E3-18: Learning Motivation, Belief, and Attitude toward Science Learning of College Female Students in Taiwan

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Abstract:
Introduction: Research indicated that the proportion and achievement for the female students in scientific field were low compared to the male students. However, very little is known about intention and experience of science learning among female college students. The purpose of this
The study is to investigate the relationships between college female students’ motivation, belief, and attitudes toward science learning in Taiwan. Research questions were (a) What are female college students’ levels of attitude, belief, and motivation toward science learning? (b) What are relationships between learning attitude, belief, and motivation? (c) Do students’ learning attitude, belief, and motivation differ by demographics?

**Method(s):** A cross-sectional Internet survey design was used. Chinese-version of the FINE Science website was set up for data collection. All female students (N=337) studying at an Institute of Technology were recruited. 191 students completed the survey (response rate 56.7%). Most of the participants had a nuclear family (65.2%) and their parents had an educational level higher than junior high (71.1% and 69.0%, respectively). Four Chinese instruments with 5 point Likert Scale including the Attitudes Toward Biology Scale (alpha .97), Students' Beliefs about Science Learning Questionnaire (alpha .89), Students' Motivation toward Science Learning (alpha .88), and Demographic Inventory were used. Higher scores indicate more positive attitude and belief and higher motivation toward science learning. Descriptive statistics and Pearson correlation were used for data analysis.

**Results:** Female students did not have very positive attitude (M=3.30) and belief (M=3.51) or high motivation (M=3.51) toward science learning. Learning motivation was positively correlated with learning attitude (r=.63) while learning belief was not related to learning attitude (r=-.09). Those whose father had an educational level higher than senior high possessed more positive learning belief than those whose father had an education of senior high.

**Discussion & Conclusions:** Strategies to motivate female students’ science learning may help them to have more positive attitudes toward science learning. The findings of the study have limited generalizability due to a convenience Internet sampling.

**Abstract History:**
This abstract has not been presented or accepted for presentation in whole or in part at the SNRS or other scientific meeting.

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