



Risk and protective factors influencing life skills among youths in long-term foster care

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Abstract

This article examines the predictive value of selected risk and protective factors in explaining self-sufficiency skills of youths in long-term foster care. The sample included 219 ethnically diverse youths (133 females and 86 males) in care and their caregivers. The average age of the youths was 13.96 years. This study measured life skills with the Ansell-Casey Life Skills Assessment, completed independently by youths and caregivers, as well as a survey of social workers to gather additional information about the incidence of specific risk and protective factors. Protective factors were associated with greater self-sufficiency skills and risk factors were negatively associated. Using stepwise regression, for caregivers, risk and protective factors in a linear combination, explained more variance of the skill areas of Decision-Making, Social Relationships and Money Management than when considered in separate regression analyses. The reverse was true for these areas rated by youths. Practice and research implications are discussed.

Key Words: resiliency, risk factors, protective factors, self-sufficiency

Many of the over 230,000 adolescents placed in foster care will not be reunited with their families (Cook, Fleishman, & Grimes, 1991). They will experience multiple out-of-home placements, with the number of placements rising as the length of time in care increases (Cook, McLean, & Ansell, 1989; Fanshel & Shinn, 1978). Several outcome studies have found that youths placed in foster care do less well than their peers in the general population in several areas. These data, however, must be viewed with caution as many of the comparisons were not adjusted for child maltreatment, family poverty, neighborhood conditions and other factors.¹

With this caution in mind, there are a number of concerns with how youths in foster care are functioning. For example, youths in foster care were behind in reading and math skills (Fanshel, Finch, & Grundy, 1990; Fanshel & Shinn, 1978; Fox & Arcuri, 1980; Jones & Moses, 1984; North, Mallabar, & Desrochers, 1988). Along the same lines, many researchers (Barth, 1990; Cook, et al, 1991; Cook, 1994; Festinger, 1983; Jones & Moses, 1984; Zimmerman, 1982) documented high school completion rates as low as 28% for youths in foster care, varying by study and the age of the sample youths.² Similarly, the number of years of college education seems to be lower for youths previously in foster care (Festinger, 1983; Jones & Moses, 1984; Zimmerman, 1982).

Fewer youths placed in foster care were regularly employed after leaving care (Cook, et al, 1989; Cook, 1994; Triseliotis & Russell, 1984). Unemployment estimates ranged from 35%

(Cook, 1994) to around 75% (Barth, 1990). Foster care alumni were also more likely to receive public aid (Jones & Moses, 1984; Zimmerman, 1982). Some researchers (Barth, 1990; Jones & Moses, 1984) reported AFDC or General Assistance use to be nearly 50% among youths formerly in foster care. Given the lower economic levels, it is not surprising that Susser and his colleagues (1991) found a higher rate of homelessness among youths formerly in foster care (15% of the homeless sample experienced foster care) as compared with a "never homeless sample" (2% of whom also experienced foster care). Likewise, in a national study, it was found 25% of youths formerly in foster care experienced at least one night of homelessness (Cook, et al, 1991).

These findings point toward the need for early and more comprehensive approaches to help youths develop skills for living independently as adults. This includes a more informed understanding of the factors that predict greater independent living skills. During the transition to independence, youths often experience some form of separation anxiety. The anxiety can be especially pronounced for youths in out-of-home care if they lack secure attachments, and are still dealing with trauma associated with loss (Mauzerall, 1983). The disruptions and traumas often suffered by youths in out-of-home care may also delay or interrupt development of life skills needed for successful transition to independent living and thus, may lower the achievement of youths as seen in the brief literature presented.

Before this study, scant data were available on the factors associated with self-sufficiency skills for youths in out-of-home care. If these factors are known, independent living skills acquisition can be better facilitated. This article examines which factors, through linear regression analysis, predict self-sufficiency skills. Although it is recognized that acquisition of independent living skills represents a complex, life-long process, this exploration is limited to the risk and protective factors that are predictive of self-sufficiency skills.

