



**The author(s) shown below used Federal funding provided by the U.S. Department of Justice to prepare the following resource:**

**Document Title:** **Long-Term Impact of a Positive Youth Development Program on Dating Violence Outcomes During the Transition to Adulthood**

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**Document Number:** **251206**

**Date Received:** **October 2017**

**Award Number:** **2013-VA-CX-0002**

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## **Draft Final Summary Overview**

### **Long-Term Impact of a Positive Youth Development Program on Dating Violence Outcomes During the Transition to Adulthood**

**Grant Number:** 2013-VA-CX-0002

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**Submitted:** October 2, 2017

This project was supported by Grant 2013-VA-CX-0002 awarded by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. Opinions and views expressed in this document are those of the authors and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

## **Long-Term Impact of a Positive Youth Development Program on Dating Violence Outcomes During the Transition to Adulthood**

### **Purpose of the Project**

Young adults with a history of maltreatment and foster care are at significant risk for dating violence (DV) perpetration and victimization.<sup>1 2 3 4</sup> The identification of factors that precede the onset of DV (as identified through longitudinal, as opposed to cross-sectional research) are critical for developing sensitive prevention programming. The purpose of this study was to identify risk and protective factors for dating violence (DV) among young adults (ages 18-22) with a history of maltreatment and placement in foster care. The study extended a decade of research on the Fostering Healthy Futures (FHF) program, a positive youth development program for maltreated youth, by examining data collected from multiple sources at 3 earlier time points (from preadolescence through middle adolescence as part of a randomized controlled trial). The study also examined whether the FHF program buffered the impact of baseline risk on hypothesized mediating factors. The goal of this research was to identify factors that ameliorated the effects of risk to reduce DV perpetration and victimization in young adulthood. The three specific aims included: (1) Describing the topography of DV and developing the measurement model; (2) Using longitudinal data to examine hypothesized relationships among baseline risk factors, mediating risk and protective factors, and DV outcomes; and (3) Examining whether the prevention program attenuated the impact of risk factors on DV victimization and perpetration.

### **Participants**

Participants ( $N=243$ ) for the current young-adult study were recruited for enrollment if they had been enrolled in the FHF study during the summers of 2002-2009 and were currently between the ages of 18-22. The initial FHF study enrolled all 9- to 11-year-olds placed in out-of-home care

within the preceding year by participating counties; 91% of all eligible youth were enrolled. Youth were re-interviewed at Time 2 (1.5 years post-enrollment; mean age = 11.9 years), and Time 3 (2.5-3.5 years post-enrollment; mean age = 13.75), and the current study funded a 4<sup>th</sup> wave of interviews, which took place an average of 9.4 years post-enrollment and 6.4 years following their most recent (either T2 or T3) interview.

Of the 243 participants who were recruited for the Time 4 (T4) young adult interviews, 215 (88.5%) were interviewed. Seven participants refused, 3 were unable to be located, and 18 either aged out of the recruitment window or could not be scheduled after making contact. Descriptive characteristics of the 215 who were interviewed are provided in Table 1.

