DEVELOPMENT AND VALIDATION OF THE ACADEMIC RISK SCALE FOR FILIPINO COLLEGE STUDENTS

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Background of the Study

- Late adolescents who enter a university face a major life transition (Lin, 2010)
- Academic failure is more than just a personal concern of students.
- Multi-dimensional factors can interact and influence educational achievement (Lucio, Rapp-Paglicci and Rowe, 2011)
- Negative academic outcomes rarely occur without exhibiting some warnings (Lucio et al., 2011)

Rationale

- Scarcity of local studies on academic risk among college students
- Lack of local instrument
- Previous experiences of handling academically at-risk students
- Mental health of the students is a significant factor to academic risk

Theoretical Framework

- Risk-Focused Model (Bogenschneider, 1998)
- Emerged from medical epidemiology
- Used also in human development
- Just like in a disease, human development can be influenced not only by one risk factor, but by multiple risk factors
- Reducing or eliminating these risk factors can hold promise to the prevention of youth problems

Methodology

- **Design:** Scale Development Research; descriptive research
- **Sampling:** Purposive non-random
- **Test Conceptualization (Survey) Sample**: 32 academically at-risk students, 11 professors
- **Preliminary Sample**: 443 academically at-risk college students; 16-28 years old; 226 female and 216 male
- **Final Sample**: 445 academically at-risk college students; 15-28 years old; 241 female and 204 male
- 232 academic scholars or dean's listers, 17-28 years old,182 female and 50 male

Methodology

Instruments

- 1. Academic Risk Survey Form
- 2. Demographic Data Sheet
- 3. Purdue Non-Language Test – Form B
- 4. Mental Health Inventory-5
- 5. Depression Anxiety Stress Scale-21
- 6. Academic Resilience Scale
- 7. College Self-Efficacy Inventory
- 8. Academic Risk Scale (ARS)