A number of studies focused on understanding risk and protective factors and their influence on the coping responses of people when faced with adverse circumstances (e.g., Werner & Smith, 1989). Researchers have found certain types of stressors to be associated with later impaired adult functioning. In a longitudinal study, more than half of the stressful life events that took place in infancy and early childhood were associated with criminal records or an irrevocable broken marriage (Werner, 1989). Some of the events particularly applicable to youths in foster care include: prolonged disruptions of the family life; having a father who was permanently absent during infancy or early childhood; and having a mother who worked outside the home without stable substitute child care during the first year of the child's life. Similarly, in a review of the literature, Rutter (1981) concluded that most of the stressors, which provoke psychiatric disorders, involved some form of loss, disappointment or disturbed interpersonal relationships.

Youths in out-of-home care have experienced at least one stressful event – disruption of their family life, disappointment or loss in at least one relationship with a parent, and often have been neglected or abused in some way. Youths in long-term foster care also experience a prolonged disruption and often many placement changes during their stay in out-of-home care. Thus, it is of interest in this paper to examine different risk and protective factors and their relationship with self-sufficiency skills. It was thought that risk factors would be negatively associated with self-sufficiency skills, protective factors would be positively associated with self-sufficiency skills, and that risk and protective factors combined would have more predictive power of self-sufficiency skills than looking at either risk or protective factors individually.

For purposes of this paper, risk factors are defined as those factors that "are biological or psychosocial hazards that increase the likelihood of a negative developmental outcome in a group of people" (Werner & Smith, 1992, p. 3). Protective factors "include individual, family, and community characteristics that positively modify, ameliorate, or alter a person's response to some environmental danger that predisposes that individual to maladaptive outcomes; they enable children to survive and thrive in the face of adversity" (Rutter, 1987, p. 317-319; Rutter, 1985, p. 600). Resiliency is conceptualized as "youth who do well, in some sense, in

spite of having experienced a form of "stress" which in the population as a whole is known to carry a substantial risk of aversive outcome" (Rutter, 1981, p. 323).

As mentioned, there are several risks that youths living in foster care may face. Foremost, is the trauma that may be inflicted by child maltreatment depending upon the severity, length, age of victimization, and other circumstances. In addition, these children grow up without experiencing the protection, affection, encouragement, and intimate contact associated with stable family life. Thus, a relationship with a significant adult may be important. Foster care also tends to isolate children from their community and from accumulating knowledge of community resources, as evidenced by the earlier mentioned lower employment rates of youths formerly in foster care. Youths in foster care are also likely to experience delays in educational progress which may potentially deter vocational preparation and subsequent employment due to multiple moves and transferring schools (Mech, 1988).

In order to prepare youths for living on their own, given their already heightened risk for difficulties in making the transition, it is important to better understand how protective and risk factors affect self-sufficiency skills. The contribution and relationship of various risk and protective factors to self-sufficiency skills of youths in long-term foster care were investigated. Specifically, this study examined the following protective factors of relative placement, self-esteem, group involvement, vision for the future, relationships with the foster mother, relationships with peers, having a significant relationship with an adult, cultural identity, employment opportunities and volunteer experience. In addition, the risk factors of number of placement changes, maltreatment history, and special learning needs (special education placement, learning disability, ADD/ADHD diagnosis) were examined. While important, birth family contact was excluded due to missing data.

In absence of related research, this study was exploratory. The research question guiding data collection and analysis was: what is the contribution and relationship of various risk and protective factors to self-sufficiency skills of youths in long-term foster care? Protective factors were hypothesized to be positively associated with self-sufficiency skills, while risk factors were hypothesized to be negatively associated. Furthermore, it was thought that the combination of protective and risk factors would explain more variance of the investigated dependent variables, than either risk or protective factors would alone.

Method

Research participants

The sample consisted of youths and their caregivers in the family foster care component of a national long-term foster care agency. Participants in the field test were a random sample of 295 of the 365 youths in family foster care who were between the ages of 12 and 15 in January, 1995. There were 219 youths for whom both youth and caregiver assessments were completed: 133 females (60.7%) and 86 males (39.3%). The average age of the youths was 13.96 years ($SD = 0.92$). Youths in the sample were ethnically diverse: African-American ($N = 61$, 27.9%), Asian ($N = 5$, 2.3%), White (Non-Hispanic) ($N = 91$, 41.6%), Hispanic/Latino ($N = 27$, 12.3%), Middle Eastern ($N = 5$, 2.3%), Native American ($N = 23$, 10.5%), and Polynesian ($N = 7$, 3.2%). Some youths ($N = 59$, 26.9%) reported multi-ethnic identifications. Most youths ($N = 149$, 68%) lived in non-relative placements, while 71 (32%) youths lived in relative placements (for more information, see Nollan, 1996).

