

Youth and Urban Forestry Work: studies of developmental benefits

Numerous programs in American cities offer teens and adolescents opportunities to do service work in forest landscapes. Youth work and urban forest stewardship may include tree planting, tree surveys, ecosystem or wildlife habitat restoration, and invasive species removal.

Youth program managers tell engaging stories about how young people benefit from nature-based work experiences, as volunteers or as employees. A research project was launched to assess such reports using social science methods. Two studies were conducted in 2005 (sponsored by the USDA Forest Service and the National Urban and Community Forestry Advisory Council). Preliminary results are reported in this flyer.

Research Overview

Many studies have evaluated youth benefits that are associated with wilderness or wildland based experiences. Few prior studies have explored what youth gain from forest experiences that occur in the city. And, until recently, the general psychological approach to youth development studies was to focus on abnormal or dysfunctional behavior. More recent literature in psychology has turned to positive youth development.

Two studies attempted to assess the positive benefits that young people gain from being involved in nature and ecology projects that are situated in their communities and neighborhoods.



STUDY 1: SUMMER URBAN FORESTRY PROGRAMS - Eight urban forestry programs in the U.S. participated in pilot data collection during the summer of 2005. The programs had these characteristics: sponsorship by government agency or NPO, involving youth of ages 15-19 years, providing ≥ 60 hours of activity, conducting urban forest stewardship primarily on public property, and including additional development activities (such as job skills instruction).

Surveys were prepared using instruments developed by youth psychologists, and had been tested for reliability and validity. A goal of the project was to construct a measurement tool that eventually might be used by any program to evaluate outcomes. Youth were assessed using pre and post tests. The surveys addressed these developmental concepts:

- 1) Environmental Identity (Clayton 2003)**, including self-identification, ideology, emotions, and autobiography
- 2) Self-Efficacy Scale (Sherer et al. 1982)**, including general and social self-efficacy
- 3) Environmental Concern (Schultz 2001)**, including egotism, altruism, and biospherism
- 4) Adolescent Self Concept (Harter 1988)**, including social, athletic, appearance, job competence, friendship
- 5) Civic Action (Moely et al. 2002)**, including community service intentions

STUDY 2: COMPARING PROFESSIONALS AND YOUTH - Interviews and surveys were done with two groups: urban forestry professionals who are women and/or of non-white cultural background, and youth who have previously participated in urban forestry stewardship programs. The qualitative and quantitative data are being analyzed to help understand what conditions and experiences of adolescence might contribute to career choices in urban natural resources. Surveys include concepts of Environmental Identity, Self Efficacy, and Environmental Concern.

All summer program youth (about 100) were given pre-tests on the first day of their respective programs, using pencil-and-paper surveys. Post tests were given on the last day of the programs. A variety of statistical tests were done to determine if any developmental affects were associated with youth participation in urban forestry stewardship programs. Scoring of assessment variables was based on research literature and prior applications of the measures. Statistical analysis approaches included variable descriptives, correlations among measures, and multiple variable comparisons on pre/post measures.



Surprising Outcomes!

Scores on Study 1 - pre/post tests - were well within the standard ranges of response found in other studies that had used the same measurements. Some prior studies have generated significant change in youth scores, usually the result of directed educational efforts. Surprisingly, the youth respondents in Study 1 showed no statistically significant change on most of the developmental variables. General self-efficacy was the exception, showing a decline from pre to post test.

Additional analyses explored possible response patterns associated with program participation and demographic traits. No significant differences were detected by program on the pre/post outcome variables. Few notable differences were observed based on gender, age, self-reported cultural background, extent of prior program participation, and participation in public assistance programs. Some general patterns were observed in scores though few statistically significant differences were found, so these results should be considered to be tentative. White youth responded more favorably in pre/post testing, as did young people who had ≥ 2 prior program experiences as compared to those with no prior experience. Curiously, attention to self and ego became stronger, as compared to declining concerns of biosphere and altruism across most personal traits. Youth receiving public assistance generally declined across many pre/post tests.

Additional Tests

Some measures were used for both the summer pre/post survey, and for the career survey (given to active professionals and youth who had participated in prior programs). Generally, professionals and youth with some time delay in program participation were significantly higher on concern for the biosphere and altruism, and lower on egotism. They also exhibited a significantly higher level of environmental identity.

What Did We Learn?

Some time delay may be needed for youth to assimilate and internalize the significance of their nature stewardship experiences. Slight declines appeared on many of the post test measures. Perhaps the program experiences had youth calling into question their sense of self, but not enough time had passed for new attitudes to emerge. Perhaps program activities that promote greater reflection over the course of a program would result in positive and significant changes.

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