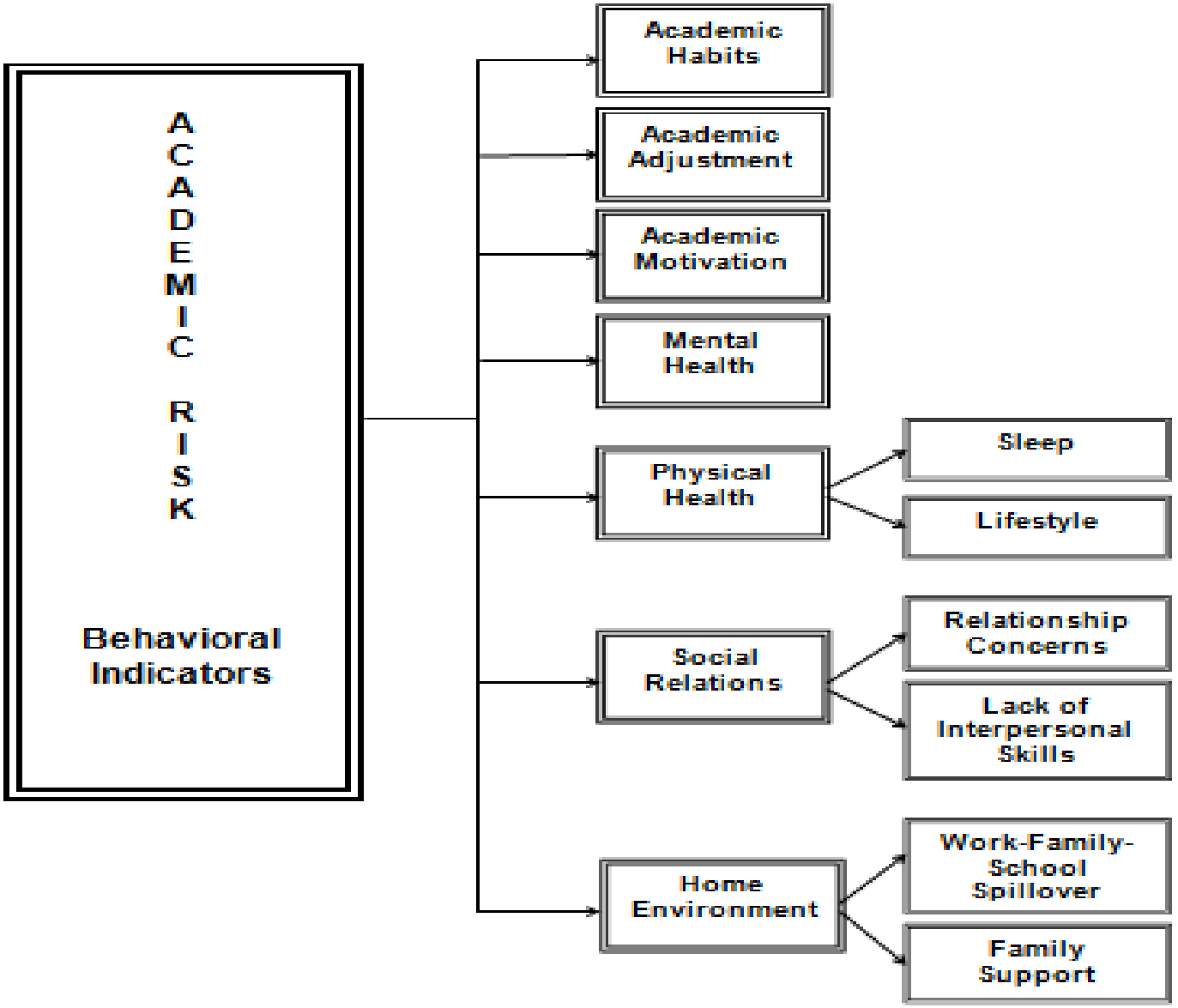
ARS Scaling

- Verbal frequency scale
- Response Options:
  - Always descriptive of me (5 pts)
  - Often descriptive of me (4 pts)
  - Sometimes descriptive of me (3 pts)
  - Rarely descriptive of me (2 pts)
  - Never descriptive of me (1 pt)

ARS

- Assess college students' inability to manage, perform and fulfill their school responsibilities that lead to poor academic performance and failure.
- Particularly, it measures **behavioral indicators of academic risk** (school-related behaviors manifested by academically at-risk students that are likely to contribute to their academic failure)

Behavioral Indicators of Academic Risk



Behavioral Indicators of Academic Risk

Academic Habits

- How college students typically approach their school responsibilities, handle their school tasks and manage their time.

Academic Adjustment

- Degree to which students are able to meet the academic demands of college.

Academic Motivation

- Concerned with the problems on the intrinsic or extrinsic reasons that may influence college students to attend school and finish their degree.

Mental Health

- Provides a measure of the psychological problems, like depression and anxiety among college students that can contribute to academic risk.

Physical Health

- Refers to college students' bodily health condition that can contribute to academic risk to include sleep deprivation and lifestyle

- **Sleep** – covered college students' poor sleeping habits and sleep deprivation that can contribute to academic risk.
- **Lifestyle** – college students' way of living that can lead to academic risk; it specifically covered computer gaming, partying and alcohol drinking.

Social Relations

- Academically at-risk students' handling of relationship concerns and skills in interacting with classmates and friends that may contribute to academic risk.

- **Relationship Concerns** – the problems of college students in academic risk when it comes to dating and romance, experience of homesickness, conflicts with classmates, unsupportive friends, and negative peer pressure.
- **Lack of Interpersonal Skills -** academically at-risk student's deficiency in interpersonal skills which may be manifested by feelings of timidity, lack of acceptance, lack of friends or difficulty in making friends.

Home Environment

- Home and family conditions faced by the academically at-risk students that can contribute to academic risk

- **Work-Family-School Spillover** – the work and/or family responsibilities which academically at-risk students may have that affect their ability to perform well in school.
- **Family Support –** the supervision, assistance or guidance received by academically at-risk students from their parents, siblings or guardians.