Response rates

Two hundred seventy-four surveys were mailed to youths and caregivers respectively. A total of 229 surveys were completed by youths, 237 surveys were completed by caregivers, and 259 surveys were completed by social workers. This represents response rates of 83.6% for youths, 86.5% for caregivers, and 94.5% for social workers. Overall, complete data on youths from youths, caregivers, and social workers were gathered on 219 youths, representing 80% of the original sample ($n = 274$).

Measures

The Ansell-Casey Life Skills Assessment

The Ansell-Casey Life Skills Assessment (ACLSA) is a developmental paper and pencil measure. It measures the capabilities and behaviors that are generally viewed as important life skills for youths ages 8 to 19. The factor analysis based sub-scales were primarily conceptualized as indicators of resiliency (e.g., higher scores corresponded with greater self-sufficiency skills, which would be an indicator of a resiliency based on the definition used). Scales included the following domains, with sub-scales in parentheses: Physical Development (Personal Care & Appearance, Health & Medical, Food & Nutrition); Moral Development (Values, Legal Rights & Responsibilities); Education and Vocational Development (Decision-Making Skills, Study Skills, Work Habits, and Career Planning & Employment); Social Development (Emotional Well-Being, Social Relationships, Communication Skills, Sexuality & Intimacy, Pregnancy & Parenting Awareness, and Leisure Time); and Community and Housing Issues (Money Management, Household Maintenance, Transportation & Mobility, and Community Resources). A number of "status items" (e.g., has a social security card, has a birth certificate) were assessed as well. ACLSA scale scores were used as dependent variables. Some of the "status items" were considered protective factors, and independent variables: Group involvement, employment experience, and volunteer experience.

There are three versions of the ACLSA, used across three age groups: ACLSA-I is for use with youths ages 8-11; ACLSA-II is for use with youths ages 12-15; and ACLSA-III is for use with youths ages 16-19. Some items are the same across the three versions, while others are adjusted to reflect age appropriate skill. Each version has a form for both the youth and his or her caregiver.³

The Field Test Version of the ACLSA-II (for ages 12-15) contained 130 life skills items reflecting knowledge or use of life skills. Knowledge items were answered on a 3 point scale (Can Do This, Don't Know, Can't Do This) and behavior items were answered on a 5 point scale (Does this Most of the Time, Sometimes, Once in a While, Can but Doesn't, Hasn't Learned This Yet). Subsequent ACLSA-II editions use only a 5 point scale. Internal reliability of the ACLSA-II, assessed by calculating Cronbach alphas, ranged from 0.41 to 0.85 for the youth sample and 0.45 to 0.87 for the caregivers. Test-retest analyses for the ACLSA-II indicated moderate (0.4) to high (0.8) correlations between administrations.

Social Worker Mail Survey

The Social Worker Mail Survey (SWMS) is designed to gather outcome information about youth demographic information, status variables, and a variety of key competency areas. These outcomes were divided into protective and risk factors. Protective factors, those factors associated with positive outcomes, based on the ACLSA included: Relative placement, cultural identification, self esteem, vision for the future, relationship with the foster mother, relationship with peers, having a significant relationship with an adult with whom the youth felt comfortable talking, work experience, volunteer experience, and group involvement. The vision for the future scale was comprised of questions regarding the youth's ability to set goals for the near and distant future, along with making a plan to attain them. Risk factors, those factors

associated with a higher likelihood of negative outcomes, included: Number of placement changes; occurrence of neglect, physical abuse, or sexual abuse; ADD/ADHD diagnosis; learning disability; and special education status.

Selection of Dependent Variables

In order to address the relationship of various risk and protective factors with self-sufficiency skills of youths in long-term foster care, several multiple regression analyses were performed using a select subset of dependent variables.⁴ These dependent variables were chosen from the domains based on their importance for practice. From the domain of Education and Vocational Development, Decision-Making Skills was chosen. Based on their practice experience, social workers communicated that this is a critical component to successful independent living. It was also chosen because decision-making skills were identified as one of the major competencies in The Secretary's Commission on Achieving Necessary Skills (U.S. Department of Labor, 1991).

