

A Scale for Measuring Agricultural Students' Affective Empathy: Results from An Exploratory Factor Analysis

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Introduction

- Affective empathy is an important skill for agricultural communicators who often engage in civil discourse about contentious public issues (Baker et al., 2021).
- A valid and reliable instrument designed to measure agricultural communications students' affective empathy is needed to assess their development of such skills.
- Our study's purpose was to further investigate the construct validity of the affective empathy scale developed by Reniers et al.'s (2011).

Framework

- Reniers et al.'s (2011) affective empathy scale served as the framework.
- The authors established construct validity of the scale using a PCA and CFA.
- Three subscales: 1) emotion contagion (4 items); 2) proximal responsivity (4 items); 3) peripheral responsivity (4 items).

Methods

- Collected 106 responses from students enrolled in two agricultural communications courses.
- Bartlett's Test of Sphericity to examine interrelationships between factors.
- Conducted an EFA and extracted factors via the PCA method.
- Used the orthogonal rotation method since the subscales did not correlate and the a priori criterion to load items onto the three hypothesized constructs.

Results

- Kaiser-Meyer-Olkin measure = .85.
- Bartlett's Test of Sphericity = $\chi^2(66) = 330.84, p < .001$.
- Factor one explained 28.59% of the total variance.
- Factor two explained 13.24% of the total variance.
- Factor three explained 11.86% of the total variance.



Results Cont.

Factors and Items of Students' Affective Empathy after Factor Rotation

Affective Empathy Items	Factor		
	1	2	3
It worries me when others are worrying and panicky.	.77		
I am inclined to get nervous when others around me seem to be nervous.	.77		
I am happy when I am with a cheerful group and sad when the others are glum.	.74		
People I am with have a strong influence on my mood.	.66		.40
I get very upset when I see someone cry.	.51	.47	
Friends talk to me about their problems as they say that I am very understanding.		.78	
I often get emotionally involved with my friends' problems.		.73	
It affects me very much when one of my friends seems upset.	.40	.66	
I usually stay emotionally detached when watching a film.			
I am usually objective when I watch a film or play, and I don't often get completely caught up in it.			.78
It is hard for me to see why some things upset people so much.			-.75
I often get deeply involved with the feelings of a character in a film, play, or novel.			.41

Conclusions & Recommendations

- When implementing the cognitive empathy scale with agricultural students, we recommend...
 - Removing item 9.
 - Revising item 4 to *My mood is influenced by the moods of people around me.*
 - Revising item 5 to *I feel like crying when I see someone else cry.*
 - Revising item 8 to *I get emotional on behalf of my friends when they are upset.*
- Our suggested modifications may allow scholars to measure agricultural students' cognitive empathy more accurately.