

WESTERN MICHIGAN UNIVERSITY



Department of Chemistry
College of Arts and Sciences

*The
Department of Chemistry
presents*

*Literature Seminar
by*

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Assessing College Students' Risk Perceptions of Hazards in Chemistry Laboratories

College laboratories are generally perceived to be low-risk environments in comparison to industrial laboratories and plant operations. However, accidents in college chemistry laboratories have revealed the safety conditions to which both students and staff may be exposed. Improving the effectiveness of laboratory safety training programs and chemical safety education requires gaining an understanding of how undergraduate students may perceive the risk associated with chemistry laboratory settings. This study characterized risk perceptions of safety hazards in chemistry laboratories among college students. Undergraduate college students from the chemistry and biology department of a university in Mexico were surveyed. The Workers' Risk Perception Dimensional Evaluation (EDRP-T) was used to characterize risk perceptions through nine dimensions and the overall perceived risk for three risk factors: laboratory work, chemical splashes, and chemical substances inhalation. Perceived risk was characterized in a sample of 521 undergraduate students. Students felt confident in successfully dealing with the risk factors evaluated despite feelings of dread and vulnerability as well as concerns about the severity of the consequences of an injury. Their perceived ability to control and avoid these risks might have reflected the students' self-efficacy. Discrepancies in characterizing risk perception as a multidimensional construct or a direct, measurable characteristic were identified. Gaining an understanding about what undergraduate students do and do not perceive as hazardous is a valuable input to develop risk management and communication strategies with the potential to influence students' decision-making process that can result in safer behaviors. Successful design and implementation of chemical education programs requires recognizing gaps at all levels.

**Friday, April 26th at 1:00 PM
1260 Chemistry Building**