rank are factors involving the teacher, having wrong priorities, the lack of parental supervision and involvement, and being psychologically challenged that pertain to students having psychological problems like being depressed or anxious. A multitude of reasons came in fifth in the rank. It includes traits like being stubborn, irresponsible, lacking in confidence, and having low frustration tolerance.

Also on the fifth rank are problem behaviors like being addicted to computer games, having many vices, devoted to activities not related to school, having poor study habits and non-submission of requirements. Problems with adjustment and relationships, and having mental deficit are likewise on the fifth rank.

Table 2. Survey results of college professors (N=11)

Rank	f	%	Response
1	6	54.54	Absences or school truancy Family problems Negative peer influence
2	5	45.45	Laziness Lack of interest in the subject or course
3	4	36.36	Lack of time management Lack of motivation Lax, carefree Inattentive or mentally absent in class
4	3	27.27	Lack of focus on one's studies Low or lack of ambition Psychologically challenged Teacher factor Wrong priorities Lack of parental involvement or supervision
5	2	18.18	Uncooperative or stubborn Lack of goal setting Irresponsible Low frustration tolerance Poor study habits Mental deficit or slow learner Lack of confidence Relationship problems Non-submission of requirements Adjustment problems Devoted to activities not related to school Many vices Addiction to computer games

Comparing the survey results from the two groups of participants, it can be observed that the responses provided by the academically at-risk students were also given by the professors. However, it can be noticed that the second group of respondents, the professors, identified more diverse reasons behind academic failure and academic risk.

Utilizing the results of these two surveys and the prominent findings from available literature and studies, a total of 11 components of academic risk was conceptualized. Table 3 presents the table of specifications of the ARS First Draft.

Table 3 illustrates the number of items that were written and comprised each of the 11 components in the ARS First Draft. Mental health, physical health, and school environment had the most number of items (n=35), followed by academic attitudes (n=31), academic habits (n=30), home environment (n=28), and academic motivation (n=27). The remaining components namely academic unpreparedness, academic adjustment, academic goals, and social relations had 25 items each. In total, the ARS First Draft consisted of 321 items.

Table 3. Table of specifications of the ARS first draft

Component	No. of Items	%
Academic Habits	30	9.35
Academic Attitudes	31	9.66
Academic Unpreparedness	25	7.79
Academic Adjustment	25	7.79
Academic Goals	25	7.79
Academic Motivation	27	8.41
Mental Health	35	10.90
Physical Health	35	10.90
Social Relations	25	7.79
Home Environment	28	8.72
School Environment	35	10.90
Total	321	100

Various empirical researches can support the conceptualized components of academic risk.

For the first component of academic risk which is academic habits, there are three prominent results across various studies which include poor study habits, academic procrastination and poor time management as dominant ways among probationary students. In fact, Isaak, Graves and Mayers (2006) discovered that probationary students identified procrastination and time management as two of their top three problems and they also had low scores on study habits as measured by the Survey of Study Habits and Attitudes (SSHA). This was further supported by the findings of Thombs (as cited in Isaak, et al., 2006), which highlighted that time management best discriminates probationary from non-probationary students, and Austin's findings on probationary students' poor time management and insufficient study (as cited in Isaak, et al., 2006). Moreover, Schiming (2012) emphasized that academic procrastination is a factor affecting academic performance. In addition, Forsyth, Story, Kelley, & McMillan (2009) wanted to know the factors that facilitate good academic performance, and found that one of the reasons is having good preparation.

Other than these, Austin (as cited in Isaak, et al., 2006) also mentioned that probationary students have poor attendance, while Perry, Hladkyj, Pekrun, Clifton, & Chipperfield (2005) considered student autonomy and self-reliance as important elements to success in college. These two findings support the claim of Perlman, McCann and Prust (2007) that there are behaviors helpful in attaining good academic performance, and some of these behaviors include regularly attending classes and promptly doing assignments. The other findings of Perlman et al. (2007) points to other behaviors of students that also help attain good academic performance such as being attentive to discussions and lectures, studying in a quiet place, seriously taking responsibilities, exerting additional effort in assignments that will have more weight or points, and accomplishing extra credit.

Studies in support of the second component concerning academic attitudes reveal that there are varying attitudes among students that can explain academic success or failure. When it came to study attitudes as measured by the SSHA, Isaak, et al. (2006) found that probationary students had low scores in it.

