

# UC Irvine

## UC Irvine Previously Published Works

### Title

Perceived Social Environment and Adolescents' Well-Being and Adjustment: Comparing a Foster Care Sample With a Matched Sample

### Permalink

<https://escholarship.org/uc/item/1fj0d6j1>

### Journal

Journal of Youth and Adolescence, 35(3)

### ISSN

0047-2891

### Authors

Farruggia, Susan P  
Greenberger, Ellen  
Chen, Chuansheng  
[et al.](#)

### Publication Date

2006-06-01

### DOI

10.1007/s10964-006-9029-6

### Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed

# Perceived Social Environment and Adolescents' Well-Being and Adjustment: Comparing a Foster Care Sample With a Matched Sample

Susan P. Farruggia,<sup>1</sup> Ellen Greenberger,<sup>2</sup> Chuansheng Chen,<sup>3</sup> and Jutta Heckhausen<sup>4</sup>

Received October 17, 2005; accepted January 12, 2006  
Published online: 3 May 2006

Previous research has demonstrated that former foster care youth are at risk for poor outcomes (e.g., more problem behaviors, more depression, lower self-esteem, and poor social relationships). It is not clear, however, whether these findings reflect preemancipation developmental deficits. This study used 163 preemancipation foster care youth and a matched sample of 163 comparison youth. Results showed that foster-care youth did not differ from the comparison sample on measures of well-being, including depressed mood, problem behavior, and self-esteem. Foster care youth reported higher levels of work orientation, but lower levels of academic achievement, aspirations, and expectations. In addition, compared to the matched sample, foster care youth perceived better social environments with respect to their important nonparental adults (VIPs) and peers, but poorer social environments relating to their parents. These differences in social environments may have offset each other and resulted in similar levels of psychological well-being for the two groups of youth. Regression analyses further showed that social environments were linked to selected adolescent outcomes, and nonparental VIPs were especially important for the foster care sample.

**KEY WORDS:** foster care; problem behavior; depressed mood; child maltreatment.

## INTRODUCTION

The proportion of children in foster care in the U.S. increased dramatically between 1980 and 2000 (U.S. De-

partment of Health and Human Services, 2004). In 1980, 4.7 of every 1,000 U.S. children were in foster care; in 2000, the proportion had increased to 7.7 of every 1,000 children. By September 30, 2002, approximately 532,000 U.S. children were in foster care (U.S. Department of Health and Human Services, 2004). Within Los Angeles County, California—the location where the current study was initiated—33,502 youth were in substitute care in June, 2002 (Department of Social Services, 2002).

An abundance of research, albeit of varying quality, suggests that foster care youth are at risk for poorer outcomes than are their age-mates who are not in foster care. For example, studies indicate that foster youth tend to have higher levels of problem behavior than their age-mates and are more likely to have been incarcerated or in trouble with the law (Benedict *et al.*, 1996; Courtney *et al.*, 2005; Festinger, 1983; Kraus, 1981). In an early study conducted in the 1950s, McCord *et al.* (1960) found

<sup>1</sup>Doctoral student, Department of Psychology and Social Behavior, School of Social Ecology, University of California, Irvine. Current interests: Cross-cultural study of adolescent well-being, at-risk youth. To whom correspondence should be addressed at Department of Psychology and Social Behavior, 3340 Social Ecology II, University of California, Irvine, California; e-mail: sfarrugg@uci.edu.

<sup>2</sup>Professor of Psychology and Social Behavior, School of Social Ecology, University of California, Irvine. Received PhD in clinical psychology from Radcliffe College, Harvard University. Current interests: Role of culture, family, peers, and nonparental adults in adolescent development.

<sup>3</sup>Professor of Psychology and Social Behavior, School of Social Ecology, University of California, Irvine. Received PhD in developmental psychology from University of Michigan. Current interests: Cross-cultural human development; neural bases of language and mathematical learning.

<sup>4</sup>Professor of Psychology and Social Behavior, School of Social Ecology, University of California, Irvine. Received PhD in developmental psychology from University of Strathclyde. Current interests:

Life-span development, motivation and developmental regulation, control and health.

that former foster youth engaged in more criminal behavior and alcohol use than did a matched comparison sample. Recently, Courtney *et al.* (2005) found that 71% of their sample had committed at least one delinquent act while in foster care, and 25% of the sample had committed seven or more delinquent acts. Additionally, these delinquent youth continued to engage in problematic behavior after they had been discharged from foster care: 18% had been arrested at least once in the 12–18 months after leaving the foster care system. Similarly, Buehler *et al.* (2000) found that a sample of young adults previously in foster care were significantly more likely to have problems with drugs and alcohol than a random sample of their agemates. Not surprisingly, therefore, former foster youth are more likely to be unemployed (Blome, 1997) and to experience homelessness (Benedict *et al.*, 1996; Mangine *et al.*, 1990). Nationally, 25–50% (depending on the sample) of former foster youth become homeless at some point during adulthood, and 40% of emancipated youth rely upon public assistance to survive (Orangewood Children's Foundation, 2001).

Foster youth are also at risk for problems in their social lives. Cook-Fong's (2000) study indicated that former foster youth were more likely to experience social isolation and marital unhappiness (see also Cook, 1992). Similarly, Buehler *et al.* (2000) found that young adults who had been in foster care were more likely to report marital conflict than were either a random sample of their agemates or a matched sample. Further, former foster youth were more likely to report relational violence (Benedict *et al.*, 1996) than comparison groups.

