

**GRADUATE COLLEGE**

**DEFENSE NOTICE**

Please Post

The following dissertation presentation is scheduled and open  
to those in the University Community

Edith Munene, Candidate

Fayneese Miller, Ph.D., Advisor

Doctor of Education

Educational Leadership & Policy Studies

March 17, 2008

10:00 a.m. – 12:00 p.m.

Memorial Lounge  
Waterman Building

Title: Examining the Web of Bio-Psychosocial Associations Between Multiple  
Risk Behavior Attributes, Depressive Symptoms And The Social Environment  
Among Adolescents: The Factor Structure of the 2007 Vermont Youth Risk  
Behavior Survey

## ABSTRACT

**Objective:** Once regarded as evidence of misguided or impulsive decision-making, today health risk behavior in adolescence is now recognized as dynamic conditions (some with genetic predispositions) evolving across the lifespan (National Institutes of Health, 2006). As a result, numerous national and international studies have been conducted to document various types of adolescent risk behaviors. However, to date, no studies have focused on understanding the web of bio-psychosocial associations/relationships between multiple risk behaviour attributes, depressive symptoms and social environment contextual factors in a representative sample of Vermont's adolescents. As a consequence, there is no population-based evidence that depressive symptoms and other biological, psychological and social determinants are linked in any direct or indirect manner. This research topic was chosen because the issue it sought to address represents a significant risk to the health and well-being of adolescents and has subsequent social and health implications.

**Methods:** This was an exploratory, non-intervention, cross sectional study of adolescents in grades 8 through 12, living in Vermont that utilized the 2007 Vermont Youth Risk Behavior Survey (YRBS) data. Using a triangulation of quantitative and secondary literature review approach, this study explored and interpolated multiple risk factors, depressive symptoms and the social environmental (protective) factors among a representative sample (N =28,919) in 144 Vermont schools representing 60 supervisory unions. An exploratory factor analysis (EFA) using principle components analysis was carried out to unveil the aggregation of variables and to cluster risk and protective factors on items from the 2007 Vermont Youth Risk Behavior Survey (YRBS) in order to determine the number of factors that account for any possible co-variation between variables (i.e. looking at which observed variables correlate with each factor). An oblique rotational method namely, promax was used because it attempts to identify orthogonal factors, but still allows factors to be correlated to some degree.

**Results:** Six main component factors emerged. The number of factors was determined by examining the eigenvalues of the factors extracted, as well as by visually examining the scree plot. Regressions with risk-scores as outcomes, and depressive symptoms, background and protective factors as predictors including other relevant interactive attributes were undertaken to reveal whether depression and protective factors have an effect on the risk-behaviors, and whether that effect is different, for example in males vs. females. Overall, the findings revealed that risk behaviors and protective factors clustered together into coherent groups when variables were subjected to a factor analysis and that they are attributable to biological, psychological and social environmental influences and that they can be exacerbated by concomitant demographic factors like age and gender.

**Conclusion:** The analysis yielded several factors that were broadly consistent with the research hypothesis and hence provided the evidence of the discriminability extent of depressive symptoms involvement in multiple risk factors and social environmental influences among adolescents and also for the utility of the YRBS as a reliable health risk and health enhancing assessment tool. Implications for professional practice and policy include employing a comprehensive bio-psychosocial approach to the investigation of the mechanisms of adolescent health risk behavior and to prevention, intervention and support initiatives.