Research Flow

Test Conceptualization Phase

(Item Generation and Content Validation)

Preliminary Phase

(Administration of ARS Preliminary Form, Item Analysis, Reliability Analysis, & Validity Analysis)

Final Phase

(Administration of ARS Polished Form, Reliability Analysis, Validity Analysis & Establishment of Norms)

Results
Test Conceptualization Phase

- Review of related literature and studies
- Survey with: (1) students (laziness) and (2) educators (absences, family problems and negative peer influence)
- Table of Specifications and Item Writing for the ARS First Draft
- Content Validation of ARS First Draft
- Developed the ARS Preliminary Form

Results
Preliminary Phase

- Item analysis using item-to-total correlation (248 retained items, 75 rejected items)

Reliability Analysis of ARS Preliminary Form (323 items)

- Reliability Analysis of the Preliminary Form (α=.834 to α=.933)
- Social relations – lowest reliability coefficient
- Mental health – highest reliability coefficient

Factor Analysis Results of the ARS Preliminary Form

Behavioral Indicators	Components	No. of Items	Eigenvalues
Academic Habits	None	17	.552 – .753
Academic Adjustment	Adapting to new demands & standards in college	14	.538 – .682
	Course-related adjustment	3	.457 – .805
Academic Motivation	Lack of Motivation	11	.514 – .725
	External Motivation	9	.490 – .670
Mental Health	None	19	.558 – .762
Physical Health	Sleep	8	.511 – .774
	Lifestyle	7	.445 – .772
	Physical Illness	3	.710 – .836
Social Relations	Relationship Concerns	8	.466 – .723
	Inability to form friendships	5	.585 – .765
	Negative peer influence	3	.683 – .700
Home Environment	Poor family relations	11	.547 – .700
	Family obligations	7	.430 – .729
	Family expectations	4	.674 – .750

Results
Final Phase

- Reliability Analysis of the Polished Form (129 items) - α=.865 to α=.953
- Mental health – highest reliability coefficient
- Academic adjustment – lowest reliability coefficient

Concurrent Validity
Academic Risk and Mental Health

Behavioral Indicators of Academic Risk	r-value	p-value	Interpretation
Academic Habits	-.177**	.003	Low Relationship
Academic Adjustment	-.309**	.000	Low Relationship
Academic Motivation	-.321**	.000	Low Relationship
Mental Health	-.490**	.000	Marked Relationship
Physical Health	-.120*	.045	Negligible Relationship
Social Relations	-.264**	.000	Low Relationship
Home Environment	-.369**	.000	Low Relationship

Concurrent Validity
Academic Risk and Depression

Behavioral Indicators of Academic Risk	r-value	p-value	Interpretation
Academic Habits	.372**	.000	Low Relationship
Academic Adjustment	.510**	.000	Marked Relationship
Academic Motivation	.567**	.000	Marked Relationship
Mental Health	.622**	.000	High Relationship
Physical Health	.279**	.000	Low Relationship
Social Relations	.469**	.000	Marked Relationship
Home Environment	.507**	.000	Marked Relationship

Concurrent Validity
Academic Risk and Anxiety

Behavioral Indicators of Academic Risk	r-value	p-value	Interpretation
Academic Habits	.303**	.000	Low Relationship
Academic Adjustment	.367**	.000	Low Relationship
Academic Motivation	.384**	.000	Low Relationship
Mental Health	.533**	.000	Marked Relationship
Physical Health	.244**	.000	Low Relationship
Social Relations	.341**	.000	Low Relationship
Home Environment	.357**	.000	Low Relationship

Concurrent Validity
Academic Risk and Stress

Behavioral Indicators of Academic Risk	r-value	p-value	Interpretation
Academic Habits	.316**	.000	Low Relationship
Academic Adjustment	.449**	.000	Marked Relationship
Academic Motivation	.417**	.000	Marked Relationship
Mental Health	.551**	.000	Marked Relationship
Physical Health	.235**	.000	Low Relationship
Social Relations	.379**	.000	Low Relationship
Home Environment	.437**	.000	Marked Relationship