Perhaps related to their behavioral and social problems, foster youth also have been found to experience poorer psychological well-being. Not all studies have shown consistent results, however. Using data from the National Survey of Families and Households, Cook-Fong (2000) found that adults who were formerly in foster care had higher depression scores than their agemates who had not been in foster care, and Cook's (1992) study revealed that former foster youth had lower levels of self-esteem than a comparison group. Unlike Cook-Fong (2000), Buehler *et al.* (2000) found that young adults formerly in foster care did *not* differ in depressed affect and self-esteem from either a random sample of their agemates or a sample matched to the former foster youth on such key variables as gender and ethnicity. The reasons for the differences between these findings are unclear.

Finally, the educational deficits that former foster care youth bring to the transition to adulthood are no doubt a factor in their higher rates of unemployment, homelessness, and antisocial behavior. Researchers have documented large and significant differences in stan-

dardized achievement scores and high-school drop-out rates (Blome, 1997; Zetlin *et al.*, 2004). Poorer academic skills in mathematics, writing, and reading are evident at least as early as fourth grade (Mitic and Rimer, 2003). Foster care youth are also far more likely than comparison youth to be placed in special education programs as a result of academic and/or emotional problems, with some studies reporting rates as high as 50% (Blome, 1997). On a brighter note, it appears that foster youth who obtain a high school diploma or equivalent degree, and importantly, are still in care at age 19 (i.e., past the usual time of emancipation) are more than three times as likely as already-emancipated foster youth to be enrolled in a 2- or 4-year college (Courtney *et al.*, 2005). These findings clearly indicate that foster youth are at a significant disadvantage in terms of academic skills and credentials and suggest that even for the more successful students, an extended period of foster care may confer an advantage.

### Limitations of Previous Research

Research on adults who spent time in foster care typically has not taken into account their psychological well-being before the transition from foster care to independence. It is not clear, therefore, whether older foster care youth have lower levels of well-being and adjustment than their agemates prior to their emancipation, or whether such differences first emerge at the point when foster youth no longer have the supports provided by the foster care system. Only a few studies have attempted to address this issue. Kortenkamp and Ehrle (2002), using data from the 1997 and 1999 National Survey of America's Families, compared youth ages 3–17 who were in both kin and nonkin foster homes to children in parent care and children in high-risk parent care (single parent, low income). Kortenkamp and Ehrle found that the foster care children had more behavioral and emotional problems than the two comparison groups. However, the foster care sample was less likely to have been suspended or expelled from school during the previous year than the high-risk parent care group. One major limitation of this study is that the different groups were not matched on any variables. Therefore, it was not clear whether the differences could be attributed to foster care or to other background variables (e.g., ethnicity, socioeconomic status).

In addition, little systematic research has examined the quality of foster youths' relationships with peers and key nonparental adults in their lives. This is surprising, inasmuch as research on normative adolescent development has abundantly demonstrated the important role

these persons play in adolescents' well-being. For example, peer popularity is negatively related to adolescent depression (Jacobsen *et al.*, 1983); peer rejection is positively related to both adolescent depression (Petersen *et al.*, 1991) and childhood loneliness (Parker and Asher, 1993); and peers' involvement in problem behavior is strongly predictive of adolescents' own level of misconduct (Chen *et al.*, 1998; Dodge and Pettit, 2003; Jessor and Jessor, 1977). Moreover, having peers who react negatively to adolescent misconduct has been shown to buffer the effects of family risk factors for misconduct and risk factors associated with adolescents' "VIPs" (important nonparental adults; Greenberger *et al.*, 1998).

The positive role that nonparental adults play in adolescent development was demonstrated in Werner and Smith's landmark longitudinal study (1982) of children at high risk for poor developmental outcomes. This study revealed that all participants who experienced family instability and poverty as children but became well-adjusted adults had had an important adult in their lives. More recent research based on samples at lower risk suggests that the majority of adolescents have a nonrelated adult or extended family member whom they consider important in their lives, but indicates that this phenomenon is more common among girls than boys (Blyth *et al.*, 1982; Greenberger *et al.*, 1998). Moreover, findings from a study by Beam *et al.* (2002) suggest that having a nonparental VIP—a relationship reported by 83% of females and 68% of males—is a normative occurrence during the adolescent years rather than one triggered by crisis. In their study, VIPs were significantly more likely to be adult females than males. Chen *et al.* (2003) found that adolescents perceived their VIPs providing a better social environment (i.e., more warmth and acceptance, more sanctions against misconduct) and better role models (i.e., fewer problem behaviors and depressive symptoms) than either their parents or peers. In cross-sectional studies, it has been shown that young mothers who had an adult mentor (similar to a VIP) were less depressed than young mothers who did not have such a person in their lives (Rhodes *et al.*, 1992), and that adolescents who perceived their VIP as less depressed and less involved in problematic behavior were themselves less depressed (Greenberger *et al.*, 1998). (See McDonald *et al.*, 1996 for a more comprehensive discussion of the limitations of existing research on foster youth.)

### The Present Study

To overcome the limitations of previous research, the present study examined well-being and adjustment *prior*

to the transition from foster care to independence among older youth and focused on the quality of youths' social environments in multiple domains (parents, peers, and VIPs) in order to explore whether they may complement and compensate for one another. In addition, unlike most previous researchers, we have randomly sampled foster care youth from a larger population and utilized a matched comparison sample of youth who are not in care. In the present study, we address the following questions:

