Method

Researchers conducted an electronic search using EBSCO Host and Cambridge search engines to identify all publications between 1984 and March of 2009 that used correlational research methods (i.e., articles that specifically investigated the relationship between predictor and outcome variables) to investigate secondary transition predictors of post-school success. The databases targeted for the search included: Academic Search Premier, Educational Administration Abstracts, Education Research Complete, Educational Resources Information Center (ERIC), MasterFILE Premier, Middle Search Plus, PsycARTICLES, and PsycINFO. Full and truncated versions of the following search terms were used: *correlation, correlate, correlational, predictor, relationship, students, youth, adolescents, young adults, disability, middle school, high school, transition, education, special education, outcomes, post-school, postsecondary, post-school outcomes, in-school, post-secondary education, employment, independent living, and quality of life*. Additional correlational articles were also found for review through NSTTAC's search to identify evidence-based practices in secondary transition (Test et al., 2009). Finally, researchers conducted a hand-search of reference lists of articles identified through electronic searches that met inclusion criteria in order to identify additional articles pertinent to this review. From the original search, 162 articles were identified. Researchers reviewed abstracts and data analysis sections of the articles to determine if analyses were correlational in nature. Articles found that were (a) expert opinion, (b) literature reviews, (c) program evaluations, (d) experimental, (e) descriptive, or (f) univariate with no correlational analyses were excluded from the review, resulting in 63 potential articles to be examined further. Interrater reliability for the original search was calculated by two separate reviewers and totaled 100% across all articles for inclusion of correlational studies.

Inclusion Criteria for Correlational Literature Review

Prior to determining quality, the 63 articles were examined to determine if they met preliminary inclusion criteria for this systematic review. To be included in the review, a study had to include (a) predictor variables related to a secondary transition program or practice and (b) outcome variables related to post-school education, employment, and independent living. Of the 63 potential articles reviewed, 35 were excluded for the following reasons: (a) in-school variables related to a secondary transition program or practice were not addressed (n=9); (b) outcome variables were not related to post-school education, employment, and/or independent living (n=19); (c) students and/or adults with disabilities were not included (n=4); and (d) only demographic variables (e.g., age, disability, gender) were analyzed (n=3). Interrater reliability for this part of the review was also calculated by two separate reviewers and was 100%.

The remaining 28 articles were then reviewed to evaluate the quality of evidence using a 13-item checklist for correlational research. The quality indicator checklist was developed based on criteria from Thompson et al. (2005; see Figure 1). Of the 28 articles reviewed, 22 met requirements of the quality indicator checklist to be included in the final review. Four of the articles were excluded because stepwise methods of analyses were used. Stepwise regression analyses were excluded because they are not designed to identify the best subset of predictor variables and negate the theoretical knowledge the experimenter may have by giving control of determining the best set of predictors to the computer program (Knapp & Sawilowsky, 2001; Tabachnick & Fidell, 2007; Thompson et al.). Additionally, using stepwise regression analysis can result in other major problems, including: (a) computer programs tend to use erroneous degrees of freedom in stepwise calculations, which may lead to an increased "likelihood of obtaining spurious statistical significance" (Thompson et al., p. 525); and (c) the Type I error rate

tends to be inflated because of the incorrect computation of degrees of freedom (Knapp & Sawilowsky; Thompson et al.). Finally, two articles were excluded because effect sizes were not reported, and there was not sufficient information to calculate effect sizes for each outcome. Interrater reliability on 41% (n=9) of the correlation studies reviewed using the quality indicator checklist in this phase was 100% for the two reviewers.

<Insert Figure 1 here>

Finally, the 22 articles that met the quality indicator criteria for correlational research were used to develop the evidence-based in-school predictors of improved post-school outcomes for students with disabilities. Decision rules for determining levels of evidence for correlational research based on the Institute for Education Sciences (IES; B. Cobb, personal communication, May 12, 2006) were then established. According to IES, the evidence provided by correlational research may only be established as a *moderate* level of causal inference. Researchers then added a *potential* level of evidence to allow for recognizing research that may be promising but has insufficient evidence to meet moderate levels. To be identified as a *moderate* level of evidence, a predictor had to have: (a) two *a priori* (i.e., planned hypothesis prior to analysis) studies with consistent significant correlations between predictor and outcome variables (exploratory studies were included only when paired with *a priori* significant correlations) and (b) effect size calculations or data to calculate effect size. To be identified as a *potential* level of evidence, a predictor had to have: (a) one *a priori* (i.e., planned hypothesis prior to analysis) study and/or (b) two or more exploratory (no specific hypothesis) studies with significant correlations between predictor and outcome variables.

The descriptions of each predictor were taken directly from the findings in the studies reviewed. Predictor categories were created based on consensus by researchers, and researchers classified each predictor to reflect a comprehensive term to support each description.

Data Analysis

Researchers examined each study for the following: (a) population (i.e., disability type), (b) sample size, (c) predictor variable(s), (d) post-school outcome variable(s), (e) type of statistical analysis used, (f) relationships among variables, (g) significance levels, and (h) data that allowed for calculation of effect sizes. Because the correlational studies included in this review were comprised of various types of analyses which yielded numerically different values, it was not possible to draw meaningful conclusions across studies (Lipsey & Wilson, 2001). Therefore, researchers chose to convert significant relationships to standardized effect size measures to allow comparisons. In order to make comparisons, several conversions had to be calculated. Studies using Pearson *r* or canonical correlations directly translated to effect size. Studies using logistic regression analysis reported odds ratio statistics that were converted to tetrachoric approximations (Digby, 1983) using the equation $r = \frac{(\mathrm{OR}^{3/4}-1)}{(\mathrm{OR}^{3/4}+1)}$. Tetrachoric transformations are often used with odds ratio statistics so that such statistics can be converted to Pearson *r* correlations. Studies using standard multiple regression analysis reporting only multiple R^2 were converted to Cohen's f^2 effect size statistic (Cohen, 1977) using the equation $f^2 = \frac{R^2}{1-R^2}$. One study (i.e., Wehmeyer & Schwartz, 1997) reported multiple R^2 for the full model and standardized regression coefficients (i.e., betas) for individual predictor variables. The standardized regression coefficient is an effect size measure that represents the change in dependent variable for one standard deviation change in the independent variable (MacKinnon,

2008). Another study (i.e., Heal, Khoju, & Rusch, 1997) did not report multiple R^2 data for each set of predictors or for the full model, but did report correlations (i.e., *r*) between each predictor variable and the three outcome variables. Therefore, the correlations were reported and converted to effect sizes for this study. For studies conducting hierarchical multiple regression analyses, the multiple R^2 was converted to effect size using a variation of the Cohen's f^2 effect size statistic (Cohen) using the equation, $f^2 = \frac{(R^2_{AB} - R^2_A)}{1 - R^2_{AB}}$. In this equation, R^2_A is the variance accounted for by a set of one or more independent variables *A*, and R^2_{AB} is the combined variance accounted for by *A* and another set of one or more independent variables *B* (often the first set of control variables; Cohen). The determination of small, medium, and large effect sizes was made based on Cohen's appraisal system. Values for correlation (*r*) effect sizes were: (a) small: $r \leq .10$, (b) medium: $r = .30$, (c) large: $r \geq .50$. Values for multiple R^2 effect sizes were: (a) small: $f^2 = .02$, (b) medium: $f^2 = .15$, and (c) large: $f^2 = .35$.