### **Project Design, Methods and Analyses**

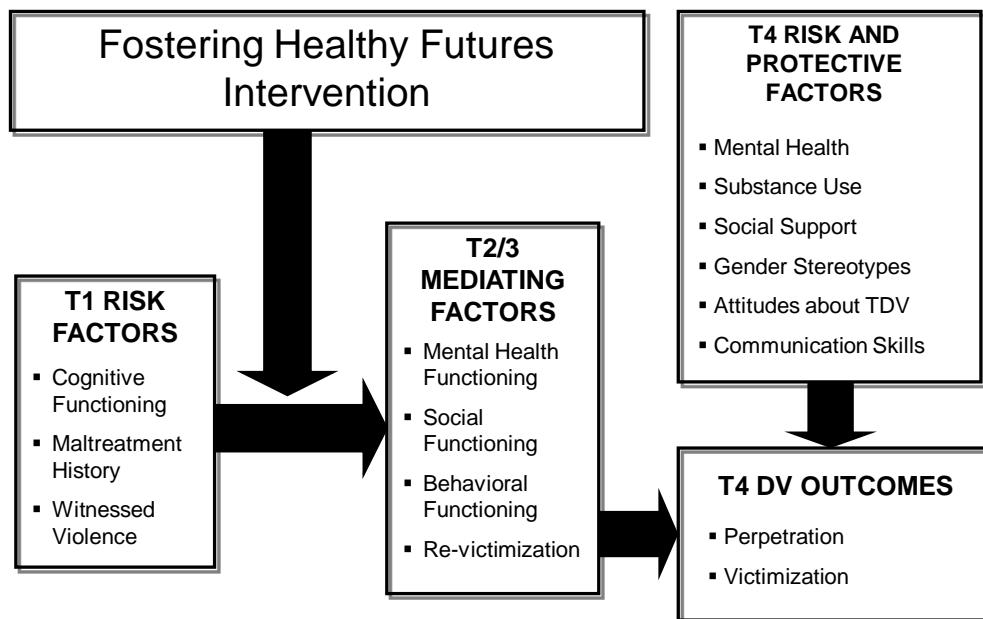
Participants and their legal guardians had given permission and contact information for themselves and others who would know how to locate them at earlier interview time points and we used that information and other publicly available information to locate them for the follow-up interviews. Following informed consent, interviews were conducted by trained graduate students in person or by phone (if living out of the area). Participants were paid \$100 for completing the 3-4-hour interview. Because the interviews contained many sensitive questions, we provided a list of community-based resources after the interviews. All procedures were IRB approved.

**Table 1. Participants' Descriptive Statistics**

<b>Gender</b> , Female	47.9%
<b>Sexual Orientation</b> , Heterosexual	88.8%
<b>Age</b> , mean years	20.0
<b>Race/Ethnicity</b> (non-exclusive)	
White	48.8%
Hispanic/Latino	54.0%
African American	27.4%
Native American	28.8%
Asian/Pacific Islander	3.7%
<b>T1 Maltreatment</b> (non-exclusive)	
Physical Abuse	27.9%
Sexual Abuse	11.6%
Neglect	86.2%
Emotional Abuse	64.7%
Moral/Legal Maltreatment	34.4%
<b>T1 Violence Exposure</b>	96.6%
<b>T1 Cognitive Functioning</b>	
Total IQ, mean std. score	96.2

## Measures

The multi-trait, multi-method measurement protocol assessed baseline and concurrent risk and protective factors, putative mediators, and young adult DV outcomes. The conceptual, measurement, and analytic model is shown below.



**T4 Dating Violence Perpetration and Victimization.** A project-adapted version of the *Conflict in Adolescent Dating Relationships Inventory (CADRI)*<sup>5</sup> was used to measure Dating Violence Perpetration (DV-P) and Victimization (DV-V). Participants were asked to report the past-year frequency of emotional/verbal abuse, relational abuse/threatening behavior, physical abuse, and sexual abuse. Response options ranged from 0 (Did not occur) to 4 (Occurred more than 10 times). Mean scores for each abuse subtype as well as for the Total DV-P and DV-V scores were computed by averaging the frequency ratings (0-4) for the component items.

**T1 Risk Factor Measures.** The measures used to operationalize the T1 risk factors included a published multi-informant measure of cumulative risk, additional maltreatment types

and exposure to intimate partner violence (IPV). The cumulative risk measure is a 7-item measure which was created and validated for maltreated children in foster care; the measure demonstrates good predictive validity.<sup>6</sup> The items (all measured at T1) include: (1) *Cognitive functioning*, (2) *Physical Abuse*, (3) *Sexual Abuse*, (4) *Removal from a single parent household*, (5) *Exposure to community violence*, (6) *Caregiver Transitions*, and (7) *School Transitions*. Consistent with literature on cumulative risk,<sup>7</sup> the measure employs conventional standards for dichotomizing and summing the 7 factors, with higher scores indicating greater cumulative risk. In addition, emotional abuse, moral/legal maltreatment, and exposure to intimate partner violence (IPV) were also included as T1 risk factors. All were coded at baseline (as absent/present) from child welfare and legal records.