From the domain of Social Development, Social Relationships was chosen for several reasons. While Social Relationship skills may not be as discrete as other skills such as balancing a checkbook, they are "an integral part of the other skills measures [job training skills, decision-making]" (Cook, 1994, p. 228). In addition, the ability to form relationships is a natural outgrowth of the bonds and attachments of the youth. At the very least, these skills are important to forming future support systems. One study found most youths would turn to a caregiver for aid or advice: "these youths intend to keep in communication with former caregivers after emancipation and many of them have done so" (English, Kouidou-Giles, & Plocke, 1994, p. 227). In addition, "satisfying and mutually gratifying relationships with friends and kin" has been stated to be a key component of competency (Pine & Krieger, 1990, p. 209). These interpersonal skills (including working together as a team, exercising leadership and negotiation) are mentioned as one of the major competencies associated with successful self-sufficiency living in The Secretary's Commission on Achieving Necessary Skills (U.S. Department of Labor, 1991).

From the domain of Community and Housing Issues, Money Management was selected. Money Management is the number one skill that adults want youths to have before they live on their own (personal communication with D. I. Ansell, President, Ansell & Associates, May 14, 1996). One study found money management skills training correlated with completing high school, maintaining a job for more than one year, not being a cost to the community, avoiding early parenting, and general satisfaction in life (Cook et al, 1991). In addition, it is a skill important to successful negotiation of paying bills and staying out of debt.

Procedure

Quantitative data were collected by mailing the instruments to selected participants. Phone calls and reminder letters were used to follow-up on instruments not returned. This paper reflects the findings from the first wave of data collection.

Data analyses

In order to understand the relationships between the independent variables and the dependent variables better, bivariate analyses were conducted with the selected dependent variables. Variables with interval level data were correlated with dependent variables. For the dummy coded variables, differences between the means on the dependent variables were compared using t-tests. Next, multiple linear regression analyses were conducted separately for protective factors with the dependent variables and then for the risk factors with the dependent variables. The risk factors included learning disability, ADD/ADHD diagnosis, special educa-

tion placement, neglect, physical abuse, sexual abuse, and placement changes. The protective factors included relationship with the foster mother, relationships with peers, vision for the future, self-esteem, cultural identification, relative placement, work experience, volunteer experience, and involvement in social clubs or groups. Finally, to determine the relative importance of the various risk and protective factors with the percentage of mastery on self-sufficiency skills, the significant independent variables from the separate risk and protective factor regressions were combined into one regression equation for each dependent variable.

The relationships of the dependent variables with the protective and risk factors were examined in an effort to reduce the experiment-wise error rate and to keep the scope manageable, while at the same time addressing the research questions and hypotheses. These dependent variables were calculated as a percentage of mastery of items within a sub-scale area. Mastery of an item was defined as receiving a rating of a 5 (most of the time) on the 5-point scale, or a 3 (can do) on the 3-point scale. If an item was rated in this way, it was re-coded to be a "1". If an item did not receive a mastery rating, then the response was coded as a "0".

Results

Overview

Overall, the protective factors were associated with higher percentages of mastery on the sub-scales of Decision-Making, Social Relationships, and Money Management. The risk factors were associated with lower percentages of mastery. A detailed description of these results is documented in Nollan (1996). Only those variables with significant relationships with the dependent variables were included in the regression analyses.

Risk and protective factor regression analyses

In each of the areas of Decision-Making and Social Relationships as rated by caregivers, a small amount of variance was explained by risk factors in a linear relationship of these dependent variables with the independent variables summarized in Table 1. Sexual abuse and having special learning needs (special education placement or learning disability) were common risk factors in most regression equations. The protective factors shown in Table 2 explained 0.208 to 0.327 of the variance of Decision-Making, Social Relationships, and Money Management (as rated by caregivers). Lower amounts of variance were explained in these areas as rated by youths. The most common protective factors in the regression equations included having an adult with whom the youth could talk (4 out of 6 regression equations), and having a vision for the future (5 out of 6 regression equations).

