Purpose

To determine the strength of associations between private religiosity, impulsivity, age, gender, and risk-taking propensity among college students in late adolescence (18 to 20 years) living away from home.

Background and Significance

- Full development of prefrontal cortex (PFC) and executive cognitive functioning completed by mid-twenties
- Limbic system, especially nucleus accumbens, and assertive reward-seeking behaviors matures in mid-adolescence
- College students are physically mature, legally considered adults after 18 years old, but are not neurobiologically mature
- College students have increased vulnerability to binge drinking, automobile accidents, smoking cigarettes, and casual sex
- Decreased probability of binge drinking after completion of first 2 years of college
- Religiosity offers pro-social influences, moral structure, protective factor, and psychological buffer against risk behaviors
- Development from parent-driven religiosity to adult spirituality parallels PFC maturity and formal operational thinking
- Risk-taking propensity assesses vulnerability to "real-world" risk taking

Methodology

- Quantitative cross-sectional descriptive correlational design
- 110 college students, 18 – 20 years old, living away from home
- Convenience sampling from large Texas public university
- Age Universal Religious Orientation (AUROS) Intrinsic Subscale – 6-item paper survey on religious orientation deeply personal to individual
- Eysenck Impulsivity Subscale – 19-item paper survey measuring ability to quickly enter into situations with minimal planning
- Balloon Analogue Risk Task (BART): Computerized behavioral measure of risk-taking propensity—natural inclination to engage in risks
- Age, gender, private religiosity, impulsivity accounted for 4% of variance in risk-taking propensity
- Most frequent risk behaviors: drinking alcohol and riding in a car without seat belts
- Males had higher impulsivity scores

Results

- Average participant: 18.9 yrs., female (78%), freshman (46%), diverse race/ethnicities, non-fraternity/sorority member, with GPA > 3.0
- Internal consistency reliability found for:
  - AUROS Intrinsic Subscale—α = .87
  - Eysenck Impulsivity Subscale—α = .73
  - BART—α = .78

Conclusions

- Supports a broader focus on identification and measurement beyond age, gender, religiosity, and impulsivity
- Supports link between positive environmental neural challenge [living away from home] and increased PFC white matter [lower BART and Impulsivity scores]
- Supports use of BART as individualized prevention intervention
- Confirms need to examine sorority/fraternity membership, declared college major, additional executive cognitive functions, type of residence

Nursing Implications

- Recognize college students as concrete thinkers
- Utilize interventions based on reward-seeking
- Encourage positive strengths
- Use innovative active teaching/learning strategies
- Address students’ natural inclination of reward-seeking
- Use classrooms as “dens of critical thinking”
- Become “environmental provocateur”
- Have awareness of campus referral resources

Nursing Practice

- Avoid face-to-face recruitment with college students
- Utilize classroom recruitment, posted flyers, and word-of-mouth between peers
- Offer some financial compensation as motivator

Nursing Education

- Address students’ natural inclination of reward-seeking
- Use classrooms as “dens of critical thinking”
- Become “environmental provocateur”
- Have awareness of campus referral resources

Nursing Research

- Provide additional studies on the impact of religiosity, impulsivity, age, and gender on risk-taking propensity among college students
- Conduct further research on the effectiveness of BART as a preventive tool
- Examine the role of sorority/fraternity membership and declared college major in risk-taking behavior