**T2/3 Mediating Measures.** As shown in Table 3, there are four mediating factors. Mental health was measured with the *Trauma Symptom Checklist for Children*.<sup>8</sup> Social functioning was measured with the *Inventory of Parent and Peer Attachment*<sup>9</sup> (higher scores indicate greater attachment). Behavioral functioning was measured with the mean of three parallel measures: the Externalizing Behavior scale of the *Child Behavior Checklist, Youth Self Report*, and *Teacher Report Form*.<sup>10</sup> Finally, revictimization was measured using the *Juvenile Victimization Questionnaire*<sup>11</sup> (JVQ). All measures, with the exception of the JVQ, were measured at both T2 and T3. If a participant completed T2 and T3 interviews, their scores were averaged. If they only completed one of the two intervening interviews, scores from that single time point were used.

**T4 Risk and Protective Measures.** Mental Health Symptoms were assessed with *The K6 Scale*,<sup>12</sup> Substance Use was measured using the *Adolescent Risk Behavior Survey*<sup>13</sup>, and Social Support was measured using the *Social Support Behaviors Scale (SS-B)*.<sup>14</sup> A composite measure of Gender Stereotypes, Attitudes Toward Dating Violence, and Communication Skills (measured

using the *Safe Dates Evaluation*<sup>15</sup> and the *Attitudes about Aggression in Dating Situations*<sup>16</sup> scales) was created by dichotomizing each scale at the median and adding up the 0-1 scores. The new measure, called *TDV Attitudes and Behaviors* had scores ranging from 1-5 ( $M=2.3$ ,  $SD = 1.5$ ), with higher scores indicating less prosocial attitudes and behaviors.

### **Analyses**

Descriptive statistics were run to examine the frequency of engagement in, and internal consistency of, different subtypes of DV and the Total Perpetration (DV-P) and Victimization (DV-V) scores. Next, a series of correlations was run to examine the relationships between the T1 Risk Factors, the T2/3 Mediators, the T4 Risk and Protective Factors and the T4 DV Outcomes (Perpetration and Victimization). Although we had planned to test our conceptual model by constructing path models to examine whether the T2/3 mediators explained the direct effects of exposure to T1 risk factors on DV perpetration and victimization at T4, we were unable to conduct these analyses due to the fact that only one of the T1 variables was related to the DV Outcomes. Therefore, we examined whether the T2/3 predictors were related to the DV Outcomes after controlling for the T1 risk factors. Finally, we tested whether participation in the FHF intervention moderated the impact of T1 Risk Factors on T2/3 Mediating Factors. Because only 2 of the 16 moderating analyses were significant, we did not include the interaction terms in our final models. In most analyses, there were less than 10 participants with missing data and we therefore used listwise deletion.

### **Project Findings**

Table 2 provides descriptive statistics for the T4 DV Outcome variables. An overwhelming majority of youth reported perpetrating, as well as being the victim of, at least one past-year

incident of DV. Abuse sub-type incidence rates were quite variable, with emotional/verbal abuse having the highest rates of perpetration and victimization, and sexual abuse having the lowest rates.

**Table 2 – Descriptive Statistics for the Dating Violence Variables**

	N	Past-year Involvement	Alpha
<b>Total Victimization (DV-V)</b>	211	91.0%	0.92
<b>Total Perpetration (DV-P)</b>	211	84.5%	0.88
<b>Emotional/Verbal Abuse Victimization</b>	211	91.0%	0.88
<b>Emotional/Verbal Abuse Perpetration</b>	211	83.4%	0.87
<b>Relational Abuse Victimization</b>	211	31.3%	0.86
<b>Relational Abuse Perpetration</b>	210	18.6%	0.65
<b>Physical Abuse Victimization</b>	210	38.1%	0.89
<b>Physical Abuse Perpetration</b>	210	18.1%	0.76
<b>Sexual Abuse Victimization</b>	210	21.4%	0.55
<b>Sexual Abuse Perpetration</b>	210	13.3%	0.18

While the measure's internal consistency was acceptable for the total perpetration (DV-P) and victimization (DV-V) scales, Cronbach's alphas were substantially lower for Relational Abuse Perpetration and for Sexual Abuse Victimization and Perpetration. Because of the variability in alphas and the high correlations ( $r_s .4-.9$ ) between the abuse sub-types and the DV-V and DV-P scores, only the DV-V and DV-P scores were used in subsequent analyses.