Schunk (as cited in Joo, Kim, N., Kim, S., and Chung, 2011) considered academic self-efficacy or the learner's perceived belief to succeed in completing a given instructional task as one of the most essential internal variables related to academic achievement. Such that according to Pinquart, Juang, and Silbereisen (as cited in Perry, De Wine, Duffy & Vance, 2007) those who are high in academic self-efficacy had better grades. In addition, Lee, Chen & Sok (2010) indicated the affective components of self-efficacy which explains the students' emotional reactions to tasks such as feelings of anger, hopelessness, boredom or shame, to feelings of enjoyment, relief, pride and hope; these feelings can influence their self-regulation, learning strategies, motivation, and academic achievements.

Seligman (as cited in Gębka, 2013) also noted of the role of explanatory style or the habitual way by which a person explains the causes of different events that is believed to be an influential factor behind students' academic achievements. According to Mkumbo and Amani (2012), among low performing students, academic failure was often attributed to factors that are external and uncontrollable. With regard to controllability of attributions, Banks & Woolfson (2008) explained that students who believed that they are high achievers had more control over their failure unlike those students who felt they were low achievers.

Furthermore, Brophy (1998) found that some students possess the "failure syndrome" and have developed failure expectations and do not have confidence in their abilities. Closely related to this is self-handicapping. Martin et al. (as cited in De Castella, Byrne and Covington, 2013) discovered that academic self-handicapping predicted poor self-regulation, lower academic achievement, and increased likelihood of later withdrawal from studies.

The attitudes of persistence, exerting effort and being conscientious are among the other things found relevant to academic performance. Persistence as an attitude is essential to avoid academic failure. In fact, Lei (as cited in Mkumbo & Amani, 2012) considered persistence as another factor in the success of students on their academic endeavors. A wide range of studies found effort to positively influence marks/grades (Gębka, 2013). In the meta-analytic study by Trapmann, Hell, Hirn and Schuler (as cited in Allen, Robbins & Sawyer, 2010) regarding the relationship of the Big Five personality factors with college success, they learned that conscientiousness consistently predicted higher grades.

When it came to attitudes toward learning evident among students, Martin and Säljö (as cited in Gębka, 2013) was able to distinguish between the impact of deep and surface learning strategies. Deep learning strategy had a positive impact on academic performance. But there are inconsistencies in the results of studies on surface learning, some saying it has a negative impact to academic achievement, while others reported of its positive relationship with academic achievement.

Academic unpreparedness, the third component of academic risk, can be supported by the study of King (2004) which pointed out that at-risk students are academically unprepared, and this is a product of their earlier educational experiences such as their poor preparation and having academic failure. Academically unprepared students do not know how to go about earning a degree in college. Likewise, for Daley (2010), many students have low academic skills and are not prepared for the academic rigors of college. In fact, according to Austin (as cited in Isaak, et al., 2006), probationary students have inadequate reading comprehension.

The fourth component of academic risk which is academic adjustment is supported by a number of empirical researches that linked the quality of academic performance with the adjustment in college. Maxwell (as cited in Isaak, et al., 2006) remarked that probationary students adapted more poorly to college environment and Trombley (as cited in Isaak, et al., 2006) stated that probationary students reported problems with adjustment to college work.

Ross, Neibling and Heckert (as cited in Murff, 2005) affirmed that students' experience of increased stress in college can influence academic performance for reasons being they need to make significant adjustments in college, deal with the pressure of their studies, and due to academic requirements among other reasons. For Murff (2005), stress prevents college students from being successful in their respective educational goals.

Academic goals, the fifth of the eleven components of academic risk, have its strongest support from the study of Isaak, et al. (2006), who explicitly stated that students in academic jeopardy have goals which are less definite. Likewise, Robbins, Lauver, Le, Davis, Langley and Carlstgrom (as cited in Allen, et al., 2010) conducted a meta-analysis of 109 studies that were published from 1973 to 2002 and learned that academic performance was predicted by academic goals along with other variables.

There are many types of goals and for Chan & Lai (2007), mastery and performance-approach goals are positively correlated with academic achievement, whereas performance-avoidance goal is negatively correlated with academic achievement. Tang and Hong (as cited in Chan & Lai, 2007) stated that there are differences in cultural values and the meaning attached to achievement goals. In Chinese culture, academic achievement is a social endeavor and a moral obligation, while in American culture, it is an individual endeavor.

