Patterns of change in children's out-of-home placement: Associated risk factors and outcomes

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Out of home placement (OOHP) affected more than 400,000 children in 2017 (Children’s Bureau, 2017).

$4.5 billion dollars per year is spent on providing care to children in OOHPs.

Average OOHP duration is between 1 and 23 months (Children’s Bureau, 2017).

Removal from the home may be a traumatic experience for children (Kerker & Dore, 2006; Kolko, Hurlburt, Barth, Leslie, & Burns, 2010; Lee et al., 2018).

Research on OOHP of children focuses on two primary areas:
- Risk factors associated with frequency of OOHP (e.g., maltreatment characteristics or parental substance use; Turney & Wildeman, 2017).
- Negative outcomes in children associated with frequency of OOHP.
BACKGROUND: CHILD OUTCOMES

- OOHP has been associated with more depression (Anderson, 2011)

- Post-traumatic stress symptoms (Kolko, Hurlburt, Barth, Leslie, & Burns, 2010)

- Externalizing problems, such as delinquency and aggression (Newton, Litrownik, & Landsverk, 2000; Perry & Price, 2017)

- Greater frequency of OOHPs has been associated with long-lasting negative impacts on the wellbeing of children such as:
  - Greater depressive symptoms and Problem Behaviors –Aggression and Delinquency, Trauma Symptoms, and Insecure Attachment to Caregiver (Lockwood, Friedman & Christian, 2015; Fisher, Stoolmiller, Mannerling, Takahashi, & Chamberlain, 2011; Hall, Stinson, & Moser, 2018; Perry & Price, 2017; Rubin, O’Reilly, Luan, & Localio, 2007; Ryan & Testa, 2005; Bederian-Gardner et al., 2018)
BACKGROUND: RISK FACTORS

- Physical abuse and sexual abuse, relative to other forms of maltreatment, are associated with higher rates of removal from the home (Crawford & Bradley, 2016; Hunter, Coulter, Runyan, & Everson, 1990).

- Family violence and lower family income are also associated with OOHP (Horwitz, Hurlburt, Cohen, Zhang, & Landsverk, 2011).

- Parental mental health problems are associated with greater frequency of OOHP of children over time (Aguiniga, Madden, & Hawley, 2015).

- Parental incarceration, abuse by a caregiver, exposure to violence at home, and caregiver mental illness (Turney & Wildeman, 2017).
• First, few studies evaluate multiple frequency OOHPs over time while accounting for change in placement during each removal from home.

• Second, knowledge is limited about adverse childhood experiences or ACEs that may be associated with unstable patterns of OOHP.

• Finally, the relationship between placement instability and subsequent internalizing (depressive and trauma symptoms) and externalizing (delinquency and aggression) outcomes needs further examination.
• Identify combinations of adverse childhood experiences that are associated with more placement instability in school-aged children (assessed by both frequency and change in placement) – over 3 years.

• To understand long-term negative outcomes during adolescence that are associated with greater placement instability – based on the two above mentioned indicators.
METHODS

- Data come from the National Survey of Child and Adolescent Wellbeing Cohort I (NSCAW I).

- The present study uses data from times 1, 3 and 4 measured approximately 18-months apart for a sub-sample of **1,657 children** between the ages of 9 and 14 at time 1 (1999)

- All contextual predictors (ACEs) of OOHP were assessed at time 1.

- Out of home setting variables were assessed at times 1, 3, and 4

- Internalizing and externalizing problem behaviors were assessed at time 4 when the children were between the ages of 12 and 17.
METHODS

- Adverse childhood experiences (time 1) – Caseworker reported
  - Physical, Sexual, Emotional, Neglect or Supervisory Maltreatment
  - Parental Mental Health Problems, Parent Substance Use, Parental Incarceration, Parental Alcohol Use, and Domestic Violence
  - A dichotomous variable was created for each predictor to where 1 = “exposure,” 0 = “no exposure.”

- OOHP (times 1, 3 and 4) – Caseworker reported
  - At each time point, if the child was in OOHP and if there was any change in the OOHP since the last assessment.

- Trauma Symptoms (time 4) – Self reported
  - Trauma Symptom Checklist for Children (TSCC; Briere, 1996) consists of 10 items
  - Responses ranged from 0 (Never) to 3 (Almost all of the time).
  - A sum score of all items was used (Briere, 1996).
METHODS

- Depressive Symptoms (time 4) – Self Reported
  - 16 items from the Youth Self Report (YSR; Achenbach & Edelbrock, 1991).

- Delinquency (time 4) – Self Reported

- Aggression (time 4) – Self Reported
  - 19 items pertaining to aggressive behaviors – not including an above mentioned delinquency items from the Youth Self Report (YSR; Achenbach & Edelbrock, 1991).

All YSR items were coded 0 for “never true”, 1 for “somewhat true”, and 2 for “very true”. Items were summed to create sum scores

- Covariates: Child age, race, sex and parent education.
ANALYTIC STRATEGY

• Categorized adolescents based on the number of times (i.e., frequency) they were in an OOHP and change in OOHP: Latent Transition Analysis

• Multinomial logistic regression: ACEs as predictors

• Multivariate regression model: depressive symptoms, delinquency, aggression, and trauma symptoms as outcomes.