After operationalizing the DV indices, we examined the bivariate relationships between all predictor variables and the DV variables. As shown in Table 3, of the four T1 Risk Factors, only exposure to Moral-Legal Maltreatment was related to T4 DV-P. Exposure in preadolescence to this type of maltreatment (defined as the caregiver exposing or involving the child in illegal activity or other activities that may foster delinquency or antisocial behavior) led to greater DV-V in young adulthood. While it was not surprising that most of the T1 Risk Factors were not associated with

involvement in DV 9.5 years later, the lack of these direct associations precluded the examination of the mediational models we hypothesized.

As shown in Table 4, however, a number of the T1 Risk Factors were related to the hypothesized and more proximal T2/3 mediators. T1 Cumulative Risk was positively correlated with T2/3 Trauma

Symptoms and Externalizing

Problems, and was negatively associated with Caregiver Attachment. Moral-Legal Maltreatment was negatively associated with Caregiver Attachment. Emotional Abuse and Exposure to DV were unrelated to any of the T2/3 Mediating Factors.

**Table 3. Correlations Between Predictor Variables and T4 Dating Violence Outcomes**

	T4 DV Victimization	T4 DV Perpetration
<b>T1 Risk Factors</b>		
Cumulative Risk	.08	.03
Emotional Abuse	-.03	-.12
Moral-Legal Abuse	.16*	.07
Exposure to DV	-.05	.05
<b>T2/3 Mediating Factors</b>		
Trauma Symptoms	.17*	.17*
Caregiver Attachment	-.17*	-.22**
Externalizing Problems	.21**	.16*
Re-victimization	.21**	.19*
<b>T4 Risk &amp; Protective Factors</b>		
Mental Health	.17*	.19**
Substance Use	.36**	.26**
Social Support	-.20**	-.19**
TDV Attitudes/Behaviors	.24**	.26**

\*p<.05, \*\*p < .01

**Table 4. Correlations between Time 1 Risk Factors and T2/3 Mediating Factors**

<b>T2/3 Mediating Factors</b>	<b>Time 1 Risk Factors</b>			
	Cumulative Risk	Emotional Abuse	Moral-Legal Abuse	Exposure to DV
Trauma Symptoms	.29**	-.03	.01	-.02
Caregiver Attachment	-.16*	-.05	-.17*	-.03
Externalizing Problems	.27**	-.01	.04	.02
Re-victimization	.11	-.03	.07	.01

\*p<.05, \*\*p < .01

All of the T2/3 putative Mediating Factors were bivariately associated with DV-V and DV-P in the expected direction (see Table 3). Specifically, having trauma symptoms, externalizing problems, or being re-victimized in adolescence was associated with more DV-P and DV-V in young adulthood, measured 6 years later. Caregiver attachment in adolescence was negatively associated with both DV-V and DV-P. Not surprisingly, the T4 concurrent risk and protective factors demonstrated the strongest associations with T4 DV-V and DV-P. Trauma symptoms, substance use and TDV attitudes and behaviors were positively correlated with dating violence outcomes, while higher current social support was associated with less dating violence.