Academic risk's fifth component which is academic motivation is backed up by the study of Isaak, et al. (2006) from where it was learned that one of the top three problems of probationary students is keeping themselves motivated. Robbins, et al. (as cited in Allen, et al., 2010) conducted a meta-analysis and found that achievement motivation is a predictor of academic performance. Forsyth, et al. (2009) supported the finding of Robbins, et al. (as cited in Allen, et al., 2010) when they studied what inhibits good academic performance, and discovered that it includes low motivation and exerting low effort. Moreover, French, Immekus, and Oakes (as cited in Allen, et al., 2010) discovered that academic motivation predicted engineering students' persistence.

On a different note but still about academic motivation, Johnson-Reid, Davis, Saunders, Williams and Williams (as cited in Perry, et al., 2007) explained the role of intrinsic and extrinsic rewards. The former refers to the student's belief of how important it is to finish school, while the latter is concerned with the student's belief that success in school will lead to positive life outcomes. Pintrich & De Groot (as cited in Joo, et al., 2011) explained the importance of having intrinsic value or the individual's belief in the utility and importance of the tasks, as well as their interest in it that justifies why they study. In such case, they will focus more on the purpose of their study and not on their extrinsic performance.

Lee, Chen & Sok (2010) wanted to understand how academic achievement is influenced by a combination of sociological and psychological factors, with the latter pertaining to students' sources of motivation that can assist them in developing a desire to learn that encourages academic success (Adelman & Taylor; Gootfried, as cited in Lee, et al., 2010).

Still in support of academic motivation as a component of academic risk, Lockwood, Marshall and Sadler (2005) studied how role models can motivate individuals and found that among those from individualistic cultures with promotion-focused orientation, they gain inspiration from positive role models who exhibit strategies on how to achieve success. On the other hand, those from collectivistic cultures and possess the prevention-focused orientation, they are best motivated by negative role models who teach them how to avoid failure.

Studies on mental health, academic risk's sixth component, and its implication to academic performance have similar results. For King (2004), individual risk factors among at-risk students include psychological problems. DeBerard, Spielmans and Julka (2004) identified ten predictors of retention and academic achievement and it includes the mental health of the students. Arthur (as cited in DeBerard, et al., 2004) mentioned that mental health issues like depression and anxiety are also worth studying since they are common among college students. According to McIndoo & Hopko (2014), the prevalence of these two is between 15% to 20% and when depression and anxiety co-exist, they can be highly debilitating and can cause significant interference in social, educational, and occupational functioning. Often, they may even be accompanied by substance abuse. As a result, students can manifest poor performance in the academics and increased interpersonal problems (McIndoo & Hopko, 2014).

Kauffman (as cited in Sutherland, Lewis-Palmer, Stitchter and Morgan, 2008) explained that students with emotional or behavioral disorders exhibit learning problems and behavioral deficits. Because of these, they achieve less academic progress as compared to their nondisabled peers and those with learning disabilities (Anderson, Kutash & Duchnowski, as cited in Sutherland et al., 2008).

The seventh component of academic risk is physical health. Again, King (2004) included health factors like chronic illness as individual risk factors among at-risk students. DeBerard, et al. (2004) in their investigation of predictors of retention and academic achievement found that students' physical health, drinking and smoking to be some of these predictors. Kessler, Greenberg, Mickelson, Meneades & Wang (as cited in DeBerard, et al., 2004) explained that just as much as physical health can influence work performance, it is also likely that physical health will also have influences on outcomes in college.

Also, Luthar and Ansary (2005), wanted to find out how problem behaviors can have consequences on academic grades of affluent and low-income teenagers. Their findings revealed that higher maladjustment was evident among sub-urban teenagers than their low-income, urban counterparts. The former group manifested higher consumption of alcohol, cigarettes, and use of marijuana and other illicit drugs as compared to the latter group. However, the affluent teenagers have greater access to environmental safety nets (i.e. good psychotherapists, teachers and parents who will pull them back on track) unlike the poor teenagers.

Sedentary lifestyle and body mass index were found to be negatively related to academic achievement (Kristjánsson, Sigfúsdóttir & Allegrante, 2009). While Florence, Asbridge & Veugeler (2008) found that students with a decrease in the quality of their overall diet tend to perform poorly in school. On the contrary, students whose grade point average was above of 90% have reported that they consume more vegetables, fruits and milk on a daily basis, as compared to students with low grades.

Sleep can also affect learning and consequently one's academic performance. Having sufficient sleep is not only critical to the physical health of adolescents, but also to their mental health (Kang, Lee, Y., Kim, Lim, Lee, H. et al., 2014). In the study of Noland, Price, Dake & Telljohann (2009), 91.9% of their adolescent respondents had inadequate sleep (≤ 9 hours) during most school nights, 10% of which sleep less than 6 hours for each school night. The respondents in their study reported that they felt tired during the day (93.7%), experience difficulty paying attention (83.6%) and increased stress (59.0%), get low grades (60.8%), and

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found it difficult to get along with others (57.7%). As an effect, these respondents engage in harmful behaviors like taking sleeping pills (6.0%), relaxing themselves through cigarette smoking (5.7%) and alcohol drinking during the night (2.9%).