The amount of variance explained by a combination of the risk and protective factors was varied by the dependent variable (see Table 3). Specifically, 18.3% of the variance of having good Decision-Making skills (rated by caregivers) was explained by having an adult with whom the youth could talk, higher self-esteem, a greater vision for the future, being in a relative placement, and being a youth of color. Being in a group was significantly predictive of a lower percentage of Decision-Making skills. In the area of Social Relationships, as rated by caregivers, 28.9% of the variance was explained by having an adult with whom the youth could talk, having a better relationship with peers and vision for the future. In the area of Money Management (rated by caregivers), 12.2% of the variance was explained by having an adult with whom the youth could talk, a higher self-esteem, a greater vision for the future, and being in a kinship placement.

Table 1
 Summary of stepwise regression analysis for risk factors predicting decision-making skills, social relationships, and money management

Scale area	Variables in the equation	B	SE B	Beta	Adjusted R ²	F
Decision-making Caregiver, n = 177	Learning disability	-0.181	0.053	-0.248***	0.074	F(2, 174) = 8.036***
	Sexual abuse	-0.094	0.043	-0.157*		
	Constant	0.600	0.031			
Social relationships Caregiver, n = 176	Special education	-0.097	0.039	-0.183**	0.060	F(1, 174) = 6.776**
	Sexual abuse	-0.096	0.037	-0.190**		
	Constant	0.749	0.028			
Money management Caregiver, n = 177	Special education	-0.101	0.045	-0.164*	0.053	F(2, 174) = 5.902**
	Sexual abuse	-0.112	0.043	-0.190**		
	Constant	0.445	0.033			
Decision-making Youth, n = 177	Special education	-0.111	0.036	-0.226**	0.046	F(1, 175) = 9.418**
	Constant	0.750	0.021			
Social relationships Youth, n = 176	Special education	-0.079	0.030	-0.193**	0.032	F(1, 174) = 6.753**
	Constant	0.079	0.018			
Money management Youth, n = 177	Learning disability	-0.095	0.052	-0.134	0.042	F(2, 174) = 4.899**
	Placement changes	0.172	0.066	0.192**		
	Constant	0.531	0.025			

Note. * p < .05; ** p < .01; *** p < .001

A little more than 7% of the variance of Decision-Making skills (rated by youths) was explained by the independent variables. Overall, vision for the future was significantly predictive of a greater percentage of mastery of Decision-Making skills and having a special education placement was significantly predictive of a lower percentage of mastery of Decision-Making skills. In the area of Social Relationships (rated by youths), 20.6% of the variance was explained by having an adult with whom the youth could talk, self-esteem, having volunteer experience, and being a female. In the area of Money Management, 12.2% of the variance was explained by having a vision for the future, having changed placements more than two times, and having work experience. Having a better relationship with the foster mother was a negative predictor of Money Management skills.

Discussion

Overall, protective factors were positively correlated with the dependent variables and the risk factors were negatively correlated with the dependent variables, as hypothesized. Protective and risk factors had different amounts of predictive power, depending on who was rating the youth. From examination of the variance explained solely by the risk factors (see Table 1), it can be seen that some of the risk factors may not be as highly related to the dependent variables of interest. Protective factors explained a greater amount of variance of the dependent variables as rated by caregivers as compared to the variance explained of the dependent variables as rated by youths. In general, certain protective factors like having vision for the future

and having an adult with whom to talk were important predictors of self-sufficiency skills and associated with higher self-sufficiency skills.

It is interesting that when risk and protective factors are combined for the linear regression analyses for caregivers, less variance is explained as compared to the variance explained by protective factors alone. The reverse, however, is true for youth rated dependent variables: more variance is explained by a combination of risk and protective factors than is explained by including only risk or only protective factors. This may be due to adjusted R^2 being lowered to compensate for the greater number of variables in the caregiver equations compared with the youth equations. Another possibility is that linear combination of variables may not have the most explanatory power, perhaps a non-linear approach to data analysis is necessary.