1. How do older foster-care youth compare to other youth on indicators of well-being and adjustment? We hypothesized that youth in the foster care system would have higher levels of depressed mood and problem behavior and lower levels of self-esteem, work orientation, and academic achievement. This hypothesis is based on the preponderance of previous literature showing that young adults who have emancipated from the foster care system are at risk for poorer well-being than their age-mates.
2. Do foster care youth differ from other youth in their perceived social environments?
  - (a) We hypothesized that foster care youth, relative to the comparison group, would perceive their biological parents and peers as affording them lower levels of warmth and support and as having higher levels of problem behavior and depressed mood. Troubled relationships with parents and/or parental psychosocial problems are common reasons for children's entry into the foster care system, and poorer relationships with parents could set foster youth on a less solid foundation for establishing high-quality relationships with well-adjusted peers.
  - (b) Do foster care youth differ in the prevalence of nonparental VIPs in their lives, and in various characteristics of the VIP and the adolescent-VIP relationship? In view of the absence of research on this topic among youth in foster care, we advanced no hypotheses. We examine these questions in exploratory analyses.
3. Are the associations between measures of well-being and adjustment and perceived social environments different for the two groups? We hypothesized that for foster care youth, the associations between parental variables and adolescent well-being would be weaker, and the associations between VIP and peer social support with well-being would be stronger, than those found

in the comparison sample. This hypothesis is based on the view that contact between foster care youth and their biological parents is likely to be limited, thus increasing the potency of their peers and VIPs.

## METHODS

### Participants

Participants in this study were 163 youth (46% male and 54% female) who could be matched with an available comparison sample on key demographic variables (see below). Originally, 188 foster care (FC) participants were randomly selected from a complete list of all youth 17 years of age or older in foster care in Los Angeles County for at least 1 year. Participants were in the protective custody of Los Angeles County Department of Children and Family Services (DCFS) and lived in a variety of situations: nonkin foster homes (58%), kin foster homes (17%), group homes (20%), independent living programs (3%), and detention centers (2%). The ethnicity of the participants approximated the ethnic composition of older youth in the Los Angeles County child welfare system (41% African American, 39% Latino, 12% white, and 8% other/mixed ethnicity). The mean age of FC youth in our sample was 17.7 years, and the average years "in care" was 9.7 years.

The comparison sample (COMP) of participants were 163 high school students from four Los Angeles-area high schools who were selected from a larger sample of 1183 youth from another study (Chang *et al.*, *in press*) and matched to the FC sample on age, gender, and ethnicity. A match was not found for 25 of the FC participants; 10 were not matched due to age (the youth in foster care were up to 20 years old), and 15 were not matched due to being of mixed ethnicity that was not represented in the comparison group. Most of the comparison participants' parents were at least high school graduates, and 22% of the fathers and 29% of the mothers had a 4-year college degree or beyond. Close to a majority of the participants reported living with their intact, biological family (45%), 34% lived with a single parent, 13% lived with a parent and a step-parent, and 8% had other living arrangements (e.g., joint custody). None of the matched sample lived in foster care.

### Procedures

#### *Foster Care Youth*

Los Angeles County DCFS provided names, phone numbers, and addresses of all FC youth who met inclu-

sion requirements (i.e., age), as well as contact information for their primary caregivers (e.g., foster parent, group home manager) and their DCFS caseworkers. The Juvenile Court of Los Angeles County had approved petitions for access to the youths' information. In addition, a Certificate of Confidentiality was secured from the National Institute of Health.

Of those adolescents who were contacted and continued to meet study criteria at the point when the study began (e.g., had not emancipated or moved out of state), 78% agreed to participate and were interviewed and surveyed, 7% who had agreed to participate failed to appear for a scheduled interview multiple times and were dropped from the sample, 11% declined to participate, and 4% did not receive permission to participate from their foster parent. FC youth who participated did not differ from nonparticipants on gender, age, or ethnicity. They did differ on placement type, with youth who resided in foster homes more likely to refuse than youth who resided in group homes, independent living programs, or other placement types,  $\chi^2 = 22.27$ ,  $p < .001$ . Of those who refused, 84% were in a foster home; foster home placement accounted for 60% of the youth who participated.

The FC youth completed a survey and participated in an individual, in-person interview at a community location of their choice, such as a bookstore or coffee shop. Interviews took place at the youths' current residence only when the participant's group home or detention center required it. In those cases, the interviews took place in a private office. The session, including survey completion and an interview, lasted on average 2 hours. The youth were offered a beverage during the interviews and compensated \$35.00 for their participation.

#### *Comparison Youth*

Prior to data collection for a separate study, researchers and their assistants went to classrooms at the four participating high schools and informed all seniors of the proposed study. Parental consent forms were passed out to youth who were interested in participating in the study but were not yet 18 years old. Researchers returned approximately 1 week later, collected participants' signed assent forms and parental consent forms, and administered a survey during a regular class period. At the end of the period, students turned in their surveys and a drawing was held to randomly select two students per class to receive a music store gift certificate ranging from \$25 to \$100. The participation rate for this sample was 81%.



## Measures

Participants in both samples received a survey containing demographic questions and the measures described below.

### Adolescent Well-Being and Adjustment

*Depressed mood* was assessed by the 20-item Center for Epidemiologic Studies Depression Scale (CES-D Scale) (Radloff, 1977). This scale assessed frequency of depressive symptomatology over the past month with responses ranging from 1 = *never* to 4 = *almost every day*. A sample item was “I could not get going.” This scale had high internal consistency (FC sample,  $\alpha = .85$ ; COMP sample:  $\alpha = .88$ ).

*Educational aspirations* of the participant were assessed by the question, “What is the highest level of education that you ideally would like to complete, if it were up to you?” Responses were made on a 4-point scale (1 = *high school*, 2 = *two-year college or vocational school*, 3 = *four-year college*, 4 = *graduate school*).

*Educational expectations* of the adolescent was measured by the question, “Realistically, what is the highest level of education you think you will finish?” Participants responded on the same 4-point scale as for educational aspirations described above.

*Grades in school* was measured by the question, “What have your grades been this year?” Participants responded on a 7-point scale ranging from 1 = “mostly D’s and F’s” to 7 = “Mostly A’s.”