Binge drinking is another widespread problem among adolescents (Donath, et al., 2012) as revealed in the study they did where 52.3% of their 44,610 ninth grade student-respondents reported engaging in the said behavior. Academic failure, school absenteeism/truancy are some of the risk factors of binge drinking. Vice versa, Wechsler et al. (as cited in Rhoades & Maggs, 2006) said that academic failure is one of the risks involved in abuse of alcohol. Students who considered their academic goals more important than their social goals (i.e. to gain friends) tend to consume less alcohol during their first year in college.

The eight component of academic risk is social relations. DeBerard, et al. (2004) did a study to identify ten predictors of retention and academic achievement and one of them was the social support received by the students. Isaak, et al. (2006) described students in academic jeopardy as having low social skills, and lack of peer support led to lower grade point average and poor adjustment among first year college students according to Dennis, Phinney and Chuateco (as cited in Allen, et al., 2010). The presence of stressful peer interactions is also a social risk factor for at-risk students according to King (2004). Meanwhile, Klomegah's study (2007) highlighted having friends with negative attitudes, lack of friends, as well as little participation in extracurricular activities in school as predictors of academic performance. This is similar to the results obtained by Mayol (2010), whereby the involvement of students in extra-curricular activities can create a significant impact on their academic performance. And what Murff (2005) discovered summarizes all other studies since it stated that traditional college students often have their peers and social activities as one of their many stressors in college.

Home environment is the tenth component of academic risk which has plenty of supporting studies. According to Trombley (as cited in Isaak, et al., 2006), probationary students reported problems with adjustment in their family or home. As an example, Brophy (1998) explained that students with the "failure syndrome" manifest an inability to compete with their successful siblings.

King (2004) considered familial risk factors like how the family values education, insufficient finances, disturbed family functioning, and dependent care issues as affecting students' academic performance. Isaak, et al. (2006) mentioned that students in academic jeopardy experience financial difficulties and are likely to work. For Eppler, Carsen-Plentl, and Harju (2000), older students often have work and family commitments that come in conflict with their schooling. According to Murff (2005), these non-traditional college students often have family issues as their stressors in college. This is likewise supported by Allen, et al. (2010) who looked into demographic variables like socio-economic status and situational variables such as employment status, finances and family obligations and found that they predict persistence and academic success.

Further, Fraleigh (as cited in Lee, et al., 2010) found that lower grades and permissive parenting are associated variables. Jimerson, Ferguson, Whipple, Anderson, & Dalton (2002) argued that students who dropout out have mothers who give lower value to the education of their children. Ramos-Sanchez and Nichols (2007) stated that students with parents who did not go to college themselves receive less family support for their desire to go to college and the parents are not able to provide guidance to their children when they do attend college. This coincides with the results of the study of Cutrona, Cole, Colangelo, Assouline & Russell (as cited in DeBerard, et al., 2004), which revealed that parental social support as having a positive correlation with achievement in college. It also agrees with Klomegah's findings

(2007) that family involvement and low socio economic status are predictors of academic performance.

For Ross, Neibling and Heckert (as cited in Murff, 2005), students' experience of increased stress in college can influence academic performance and reasons for their stress has to do with their housing arrangements and the changes in the lifestyle in college.

The eleventh and last component of academic risk is school environment which encompasses many elements. With regard to characteristics of teachers and their way of teaching, Poorman, Mastorovich and Webb (2008) claimed that what was helpful to academically at-risk students was when their teachers spent time with them and paid attention to what they need. Having indifferent teachers (Klomegah, 2007) can affect the academic performance of students. According to Brophy (1998), for teachers to be highly effective with failure syndrome students, they need to use encouragement strategies, show supportive behaviors, provide them with assurance and personally appealing to them to improve on their performance. Forsyth, et al. (2009) wanted to know the causes that impede academic performance and found that indeed one of them is the experience of poor teaching.

When it comes to factors like the classroom or school, Klomegah (2007) gave school size, school climate, and lack of counseling services as predictors of academic performance. To add, Lee, et al. (2010) explains that whatever the students bring to their classroom will be transformed by whatever happens inside the classroom. The transformation can be for better or for worse. Wolfgang (as cited in Lee, et al., 2010) explains that classroom climate refer to the kind of environment that teachers create for their students, as well as the environment created by the students themselves and the school in general. Wimshurst and Allard (2008) even discovered that fail grades was correlated with the quantity or proportion of students enrolled in a program.