From the regression analyses, several practice implications emerge. Sexual abuse and having a learning issue, like being in a special education placement or having a learning disability were

Table 2

Summary of stepwise regression analysis for protective factors predicting decision-making skills, social relationships, and money management

Scales	Variables in the equation	B	SE B	Beta	Adjusted R^2	F
Decision-making Caregiver, n = 144	Adult with whom to talk	0.155	0.665	0.173*	0.260	F(5, 139) = 9.751***
	Vision for the future	0.083	0.027	0.260**		
	Self esteem	0.069	0.030	0.194*		
	Relative placement	0.143	0.045	0.233**		
	Group involvement	-0.088	0.046	-0.143*		
	Constant	-0.06	0.095			
Social relationships Caregiver, n = 143	Adult with whom to talk	0.346	0.054	0.439***	0.327	F(3, 139) = 23.975***
	Relationship with peers	0.041	0.013	0.237**		
	Vision for the future	0.056	0.021	0.190**		
	Constant	0.056	0.074	0.201*		
Money management Caregiver, n = 144	Adult with whom to talk	0.128	0.677	0.143*	0.208	F(4, 140) = 10.458***
	Vision for the future	0.066	0.028	0.205**		
	Self esteem	0.091	0.031	0.256**		
	Relative placement	0.105	0.046	0.171**		
	Constant	-0.222	0.096			
Decision-making Youth, n = 144	Vision for the future	0.048	0.019	0.202*	0.031	F(1, 150) = 5.888*
	Constant	0.622	0.050			
Social relationships Youth, n = 143	Adult with whom to talk	0.205	0.052	0.294***	0.173	F(3, 148) = 11.498***
	Self esteem	0.066	0.018	0.238**		
	Volunteer experience	0.081	0.038	0.157*		
	Constant	0.364	0.072			
Money management Youth, n = 144	Relationship with peers	-0.030	0.015	-0.153*	0.075	F(4, 148) = 4.087**
	Vision for the future	0.066	0.024	0.221**		
	Volunteer experience	0.099	0.059	0.134		
	Work experience	0.090	0.053	0.139		
	Constant	0.361	0.108			

Note. * $p < .05$; ** $p < .01$; *** $p < .001$

two common risk factors predictive of lower percentages of mastery in the areas of Decision-Making Skills, Social Relationships, and Money Management. Services addressing these issues need to be offered. Furthermore, promoting the protective factors associated with these dependent variables may help lessen the effects of these risk factors.

Table 3
Stepwise multiple regression of risk and protective factors

Scale	Variables in the equation	B	SE B	Beta	Adjusted R ²	F
Decision-making Caregiver, n = 178	Adult with whom to talk	0.171	0.068	0.174*	0.183	F(6, 170) = 7.59***
	Self esteem	0.046	0.028	0.133		
	Relative placement	0.104	0.047	0.161*		
	Vision for the future	0.067	0.026	0.212**		
	Group involvement	-0.087	0.043	-0.139		
	Ethnic	0.096	0.045	0.160*		
	Constant	0.045	0.093			
Social relationships Caregivers, n = 211	Adult with whom to talk	0.346	0.051	0.266***	0.289	F(4, 202) = 21.934***
	Vision for the future	0.049	0.017	0.189**		
	Relationship with peers	0.065	0.034	0.124		
	Constant	0.310	0.066			
Money management Caregivers, n = 196	Adult with whom to talk	0.156	0.064	0.158*	0.122	F(4, 204) = 8.23***
	Self esteem	0.049	0.026	0.144		
	Vision for the future	0.061	0.023	0.195**		
	Relative placement	0.082	0.039	0.138*		
	Constant	-0.254	0.120			
Decision-making Youth, n = 214	Vision for the future	0.039	0.016	0.163*	0.073	F(2,211) = 9.383***
	Special education	-0.113	0.033	-0.241**		
	Constant	0.766	0.047			
Social relationships Youth, n = 190	Adult with whom to talk	0.216	0.047	0.305***	0.206	F(5, 184) = 10.803***
	Self esteem	0.043	0.015	0.189**		
	Volunteer experience	0.103	0.032	0.212**		
	Gender	-0.071	0.026	-0.180		
	Constant	0.405	0.066			
Money management Youth, n = 202	Vision for the future	0.090	0.021	0.296***	0.122	F(4, 197) = 7.966***
	Placement changes	0.153	0.061	0.167**		
	Work experience	0.013	0.047	0.184**		
	Relationship with foster mom	-0.023	0.014	-0.113		