*Problem behavior* was assessed by a 20-item misconduct scale (Greenberger *et al.*, 2000). Respondents indicated how often they had engaged in each behavior in the past 6 months, on a 4-point scale including 1 = *Never*, 2 = *Once or twice*, 3 = *3–4 times*, and 4 = *More often*. Sample items were “stole money or property,” “got into a physical fight,” and “smoked marijuana.” This scale had high internal consistency ( $\alpha = .89$  and  $.90$ , for the FC and COMP samples, respectively).

*Self-esteem* was assessed by the 10-item Rosenberg Self-Esteem Scale (1965). Adolescents responded to statements such as, “I feel that I have a number of good qualities” with responses ranging from 1 = *strongly disagree* to 4 = *strongly agree*. This scale had high internal consistency for both the FC sample ( $\alpha = .80$ ) and the COMP sample ( $\alpha = .87$ ).

*Work orientation* was measured by the 10-item Work Orientation Scale (Greenberger *et al.*, 1975). This scale

measures task persistence and pleasure in work. Participants indicated their degree of agreement with items such as, “I find it hard to stick to anything that takes a long time” (reverse-coded), on a 4-point scale from 1 = *strongly disagree* to 4 = *strongly agree*. The internal consistency for the scale was  $.70$  for the FC sample and  $.67$  for the COMP sample.

### Perceived Social Environment

*Depressed outlook of peers and VIP* was assessed by previously developed 3-item scales (Greenberger *et al.*, 1998). Participants indicated if their peers and VIP had felt or acted depressed in the past 6 months (1 = *yes* and 0 = *no*). A sample item from these scales was, “acted depressed.” Internal consistency for the FC sample was  $.75$  and  $.61$ , for peers and VIP, respectively; for the COMP sample, the corresponding  $\alpha$ 's were  $.71$  and  $.74$ .

*Perceived problem behavior of peers and VIP* was measured by 7-item scales previously developed by Greenberger and Chen (Greenberger *et al.*, 1998). Participants indicated whether their peers or VIP had engaged in problem behavior related to work, substance abuse, delinquency, or aggression in the past 6 months (1 = *yes* and 0 = *no*). A sample item from these scales was, “got into a physical fight.” The internal consistency of these scales (both samples) was adequate (for the FC sample,  $\alpha = .83$  for peer problem behavior and  $.65$  for VIP problem behavior; for the COMP sample, the corresponding  $\alpha$ 's were  $.78$  and  $.74$ ).

*Support from parents, VIP, and peers* was measured by identical 7-item scales. Participants indicated the amount of support they received from the specified person or group in the past 6 months by responding to statements such as “provided you with transportation” and “gave you support for family problems.” They used a 4-point scale including 1 = *Never*, 2 = *Once or twice*, 3 = *3–4 times*, and 4 = *More often*. The scales had adequate to high internal consistency for both FC and COMP samples: parental support,  $\alpha = .92$  and  $.75$ ; VIP support,  $\alpha = .83$  and  $.80$ ; peers' support:  $\alpha = .82$  and  $.78$ , respectively.

*VIP*. Several other measures relevant to the adolescents' VIP were obtained. Participants first indicated whether they had an important nonparental adult in their lives, age 21 or older, whom they felt would “be there” for them if needed. If they responded “yes,” participants indicated the *age*, *gender*, *employment status* (yes/no), and *relationship* of VIP to the adolescent (e.g., aunt, teacher). They also reported the *level of education* of their VIP, checking yes or no to “high school graduate” and “college graduate.” From these responses, a 3-point

scale was created, 0 = *Did not graduate from high school*, 1 = *Graduated from high school only*, and 2 = *Graduated from college*. Youth also indicated how frequently they had in-person or telephone *contact* with their VIP on a 4-point scale, ranging from 1 = *A few times a year*, 2 = *Once or twice a month*, 3 = *Once or twice a week*, and 4 = *Nearly every day*. The overall *importance of the VIP* to the adolescent was also assessed on a 3-point scale: important (1), very important (2), and truly key (3).

*Perceived warmth and acceptance* from parents and peers was measured by 8-item scales based on the Parental (Peer) Warmth and Acceptance Scale (Greenberger *et al.*, 1998). Participants responded to statements such as “they enjoy spending time with me” and “they really understand me” on a 6-point scale ranging from 1 = *strongly disagree* to 6 = *strongly agree*. The scales had high reliability for both samples (parental support,  $\alpha = .89$  and  $.81$  for FC and COMP samples, respectively; peers’ support,  $\alpha = .80$  for both groups).

## RESULTS

### Between-Sample Comparisons

#### *Well-Being and Adjustment*

Independent-samples *t* tests were conducted comparing the two groups on measures of well-being and adjustment. FC youth had significantly higher levels of work orientation, but lower grades in school and lower educational expectations and aspirations. No differences were found for depressed mood, self-esteem, and problem behavior,  $p > .05$  (see Table I).

#### *Perceived Social Environments*

Again using independent-samples *t* tests, the two groups were compared on social environment indicators

**Table I.** Comparison of Foster Care Youth With Comparison Youth on Measures of Well-Being and Adjustment

	Foster care <i>M</i> (SD)	Comparison <i>M</i> (SD)	<i>t</i> -test
Depressed mood	1.66 (.31)	1.71 (.35)	n.s
Self-esteem	3.12 (.47)	3.21 (.59)	n.s
Problem behavior	1.43 (.46)	1.45 (.45)	n.s
Work orientation	2.92 (.49)	2.82 (.47)	1.98*
Grades in school	4.29 (1.55)	4.74 (1.39)	2.74**
Educational expectations	2.43 (1.02)	2.68 (.99)	2.51*
Educational aspirations	2.56 (1.01)	2.89 (.98)	2.70**

\* $p < .05$ ; \*\* $p < .01$ .