Finally, Nash (2002) said that the neighborhood is a significant predictor of students' sense of school coherence, which is in turn positively related to educational behavior. Thus, students' sense of school coherence and school performance are undermined if there are high levels of crime in the neighborhood.

After conceptualizing the components of academic risk and generating items under each component, these 321 items in the ARS First Draft were content validated by five experts in the field of Psychology and Counseling. According to Magno and Ouano (2010), this is the stage where a judgmental review of items is conducted. Items are reviewed based on the framework or definition provided by the test developer as to whether they have relevance to what is being measured, if it measures something else and if it has to be revised to improve clarity (Magno & Ouano, 2010).

Inter-rater agreement was used to determine whether items are representative of the component they belong to or it needs to be either revised or removed based on the judgment of the experts. From the results of the inter-rater agreement, the ARS Preliminary Form was constructed, and it consisted of 323 items. Two items were added under the home environment component, while all the other 10 components retained their original number of items as reflected in Table 3. Of these 323 items, 39 were reverse scored since these items reflect behaviors that are uncharacteristic of students who are academically at-risk. This preliminary form of the ARS was pilot tested, which as Cohen, Swerdlik & Sturman (2013) stated is needed to evaluate whether they should be included in the instrument's final form.

Following the pilot testing of the ARS Preliminary Form to a purposively selected preliminary sample made up of 442 academically at-risk college students, item analysis was conducted. Specifically, this was done through item-total correlation. Item analysis is a general term used to describe the variety of statistical procedures designed to explore how individual test items work as compared to the other items in the test and in the context of the whole test (Cohen, et al., 2013). Statistical analysis of the items in the ARS Preliminary Form was done using item-total correlation, which is the correlation between an item and the rest of the test, without the item being considered as part of the test. Items with low correlation denote that the item is not really measuring the same thing which the rest of the test is trying to measure (Item analysis, n.d.).

In particular, Pearson's r was the statistical procedure applied to obtain the correlation of item scores and total score. A correlation coefficient of 0.40 was used by the test developer as the cut-off to decide on which items were retained and rejected. Such r-value denotes substantial/marked relationship (Magno & Ouano, 2010).

The succeeding table presents the summary of good items that were retained and poor items that were rejected per component based on the computed Pearson correlation coefficients. It is seen in Table 4 that there were a total of 248 items which were retained or 76.78% of the 323 items of the ARS Preliminary Form. These items were retained since they were considered as good items for they have correlation coefficients of .40 and above. Meanwhile, 75 (23.22%) items were rejected since they had correlation coefficients which were below .40, thus they were considered as poor items.

Table 4. Summary table of item analysis results

Component	No. of Items Retained	No. of Items Rejected	Total
Academic Habits	24	6	30
Academic Attitudes	24	7	31
Academic Unpreparedness	19	6	25
Academic Adjustment	22	3	25
Academic Goals	21	4	25
Academic Motivation	20	7	27
Mental Health	32	3	35
Physical Health	20	15	35
Social Relations	19	6	25
Home Environment	24	6	30
School Environment	23	12	35
Total	248	75	323

In the ARS Preliminary Form, the component with the most number of items retained was that of mental health (n=32). It was followed by three other components including academic habits, academic attitudes and home environment, having 24 retained items per component. Both academic motivation and physical health had 20 retained items, while social relations and academic unpreparedness each had 19 retained items. For the other components, the retained items are as follows: school environment (n=23), academic attitudes (n=22), academic goals (n=21).

As for the poor items in the ARS First Draft, majority of these rejected items came from the physical health component (n=15) and school environment (n=12). Academic attitudes and academic motivation both had seven poor items. There were six poor items for academic habits, academic unpreparedness, social relations and home environment. Academic goals ended up with four poor items. The components with the least number of poor items were academic adjustment (n=3) and mental health (n=3).

The good items in each of the 11 components that were retained after the item analysis process comprised the ARS Preliminary Form, which will be further subjected to reliability and validity analyses in the next stages of development of the Academic Risk Scale.

CONCLUSIONS

As far as the test conceptualization phase and item analysis process in the development of the ARS are considered, it can be concluded that academic risk is a comprehensive and multidimensional concept. Therefore, academic risk can be attributed to a variety of possible reasons and manifested in a wide array of behavioral indicators.

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