Note. * p < .05; ** p < .01; *** p < .001

In addition, from the results, it is clear that having a relationship with an adult with whom the youth could talk is important. This finding is supported by other research (e.g., Cook, 1994; Werner & Smith, 1992) who found that when interviewed, youths revealed their reliance on a particular individual having a positive influence on their lives. While actual attachment was not assessed, having a positive relationship with the foster mother or an adult with whom the youth feels he/she can talk, may be an indication of the security a youth feels. For similar reasons, being in a relative placement is also important. These children may be in a closer relationship and are more likely attached. It is possible that factors like having a significant adult in the youth's life, whether a foster mother, relative caregiver, or other adult may contribute to self esteem. It may be that the more secure and stable a youth is, the more attention and energy he/she can expend in learning self-sufficiency skills. Thus, it may be important to not solely address risk factors like special education placement and sexual abuse to the exclusion of the promotion of protective factors like relationship with the foster mother, relationship with peers, relative placements, self-esteem, and vision for the future.

It is also important to help youths learn to set goals and make plans to meet them. Having this future orientation, as measured by the scale of vision for the future, was predictive of more self-sufficiency skills. Work and volunteer experience were also predictive of self-sufficiency skills. As seen in the brief literature review earlier, after leaving foster care, youths tended to have poorer work histories. Volunteer and work experience while in care may help to mitigate this.

Because there is a large amount of unexplained variance, it appears that additional factors, not included in the regression equations affect the outcomes of Decision-Making skills, Social Relationship skills, and Money Management skills. One such factor may be self-sufficiency skills training, found to be a significant predictor of self-sufficiency skills and other outcomes by Cook (1994). For this study, accurate data on Independent Living training was not available. It would be important for future studies to measure this factor in a more complete way (including formal, informal, and experiential types of training) in order to try to understand the relationships between risk and protective factors on self-sufficiency skills. To accomplish this, it is important to routinely assess life skills while youths are still in out-of-home care so as to allow for identifying areas for self-sufficiency skills training. One study found services work best when the services are targeted to meet specific goals (Cook, 1994). Assessment is critical to best accomplish this. In addition to self-sufficiency training, vision for the future, relationship with an adult, and birth family involvement may also be important to understanding how self-sufficiency skills are acquired and ought to be included in future studies.

More work needs to be done to understand the relationship between risk and protective factors. Combining risk and protective factors, using a linear regression model did not necessarily explain more of the variance of the dependent variables at least in the caregiver reports. This may be indicative of a non-linear relationship. Furthermore, the interaction between risk and protective factors needs to be more clearly understood, as the results showed that they are not always additive in their nature. In addition, repeating a variation of this study with older youths would be beneficial to see if the factors predictive at younger ages are still predictive for older youths. A final recommendation for future research is to involve both caregivers and youths in the study. We found the predictors for caregiver rated dependent variables were not always the same predictors for the youth rated dependent variables. If only the caregiver or youth is involved, valuable information may be lost, and program development and assessment may be misdirected or invalid.

This study provides information on youths ages 12 to 15 years and the factors associated with their self-sufficiency skills. Having information on younger youths allows more time for programs to develop their approach to self-sufficiency training in order to better prepare youths for living on their own. In addition, this study captured the input of both youths and caregivers, upon which more informed programming and policy can be based. This study also furthers our understanding of the complexity of the relationship of risk and protective factors, showing the need for additional studies to help understand how risk and protective factors in-

teract to produce different outcomes. Thus said, the findings confirm the importance of having a relationship with an adult. It also highlights the importance of work and volunteer experience. This may indirectly offer youths more opportunities to form relationships with adults, and provide settings where youths could examine their goals, which were important to predicting self-sufficiency skills. The results of this study point to a variety of areas for practice refinement, as well as for future research.

Notes

1. For more extensive literature reviews see McDonald, Allen, Westerfelt, and Piliavin (1996) and Pecora, Kingery, Nollan, and Downs (1997).
2. At least one study found youths in foster care graduating at comparable rates to the general population (Wedeven, Pecora, Hurwitz, Howell, & Newell, 1996).
3. For a more complete description of the ACLSA, please refer to Nollan, Downs, Pecora, Ansell, Wolf, Lamont, Horn, & Martine (1997) or Nollan, Pecora, Downs, Wolf, Horn, Martine, Lamont, & Ansell (1997).
4. Multiple regression is designed to find the best linear combination of a set of independent variables with a dependent variable, minimizing the difference between the actual and predicted values of the dependent variable (Tabachnick & Fidell, 1989).

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