**Table II.** Comparison of Foster Care Youth and Comparison Youth on Social Environment

	Foster care <i>M</i> (SD)	Comparison <i>M</i> (SD)	<i>t</i> -test
Parents			
Warmth	4.4 (1.30)	4.6 (.99)	n.s
Support	2.4 (1.05)	3.1 (.66)	6.76***
Depressed mood	.25 (.33)	Not available	
Problem behavior	.13 (.21)	Not available	
Peers			
Warmth	4.7 (.89)	4.6 (.87)	n.s
Support	2.6 (.76)	2.6 (.70)	n.s
Depressed mood	.31 (.37)	.33 (.36)	n.s
Problem behavior	.33 (.32)	.24 (.28)	2.49*
VIP			
Has a VIP (%)	86%	64%	4.58***
Warmth	5.3 (.57)	Not available	
Support	3.2 (.76)	2.9 (.77)	2.93**
Depressed mood	.21 (.29)	.23 (.33)	n.s
Problem behavior	.07 (.14)	.13 (.21)	2.77**

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

for biological parents, peers, and VIPs (important non-parental adults). As shown in Table II, compared to the matched sample, youth in foster care reported receiving less support from their parents ( $p < .001$ ), but more support from their VIPs ( $p < .01$ ). The two samples did not differ in perceived parental level of warmth and acceptance. A  $2 \times 2$  ANOVA revealed main effects of both sample ( $F(1, 296) = 24.65$ ,  $p < .001$ ) and gender ( $F(1, 296) = 9.58$ ,  $p < .01$ ). FC youth were more likely to have a VIP than were the COMP youth (86% versus 64%); and girls were more likely to have a VIP than boys (82% versus 69%). The interaction of gender and sample was not significant,  $p > .05$ . In addition, foster youth reported greater involvement in problem behavior by their peers ( $p < .05$ ), but less by their VIPs ( $p < .01$ ).

### Within-Sample Comparisons

Comparisons were also made across domains of the social environment for the FC sample, using paired-samples *t* tests. FC youth reported more warmth and acceptance from their VIPs than from their parents,  $t = 6.25$ ,  $p < .001$ , or peers,  $t = 6.89$ ,  $p < .001$ , and also more warmth and acceptance from their peers than from their parents,  $t = 2.68$ ,  $p < .01$ . FC youth perceived their VIPs as more supportive than both their parents,  $t = 7.23$ ,  $p < .001$ , and peers,  $t = 7.92$ ,  $p < .001$ . No differences were found between levels of perceived parent and peer support. FC youth reported that their peers had higher levels of depressed mood than their parents,  $t = 2.00$ ,  $p < .05$ , and VIPs,  $t = 3.22$ ,  $p < .01$ . No significant

difference was found between perceived depressed mood of VIP and parental depressed mood. Finally, youth in foster care reported significantly more involvement in problem behavior by their peers than by their parents,  $t = 5.84$ ,  $p < .001$ , who in turn were reported to be more involved in problem behavior than their VIPs,  $t = 2.19$ ,  $p < .05$ .

Using paired-samples  $t$  tests, comparisons of the social environments were also made across domains for the COMP sample. For youth in this sample, no differences were found between parents and peers' warmth and acceptance,  $p > .05$ . (VIP warmth and acceptance was not available for this sample.) COMP youth reported more support from their parents than from VIPs,  $t = 4.28$ ,  $p < .001$ , and more support from their VIPs than from their peers,  $t = 2.42$ ,  $p < .05$ . Regarding depressed mood and problem behavior, COMP youth reported that their VIPs were less depressed,  $t = 3.02$ ,  $p < .01$ , and less involved in problem behavior,  $t = 3.98$ ,  $p < .001$ , than were their peers. (Depressed mood and involvement in problem behavior of parents were not assessed in the COMP sample.)

### Associations Between the Social Environment and Adolescent Adjustment

To examine the associations between social environment and outcomes and to compare whether such associations differed between the two samples, we conducted a series of analyses. First, we used confirmatory factor analyses to investigate the measurement models of the outcome variables. Second, we examined the contributions of parents, peers, and VIPs to adolescent outcomes. These analyses were conducted separately for each dimension of the social environment (i.e., perceived warmth, support, problem behavior, and depression). A small model approach was used for two reasons: to examine the unique contributions of each social context and to avoid the problem of insufficient sample size when all latent constructs were included in a single model. Third, we conducted multigroup comparisons to investigate whether the regression coefficients varied significantly between FC and COMP samples.

In the measurement model, the initial confirmatory factor analyses included two latent constructs: mental health (three observed variables: self-esteem, CESD, misconduct) and achievement (four observed variables: grades, educational aspiration, educational expectations, and work orientation). However, this model did not converge. Two modifications were made: misconduct was treated as a separate factor, and work orientation was allowed to load on both mental health and achievement latent constructs. (The significant loading of work orienta-

tion on mental health may be due to the fact that the work orientation measure assesses not only the motivation to work and to achieve, but also the *enjoyment* of working.) The new model fit the data, with the following fit indices:  $\chi^2(7) = 13.18$ ,  $p = .07$ . GFI = .99, AGFI = .96, NFI = .97, CFI = .99, RMSEA = .05. The loadings of self-esteem, CESD, and work orientation on mental health were, respectively, 1.0 (set to 1.0),  $-.40$  ( $se = .07$ ,  $p < .001$ ), and  $.32$  ( $se = .07$ ,  $p < .001$ ). The loadings of grades, educational aspirations, educational expectations, and work orientation on achievement were 1.0, 1.91 ( $se = .39$ ,  $p < .001$ ), 1.90 ( $se = .40$ ,  $p < .001$ ) and  $.27$  ( $se = .08$ ,  $p < .01$ ), respectively. Comparisons of the measurement models for the FC and COMP samples revealed no significant differences in factor loadings,  $\Delta\chi^2(5) = 5.55$ , n.s.