The last set of models examined whether the T2/3 Mediating Factors remained significant predictors of T4 DV after controlling for the baseline risk factors. Trauma Symptoms was a significant predictor of DV-V ( $\beta=.15$ ,  $t=2.1$ ,  $p=.03$ ; Overall model:  $\text{Adj } R^2 = .03$ ,  $p=.04$ ), as was Caregiver Attachment ( $\beta=-.14$ ,  $t=-1.9$ ,  $p=.05$ ; Overall model:  $\text{Adj } R^2 = .03$ ,  $p=.05$ ), Externalizing Problems ( $\beta=.19$ ,  $t=2.7$ ,  $p=.007$ ; Overall model:  $\text{Adj } R^2 = .05$ ,  $p=.01$ ), and Revictimization ( $\beta=.19$ ,  $t=2.6$ ,  $p=.01$ ; Overall model:  $\text{Adj } R^2 = .04$ ,  $p=.03$ ), over and above the 4 baseline control variables. Similarly, each of the T2/3 Mediating Factors predicted DV-P over and above the control variables: Trauma Symptoms ( $\beta=.17$ ,  $t=2.4$ ,  $p=.02$ ; Overall model:  $\text{Adj } R^2 = .04$ ,  $p=.02$ ), Caregiver Attachment ( $\beta=-.22$ ,  $t=-3.2$ ,  $p=.001$ ; Overall model:  $\text{Adj } R^2 = .06$ ,  $p=.003$ ), Externalizing Problems ( $\beta=.15$ ,  $t=2.1$ ,  $p=.03$ ; Overall model:  $\text{Adj } R^2 = .03$ ,  $p=.03$ ), and Revictimization ( $\beta=.17$ ,  $t=2.3$ ,  $p=.02$ ; Overall model:  $\text{Adj } R^2 = .04$ ,  $p=.03$ ). Although these full models only accounted for between 3%-6% of the variance, it is notable that the predictors were measured 6-10 years prior to the dating violence outcomes and account for a significant proportion of the variance.

## **Implications for Criminal Justice Policy and Practice in the United States**

This longitudinal study provides a first look at the dating violence involvement of young adults with a history of foster care placement and associated risk and protective factors for such involvement. The results suggest that the vast majority of young adults who have been the victims of maltreatment have been involved in past-year dating violence, although the extent of that involvement varies greatly. Perpetration and victimization were highly correlated, suggesting that complementary interventions are warranted. Mirroring the literature, this study found that emotional/verbal abuse was the most common type of abuse experienced and perpetrated, while the least endorsed types included perpetration of physical and sexual abuse. Future analyses will explore gender differences as well as the contextual factors surrounding dating violence. Foshee and Reyes<sup>17</sup> state that “act” scales are often used to measure DV even though they “have been criticized for being too simplistic to capture the complexity of dating abuse because they do not assess intent, motives, circumstances surrounding the abuse, acts perpetrated or received in self-defense, or severity of acts” (p. 4). We collected data that will permit us to examine (1) partner attributes (age differential, same/opposite sex partner), (2) context (e.g., perpetration in self-defense, in anger, in jest), and (3) consequences (emotional and physical).

This is also one of the first studies to examine an array of risk and protective factors over 10 years among a very high-risk sample for dating violence. While the baseline risk factors did not, for the most part, predict young adult dating violence, a rarely studied form of maltreatment, namely moral-legal maltreatment, was a consistent predictor of dating violence victimization in both the bivariate and multivariate models. Moral-legal maltreatment is when a caregiver exposes a child to illegal activity or forces them to participate in delinquent activities. Victimization as measured at the T2/3 interviews was also found to be a powerful predictor of dating violence

outcomes. Our results suggest that being victimized in certain ways and at certain developmental stages may be more of a risk than witnessing violence for dating violence outcomes.

While it was not surprising that those risk and protective factors which were measured concurrently with dating violence were strongly related, several of these same constructs which were measured in early adolescence also predicted young adult dating violence, suggesting that they may be precursors to the violence. For example, trauma symptoms and behavior/substance use problems in early adolescence and young adulthood were related to dating violence perpetration and victimization, while social support at both time periods was associated with decreased risk of dating violence involvement. All of these are amenable to intervention and have important implications for policy and practice within the juvenile justice, mental health and child welfare systems. Unfortunately, the Fostering Healthy Futures (FHF) intervention did not buffer the impact of the baseline risk factors on the putative mediators. It is hypothesized that although the FHF program may have had short-term beneficial effects in key domains, interventions which are delivered more proximal to the initiation of dating and are more targeted are needed to reduce the risk of relationship violence.

Study participants were racially and ethnically diverse with heterogeneous maltreatment and family characteristics and a range of baseline cognitive, behavioral, emotional, and social functioning. In addition, the study did not exclude youth with emotional and behavioral problems or youth with mild developmental delays, which maximizes the external validity of the findings as does the high recruitment and retention rates. The personal and monetary costs of violence and victimization are staggering.<sup>18 19 20</sup> We hope that this study's findings will have far-reaching benefits that will improve quality of life for vulnerable populations as well as improve public health and security.

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