• Full information maximum likelihood (FIML) was used to deal with missing data (Arbuckle, 1996).
Six patterns in children’s OOHP were found.

- Group 1: Children in out of home situation at all three times with the same placement (n = 116 or 7%; OOHP three times)

- Group 2: Children in out of home at all three time points with one or more reported placement change during the three time points (n = 64 or 4%; OOHP three times with change)

- Group 3: Children in out of home at any two time points but in the same placement (n = 135 or 8%; OOHP two times)

- Group 4: Children in out of home at any two-time points with one placement change (n = 26 or 2%; OOHP two times with change)

- Group 5: Children in out of home at any one time point (n = 275 or 17%; OOHP one time).

- Group 6: who were never in out of home situation (n = 1041 or 62%; no OOHP).
RESULTS: AIM 1

Out of home situation at all three times with the same placement (n = 116; 7%)
Statistically Significant (α = 0.05) Odds Ratios Presented
Reference: Never Out of Home Group

<table>
<thead>
<tr>
<th>Maltreatment Type</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual Maltreatment</td>
<td>2.40</td>
</tr>
<tr>
<td>Emotional Maltreatment</td>
<td>2.58</td>
</tr>
<tr>
<td>Neglect</td>
<td>1.66</td>
</tr>
<tr>
<td>Parent Mental Health Problems</td>
<td>2.53</td>
</tr>
<tr>
<td>Parent Substance Use Problems</td>
<td>2.90</td>
</tr>
<tr>
<td>Parent Alcohol Use Problems</td>
<td>2.78</td>
</tr>
</tbody>
</table>
RESULTS: AIM 1

Out of home at all three time points with one or more placement change (n = 64; 4%) Statistically Significant (α = 0.05) Odds Ratios Presented Reference: Never Out of Home Group

<table>
<thead>
<tr>
<th>Maltreatment: Physical</th>
<th>Maltreatment: Sexual</th>
<th>Parent Mental Health Problems</th>
<th>Parent Incarceration</th>
<th>Parent Substance Use Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.10</td>
<td>2.43</td>
<td>3.26</td>
<td>2.61</td>
<td>4.22</td>
</tr>
</tbody>
</table>
RESULTS: AIM 1

Out of home at any two time points but in the same placement (n = 149; 9%)
Statistically Significant (α = 0.05) Odds Ratios Presented
Reference: Never Out of Home Group
RESULTS: AIM 1

Out of home at any one time point (n = 257; 15%)
Statistically Significant (α = 0.05) Odds Ratios Presented
Reference: Never Out of Home Group

- Maltreatment: Neglect: 1.47
- Parent Mental Health Problems: 1.59
- Parent Substance Use Problems: 2.87
### RESULTS: AIM 2:
Statistically significant results at $\alpha = 0.05$ highlighted; Yellow standardized effects.
Reference: Never Out of Home Group

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Depression</th>
<th>Trauma Symptoms</th>
<th>Delinquency</th>
<th>Aggression</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$b$</td>
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<td>$b$</td>
<td>$\beta$</td>
</tr>
<tr>
<td>OOHP all three times</td>
<td>0.42</td>
<td>0.02</td>
<td>0.44</td>
<td>0.02</td>
</tr>
<tr>
<td>OOHP all three times with change</td>
<td>2.44</td>
<td>0.10</td>
<td>1.92</td>
<td>0.07</td>
</tr>
<tr>
<td>OOHP two times</td>
<td>0.41</td>
<td>0.02</td>
<td>0.71</td>
<td>0.04</td>
</tr>
<tr>
<td>OOHP two times with change</td>
<td>1.52</td>
<td>0.04</td>
<td>0.92</td>
<td>0.02</td>
</tr>
<tr>
<td>OOHP one time</td>
<td>0.66</td>
<td>0.05</td>
<td>0.68</td>
<td>0.05</td>
</tr>
</tbody>
</table>
CONCLUSIONS

• Children in OOHP at three time points and children in OOHP three times with change, on average, experienced five or more adverse childhood experiences at the start of the study.

• Parental substance and parental mental health were critical factors associated with children’s placement instability and any OOHP.

• Children in OOHP three time with change - were most vulnerable to externalizing and internalizing problem outcomes during adolescence.

• Unique contribution of this research –
  • Two indicators of instability: frequency of times in OOHP and change in placement
  • Parental Substance Use
LIMITATIONS

• Does not test mediation

• Only a few outcomes evaluated

• Some groups may be underpowered to detect significant findings

• Unable to evaluate distinct types of OOHPs such as kin-care, foster care, and group homes
IMPLICATIONS & FUTURE DIRECTIONS

- Prevention of adverse childhood experiences could include family support or parental mentoring.
- Prevention of mental health and substance use problems: 12-steps programs, psychotherapy, pharmacological treatments, and stress inoculation treatment.
- Stability critical element of OOHP.
- For children already in OOHP: youth-focused cognitive behavior and dosage.
- Future research should evaluate these associations with larger subgroups.
- Evaluate cognitive and academic outcomes.
- Evaluate OOHP as a mechanism.
Thank You!

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