The two latent constructs and the separate misconduct variable were then submitted to a series of regression analyses. Table III shows the regression coefficients for the FC sample. Clearly, perceived warmth from all three social contexts made unique contributions to adolescents' mental health. However, perceived warmth was not related to either achievement or adolescent misconduct. Perceived social support was not significantly associated with any of the three outcomes. Perceived problem behaviors of both their peers and VIP were significantly associated with adolescents' own misconduct. In addition, VIPs' problem behavior was related to adolescents' mental health (but unexpectedly, in a positive direction) and achievement (in a negative direction, as expected). Finally, only perceived VIPs' depression made a significant contribution to adolescents' problem behavior.

When the above models were compared across the FC and COMP samples (only for those variables that were available in both samples), two models showed no significant differences:  $\Delta\chi^2(9) = 5.04$ , n.s., for the warmth and acceptance model; and  $\Delta\chi^2(6) = 9.40$ , n.s. for the support model. For perceived depression, however, results showed significant differences between the two samples,  $\Delta\chi^2(6) = 16.57$ ,  $p < .001$ . Further examination revealed that much of that difference ( $\chi^2[1] = 12.08$ ) was due to the path between VIP depression and adolescent misconduct:  $.61$  ( $se = .13$ ,  $p < .001$ ) for the FC sample, but only  $-.02$  ( $se = .16$ , n.s.) for the COMP sample.

In the model focusing on perceived problem behaviors, there were significant differences between FC and COMP youth,  $\Delta\chi^2(6) = 22.35$ ,  $p < .001$ . Further analyses revealed that the differences were due to (1) significantly greater path coefficients between VIP problem behavior and adolescents' mental health ( $.62$ ,  $p < .05$ ) and achievement ( $-.88$ ,  $p < .05$ ) for the FC sample than for the COMP sample (corresponding coefficients were  $-.10$  and  $-.12$ , n.s.); and (2) significantly greater path



**Table III.** Summary of Multiple Regression Analyses for the Foster Care Sample

	Mental health	Achievement	Misconduct
Parental warmth	.08 (.03)**	-.06 (.04)	.01 (.03)
Peer warmth	.15 (.04)***	.05 (.06)	-.08 (.04)
VIP warmth	.15 (.06)*	.10 (.09)	-.00 (.07)
R <sup>2</sup>	.31	.04	.02
Parental support	-.01 (.04)	-.03 (.05)	.02 (.04)
Peer support	.10 (.05)	.01 (.06)	.08 (.05)
VIP support	.05 (.06)	.02 (.07)	.00 (.06)
R <sup>2</sup>	.03	.004	.02
Parental problem behavior	-.10 (.18)	.20 (.23)	-.20 (.16)
Peer problem behavior	.15 (.11)	-.03(.15)	.66 (.10)***
VIP problem behavior	.64 (.28)*	-.92 (.43)*	.87 (.25)**
R <sup>2</sup>	.03	.06	.28
Parental depression	-.19 (.11)	.03 (.16)	-.17 (.13)
Peer depression	-.07 (.09)	.10 (.14)	.13 (.11)
VIP depression	-.19 (.12)	-.34 (.20)	.65 (.14)***
R <sup>2</sup>	.10	.03	.15

Note. Shown in the table are unstandardized coefficients (and standard errors).

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

coefficients between peers' problem behavior and adolescents' mental health ( $-.35, p < .05$ ) and achievement ( $-.43, p < .05$ ) for the COMP sample than for the FC sample (corresponding coefficients were .15 and  $-.02$ , n.s.).

*A Further Look at VIPs*

Additional analyses were conducted to explore similarities and differences between the two samples on the characteristics of their VIPs and the quality of the VIP-adolescent relationship. Table IV shows the relationship of VIPs to adolescents. This table makes clear the consistently lower proportion of kin VIP members in the lives of youth in foster care. Interestingly, 21% of FC youth identified as their VIP who was related to their care: e.g., foster parent, caseworker, group home staff member.

Independent samples *t* tests were conducted on VIP gender, age, level of education, employment status (employed or not), familial relationship (kin or nonkin), age when adolescents met their VIP, frequency of contact, and importance of VIP. (See Table V for a summary of these results.) FC youth were more likely than COMP youth to select a male VIP (69% versus 41%,  $p < .001$ ) and less likely to identify a kin member as their VIP (49% versus 62%,  $p < .05$ ). Further, FC youth rated their VIPs as more important than did the COMP sample,  $t = 15.70$ ,

**Table IV.** Relationship of VIP to Adolescent (Most to Least Common)

	Foster care (%)	Comparison (%)
Sibling	21	18
Aunt/uncle	14	23
Grandparent	11	14
Cousin	4	7
Older friend	14	19
Teacher/coach	6	7
Foster-care related person	21	n/a
Other	9	12

$p < .001$ . The two groups did not differ significantly on the remaining VIP measures.

**DISCUSSION**

The current study made use of a broader array of measures (especially those related to nonparental adults) than is typical of research on foster care youth and, unlike many previous studies, included both a random sample of foster care youth and a matched comparison sample of youth not in care. For these reasons, we believe that our findings make a significant contribution to the literature on at-risk youth. In the following paragraphs, we discuss our findings and their implications for our understanding of, and policies regarding, the social environments of foster care youth.

