**Data Analysis Plan: Exploring Factors Influencing Subjective Well-being Outcomes During Emerging Adulthood**

**Overview:**

* This analysis plan involves quantitative methods to address both primarily exploratory and some confirmatory research questions.
* Statistical software such as RStudio will be utilized for data analyses, ensuring rigor and accuracy in the interpretation of findings.
* Results will be synthesized to provide comprehensive insights into the complex interplay between socio-ecological factors and well-being outcomes during emerging adulthood.

**Note\*** In this project, for more complex statistical techniques I have less experience performing, I'll remain flexible, adjusting methods as I better understand the data and analytics process. This process will involve ongoing learning, using resources like ‘Doing Data Science In R: An introduction for Social Scientists’, and seeking advice from experienced researchers/ supervisors.

**Research Questions**

**Exploratory Research Q’s (theory-building):**

1. Identify potential mediating and moderating factors that may influence the relationship between socio-ecological factors and well-being outcomes.
2. Explore variations in subjective well-being outcomes among emerging adults from different socio-economic and/or cultural/racial backgrounds.
3. Investigate differences in the utilization of social support networks based on individual characteristics, such as gender and cultural background.

**Confirmatory Q’s (theory-testing):**

1. To what extent do socio-economic status (SES) factors, such as income and education level, predict markers of adulthood and subjective well-being (SWB) among emerging adults?
2. How does perceived social support mediate the relationship between socio-economic context and markers of adulthood and subjective wellbeing?
3. How do more positive optimistic beliefs and attitudes such as self-efficacy relate to subjective wellbeing among this sample of young/emerging adults?

**Methodology Overview**

**Data overview:** The data used in all analyses were pre-existing cross-sectional data, under the original study title ‘Emerging Adulthood Measured at Multiple Institutions 2: The Next Generation (EAMMi2).’ The survey data were collected between 2016-17 with contributions from 32 academic institutions. N = 3,134 after cleaning, age range = 18 to 61, primarily under 29. Key measures included ‘Inventory of dimensions of adulthood, Markers of adulthood, well-being measures, social media use, social support, various demographics, etc.

**Data source:** Accessed from the [Open Science Framework (OSF)](https://openpsychologydata.metajnl.com/articles/10.5334/jopd.38) (website operated by Centre of Open Science (COS) which supports greater transparency in scientific practice and is a place where researchers can publish data to be used by others.

**License to use data:** CC0 1.0 Universal, allowing unrestricted use, sharing, and modification.

**Original purpose of original research by primary researchers:** To explore psychological and sociological aspects of transitioning from adolescence to adulthood.

**Utility of pre-existing data for secondary data analysis:** Research exploration and educational uses in research methods and statistics.

**Data Analysis Techniques:**

* + Overview of techniques employed to explore each RQ
  + Various regression analyses will be employed to examine the extent to which certain factors predict or are associated with subjective well-being (SWB) among emerging adults.

**Research Question 1 (RQ1): Socio-Economic Status Influence**

**Technique:** Multiple Linear Regression  
**Overview:** This technique assesses the predictive power of socio-economic status indicators (income and education level) on markers of adulthood. It quantifies the strength and direction of the relationship between independent variables (income and education) and a dependent variable (markers of adulthood). This approach is suitable for RQ1 as it helps to determine the extent to which socio-economic factors contribute to achieving adulthood milestones.

**Research Question 2 (RQ2): Differences in Subjective Well-Being**

**Technique:** Regression Analysis  
**Overview:** Like RQ1, regression analysis is used to explore the impact of socio-economic background (income and education) on subjective well-being (SWB). This method helps in understanding how changes in income and education levels are associated with variations in SWB among emerging adults, directly addressing RQ2.

**Research Question 3 (RQ3): Predicting Psychosocial Dimensions**

**Technique:** Regression Analysis  
**Overview:** This technique is applied to investigate how socio-economic factors predict differences in self-efficacy, providing insights into the influence of socio-economic status on individual psychological states. This approach aligns with RQ3 by highlighting the role of socio-economic background in psychosocial development during the transition to adulthood.

**Exploratory Research Questions:**

1. **Mediating and Moderating Factors:**  
   **Technique:** Mediation and Moderation Analysis  
   **Overview:** This involves exploring how perceived social support mediates the relationship between socio-economic context and outcomes like markers of adulthood and SWB. It also examines whether individual characteristics (e.g., gender, racial/cultural background) moderate these relationships. These analyses help identify underlying processes and conditions under which socio-economic factors influence well-being and adulthood markers.
2. **Variations in SWB:**  
   **Technique:** Ordinal Logistic regression

**Overview:** This method involves comparing SWB across different socio-economic groups to explore variations. It's suitable for examining how SWB outcomes vary among emerging adults from diverse socio-economic backgrounds, directly addressing the exploratory nature of this question.

1. **Social Support Differences:**  
   **Technique:** Interaction Effects Analysis in Regression  
   **Overview:** This technique examines how the relationship between social support and SWB varies by individual characteristics like gender and cultural background. It's used to investigate nuanced dynamics within social support mechanisms, providing insights into personalized social support needs.

**Additional Techniques:**

* **Correlation Analysis:** To explore associations between continuous variables across different domains (e.g., socio-economic status, social support, beliefs).
* **ANOVA/T-tests:** To compare means between two or more groups, useful for examining differences in social support or SWB across demographic categories.
* **Ordinal Logistic Regression:** For outcomes measured on an ordinal scale, this method models the relationship between predictor variables and an ordinal response variable.
* **Mediation Analysis:** To assess the indirect effects of socio-economic context on outcomes through mediators like social support, employing packages like **mediation** in R.
* **Imputation Techniques:** To handle missing data, ensuring the robustness of the analyses and the generalizability of the findings.

Each technique is selected to align with specific research questions, considering the nature of the variables involved (continuous, categorical) and the hypothesized relationships (direct, indirect, moderated). The combination of these methods provides a comprehensive approach to understanding the complex interplay between socio-economic factors, social support, individual beliefs, and well-being during the transition to adulthood.

**Significance and Implications:**

* Main aim: To understanding of developmental trajectories and well-being outcomes among emerging adults and contribute to insights for targeted interventions and support initiatives for this demographic.

**Interpretation and reporting of analyses findings:**

All quantitate analyses findings were interpreted considering knowledge and understanding of the research literature, much of which informed the RQ’s, and analyses performed, were presented in the introduction of the final report.