Divergent/Discriminant Validity
Academic Risk and Academic Resilience

Behavioral Indicators of Academic Risk	r-value	p-value	Interpretation
Academic Habits	-.221**	.000	Low Relationship
Academic Adjustment	-.398**	.000	Low Relationship
Academic Motivation	-.383**	.000	Low Relationship
Mental Health	-.414**	.000	Marked Relationship
Physical Health	-.172**	.004	Negligible Relationship
Social Relations	-.250**	.000	Low Relationship
Home Environment	-.317**	.000	Low Relationship

Divergent/Discriminant Validity
Academic Risk and College Self-Efficacy

Behavioral Indicators of Academic Risk	r-value	p-value	Interpretation
Academic Habits	-.439**	.000	Marked Relationship
Academic Adjustment	-.499**	.000	Marked Relationship
Academic Motivation	-.454**	.000	Marked Relationship
Mental Health	-.392**	.000	Low Relationship
Physical Health	-.186**	.002	Negligible Relationship
Social Relations	-.326**	.000	Low Relationship
Home Environment	-.254**	.000	Low Relationship

Construct Validity
Contrasted-Group Method

Behavioral Indicators	Group	M (SD)	t-value	p-value	Inference
Academic Habits	At-Risk	38.105 (9.403)	8.968	.000	Significant
	Scholars	31.090 (8.381)			
Academic Adjustment	At-Risk	34.465 (9.582)	10.585	.000	Significant
	Scholars	27.103 (5.990)			
Academic Motivation	At-Risk	37.301 (10.613)	7.329	.000	Significant
	Scholars	31.176 (8.265)			
Mental Health	At-Risk	35.989 (12.603)	7.204	.000	Significant
	Scholars	29.194 (8.621)			
Physical Health	At-Risk	31.347 (8.616)	6.143	.000	Significant
	Scholars	27.250 (6.441)			
Social Relations	At-Risk	24.623 (7.577)	8.409	.000	Significant
	Scholars	20.211 (4.017)			
Home Environment	At-Risk	39.978 (12.050)	7.285	.000	Significant
	Scholars	32.827 (10.137)			

Factor Analysis Results of the ARS Polished Form

Behavioral Indicators	Components	No. of Items	Eigenvalues
Academic Habits	None	14	.597 – .746
Academic Adjustment	None	14	.495 – .721
Academic Motivation	None	16	.550 – .714
Mental Health	None	19	.612 – .817
Physical Health	Sleep Lifestyle	8 7	.443 – .766 .479 – .771
Social Relations	Relationship Concerns Lack of Interpersonal Skills	10 5	.458 – .812 .580 – .815
Home Environment	Work-Family-School Spillover Family Support	11 7	.410 – .700 .546 – .653

Reliability Analysis of ARS Final Form (111 items)

- Reliability Analysis of the Polished Form (α=.870 to α=.948)
- Mental health – highest reliability coefficient
- Physical health – lowest reliability coefficient

Establishment of Norms

Percentile	Interpretation
80 – 99	Very High
61 – 79	High
40 – 60	Average
20 – 39	Low
1 – 19	Very Low

ARS Final Form Profile

Behavioral Indicators of Academic Risk	M	SD	Interpretation
Academic Habits	31.46	8.22	Average
Academic Adjustment	25.96	6.87	Average
Academic Motivation	28.04	8.45	Average
Mental Health	37.31	12.53	Average
Physical Health			
Sleep	16.57	5.22	Average
Lifestyle	10.47	3.81	Average
Total	27.04	7.89	Average
Social Relations			
Relationship Concerns	15.29	5.05	Average
Lack of Interpersonal Skills	8.65	3.20	**High**
Total	23.95	7.57	Average
Home Environment			
Work-Family-School Spillover	17.55	5.86	Average
Family Support	14.97	5.17	**High**
Total	32.53	10.15	Average

Conclusions

- 1. The ARS has high reliability and good validity, thus can be used to assess the behavioral indicators of academic risk among Filipino college students. It is also a standardized measure of academic risk.

- 2. The ARS is an instrument that can be used as an index of possible **mental health issues** like depression and anxiety among academically at-risk college students. It can also be used as an index of **low academic resilience** and **low self-efficacy** among college students.
- 3. The ARS can discriminate between college students who are academically at-risk and those who are not.

Thank you very much for listening!