It was hypothesized that older youth in the foster care system would have lower levels of well-being and adjustment than their agemates not in care (Hypothesis 1). This hypothesis was only partially supported. Consistent with past research, older foster care youth were found to have earned lower grades in school. They also reported lower educational aspirations and expectations than the comparison youth. Contrary to our hypothesis, however, foster care youth did not differ from a comparison group on levels of depressed mood, self-esteem, and problem

**Table V.** Characteristics of VIP and Adolescent-VIP Relationship by Sample

	Foster care	Comparison	<i>t</i> -test
VIP female	31%	59%	4.34***
VIP's age	35.1 years (15.84)	36.6 years (13.83)	n.s
VIP's level of education	1.4 (.72)	1.2 (.72)	n.s
VIP employed	84%	82%	n.s
VIP is kin	49%	62%	2.03*
Age met VIP	7.7 years (7.1)	5.9 years (7.2)	n.s
Frequency of contact	3.4 (.84)	3.2 (1.05)	1.96 +
Importance of VIP	2.4 (.67)	2.1 (.77)	15.70***

†*p* < .10; \**p* < .05; \*\**p* < .01; \*\*\**p* < .001.

behavior. Interestingly, foster care youth had *higher* levels of work orientation. Several factors may help explain these results.

First, although the social environments of foster care youth and comparison youth differed, the differences were not uniformly in the expected direction (see Hypothesis 2). Foster care youth reported that their parents provided a lower level of support and that their peers had more problem behaviors, but they were more likely than the comparison sample of youth to have a VIP and reported more support from their VIPs. Furthermore, relative to the comparison sample, foster youth reported that their VIPs had fewer problem behaviors, rated their VIPs as more important figures in their lives, and had more contact with them (at a trend level). Finally, as anticipated (Hypothesis 3), the magnitude of associations between VIP support and adolescent adjustment was greater (when there were significant differences) for the foster care youth than for the comparison sample. Taken together, these results suggest that higher (and more effective) support for foster care youth from their VIPs may have offset the lower support they received from their parents. As noted earlier, one in five foster care youth selected a VIP whom they knew from the child welfare system, suggesting that they have strong relationships with adults who understand their special circumstances and needs. This can be taken as evidence that, at least in the domain of psychological well-being, the foster care system from which our sample was drawn has worked well to compensate for the loss of parental support. This safety net consists of a complete social network that includes access to therapists, social workers, staff, and foster parents. The finding that a majority of foster care youth identified a male adult as their VIP runs counter to findings from other studies (Blyth *et al.*, 1982; Greenberger *et al.*, 1998) and deserves further study.

Beyond compensation, however, we found evidence that foster care youth fared *better* than their comparison group in one domain—work orientation. One explanation for this unexpected but reassuring finding is that youth in foster care may have been expected to develop better work habits, inasmuch as they lived as “guests” with relatives or foster parents. Additionally, foster youth may have developed more mature work habits as a result of the greater salience of work in their lives. Not only do these youth have lower educational aims than their peers, and thus are more likely to go directly into the work force, but they are more likely to have to rely on their own job earnings rather than economic support from their family.

Although the foster care system drawn upon for this study appears to work well in creating a positive social

environment for the mental health of the youth it serves, these youth’s lower academic achievement and educational expectations and aspirations stand out as a major weakness. This finding is consistent with previous research reviewed earlier. It is clear that the foster care system needs to devote far more attention to the academic issues of youth in care.

Finally, our results supported the notion that foster youth are generally doing well when they are in the system (mainly due to the support of VIPs). However, these youths’ futures are uncertain after they leave the foster care system. Not only will there be significant changes in their social networks, but early adulthood poses numerous challenges for virtually all youth. Future research should examine whether well-being and adjustment decline upon leaving the foster care system and, if so, why. Previous research certainly suggests that there are substantial differences in the adjustment of former foster care youth and those not in care.

Several limitations of the study should be noted. All data were based on adolescents’ self-report, and some of the social support scales that were administered to the foster care youth were not available for the comparison sample (i.e., VIP warmth and acceptance, parental depressed mood, and parental involvement in problem behavior). Because this study is cross-sectional, we cannot claim that associations between measures of the social environment and adolescent well-being are causal in nature. Studies that follow youth from pre- to post-emancipation, using appropriate comparison groups, will provide needed information on these at-risk youth.

To summarize, this study made two main contributions. First, it showed that foster care youth in this sample were adjusting well in terms of psychological well-being, but not in terms of academic achievement. This finding, based on careful sampling and comparison, provides a much-needed, more balanced perspective to foster care. Second, we believe that we have identified an important source of foster care youth’s adequate adjustment. That is, VIPs—nonparental adults who were identified by youth as important persons in their lives—seemed to play a major compensatory role. Previous research has largely emphasized the dysfunctional nature of foster care youth’s biological families and the negative influence of peers. Such deficit models are mainly responsible for the one-sided notion that foster care youth are headed for maladjustment. This study should steer researchers toward the examination of foster care youth’s resilience in the context of VIP social support and raises new questions about why former foster youth have poorer *post-emancipation* trajectories than their peers.

## ACKNOWLEDGMENTS

This project was funded by grants from the Society for the Psychological Study of Social Issues, and the Department of Psychology and Social Behavior, the School of Social Ecology, and the Transdisciplinary Tobacco Use Research Center at the University of California, Irvine. The authors wish to acknowledge Gary Germs for his assistance with project management and a large team of devoted undergraduate research assistants, especially Morgan Kashinsky, Jeanette Milazzo, Jaime Padilla, Anna Pate, and Natasha Simpson.

## REFERENCES

- Beam, M. R., Chen, C., and Greenberger, E. (2002). The nature of adolescents' relationships with their "very important" nonparental adults. *Am. J. Community Psychol.* 30: 305-325.
- Benedict, M. I., Zuravin, S., and Stallings, R. Y. (1996). Adult functioning of children who lived in kin versus nonrelative family foster homes. *Child Welfare* 75: 529-549.
- Blome, W. W. (1997). What happens to foster kids: Educational experiences of a random sample of foster care youth and a matched group of non-foster care youth. *Child. Adolesc. Soc. Work J.* 14: 41-53.
- Blyth, D. A., Hill, J. P., and Thiel, K. S. (1982). Early adolescents' significant others: Grade and gender differences in perceived relationships with familial and nonfamilial adults and young people. *J. Youth Adolesc.* 11: 425-450.
- Buehler, C., Orme, J. G., Post, J., and Patterson, D. A. (2000). The long-term correlates of family foster care. *Child. Youth Serv. Rev.* 22: 595-625.
- Chang, E. S., Chen, C., Greenberger, E., Dooley, D., and Heckhausen, J. (in press). What do they want in life? The life goals of a multi-ethnic, multi-generational sample of high school seniors. *J. Youth Adolesc.*
- Chen, C., Greenberger, E., Farruggia, S., Bush, K., and Dong, Q. (2003). Beyond parents and peers: The role of important non-parental adults (VIPs) in adolescent development in China and the United States. *Psychol. Sch.* 40: 35-50.
- Chen, C., Greenberger, E., Lester, J., Dong, Q., and Guo, M.-S. (1998). A cross-cultural study of family and peer correlates of adolescent misconduct. *Dev. Psychol.* 34: 770-781.
- Cook, S. K. (1992). Long term consequences of foster care for adult well-being. *Dissert. Abstr. Int.* 53(4-A): 1278.
- Cook-Fong, S. K. (2000). The adult well-being of individuals reared in family foster care placement. *Child Youth Care Forum* 29: 7-25.
- Courtney, M. E., Dworsky, A., Terao, S., Bost, N., Ruth, G., Keller, T., and Havlicek, J. (2005). *Midwest Evaluation of the Adult Functioning of Former Foster Youth*. University of Chicago, Chapin Hall Center for Children, Chicago.
- Department of Social Services (2002). Child welfare services supervised children placed in relative homes and foster family homes by county. Retrieved on December 7, 2005 from [http://www.dss.cahwnet.gov/research/res/pdf/compchildrept7\\_02.pdf](http://www.dss.cahwnet.gov/research/res/pdf/compchildrept7_02.pdf).
- Dodge, K., and Pettit, G. (2003). A biopsychosocial model of the development of chronic conduct problems in adolescence. *Dev. Psychol.* 39: 349-371.
- Festinger, T. (1983). *No One Ever Asked Us: A Postscript to Foster Care*. Columbia University Press, New York.
- Greenberger, E., Chen, C., and Beam, M. R. (1998). The role of "very important" nonparental adults in adolescent development. *J. Youth Adolesc.* 27: 321-343.
- Greenberger, E., Chen, C., Beam, M. R., Whang, S., and Dong, Q. (2000). The perceived social contexts of adolescents' misconduct: A comparative study of youths in three cultures. *J. Res. Adolesc.* 10: 365-388.
- Greenberger, E., Josselson, R., Knerr, C., and Knerr, B. (1975). The measurement and structure of psychosocial maturity. *J. Youth Adolesc.* 4: 127-143.
- Jacobsen, R. H., Lahey, B. B., and Strauss, C. C. (1983). Correlates of depressed mood in normal children. *J. Abnorm. Child Psychol.* 11: 29-39.
- Jessor, R., and Jessor, S. (1977). *Problem Behavior and Psychosocial Development: A Longitudinal Study of Youth*. Academic, New York.
- Kortenkamp, K., and Ehrle, J. (2002). The well-being of children involved with the child welfare system: A national overview. *Urban Inst.* B-43: 1-7.
- Kraus, J. (1981). Juvenile drug abuse and delinquency: Some differential associations. *Br. J. Psychiatry* 139: 422-430.
- Mangine, S. J., Royse, D., Wiehe, V. R., and Nietzel, M. T. (1990). Homelessness among adults raised as foster children: A survey of drop-in center users. *Psychol. Rep.* 67: 739-745.
- McCord, J., McCord, W., and Thurber, E. (1960). The effects of foster home placement in the prevention of adult antisocial behavior. *Soc. Serv. Rev.* 34: 415-419.
- McDonald, T. P., Allen, R. I., Westerfelt, A., and Piliavin, I. (1996). *Assessing the long-term effects of foster care: A research synthesis*. CWLA, Washington, DC.
- Mitic, W., and Rimer, M. (2003). The educational attainment of children in care in British Columbia. *Child Youth Care Forum* 31: 397-414.
- Orangewood Children's Foundation (2001). *Fact Sheet*. Orangewood Children's Foundation, Orange, CA.
- Parker, J. G., and Asher, S. R. (1993). Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. *Dev. Psychol.* 29: 611-621.
- Petersen, A. C., Sarigiani, P. A., and Kennedy, R. E. (1991). Adolescent depression: Why more girls? *J. Youth Adolesc.* [Special: The emergence of depressive symptoms during adolescence] 20: 247-271.
- Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Appl. Psychol. Meas.* 1: 385-401.
- Rhodes, J. E., Ebert, L., and Fischer, L. (1992). Natural mentors: An overlooked resource in the social networks of young, African American mothers. *Am. J. Community Psychol.* 20: 445-461.
- Rosenberg, M. (1965). *Society and the Adolescent Self-Image*. Princeton University Press, Princeton, NJ.
- U.S. Department of Health and Human Services (2004). *The AF-CARS Report: Preliminary FY2002 Estimates as of August, 2004*. Retrieved May 15, 2005 from <http://www.acf.hhs.gov/programs/cb/publications/afcars/report9.pdf>.
- Zetlin, A., Weinberg, L., and Kimm, C. (2004). Improving education outcomes for children in foster care: Intervention by an education liaison. *J. Educ. Stud. Place. Risk* 9: 421-429.