

# Reunification and Reentry in Child Welfare: A Systematic Review and Meta-analysis

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## Research Problem

In the United States, with a few exceptions, federal law requires children in the custody of child protective services with a goal of reunification with their families of origin to do so within 12 months of their placement into substitute care (Child Welfare Information Gateway, 2009). In general, there is preference for family reunification as the permanency goal for children in care (Kimberlin, Anthony & Austin, 2009). When children reunify with families, a risk for reentry to care or recurrence of maltreatment exists (Kimberlin et al., 2009). Because reunification is the preferred outcome and risk for future maltreatment and reentry to care cannot be eliminated, only decreased, there is a need for further information in this area.

One of the fundamental assumptions of child welfare is that children are better off with their parents (Wulczyn, 2004) and failure to achieve timely reunification can result in many adverse outcomes. These include attachment issues that result from multiple placements (Shireman, 2003), an increase in cost to the child welfare system, and an increased risk that children will “age-out” of the foster care system without adequate supports (Atkinson, 2008). When children do reunify, risk for recurrence of maltreatment or reentry to care cannot be eliminated, only decreased (Kimberlin, et al., 2009). The potential for negative outcomes for children lingering in or re-entering foster care is too great to ignore.

A review of federal policy about the rights of children supports this assumption. In 2001 the Children’s Bureau and the Administration for Children and Families (ACYF) implemented the Child and Family Services Review (CFSR) (ACYF, 2001). This review was an attempt to evaluate the states’ capacity to create positive outcomes for children and families (ACYF, 2001). Two of the measures in the CFSR focus on increasing successful family reunification and decreasing return to out-of-home care. The specific standards are Timeliness of Reunification and Permanency of Reunification.

During round two of the reviews, 76.9% of the states achieved the national standard on foster care reentries, but only 5.8% of states achieved the national standard on reunification, guardianship, or permanency placement with relatives (ACYF, 2011). Further, in round one of the reviews, only 50% of the states achieved the national

standard for foster care reentry, and even less, 36%, achieved the national standard for reunification, guardianship and placement with relatives (ACYF, no date).

National statistics about reunification and reentry continue to warrant attention. In 1998, 17% of children in foster care placements had been in care previously (ACF, 1998). In the 2002-2005 Child Welfare Outcome report to Congress, reentry to care is still identified as an area in need of improvement (ACYF, 2005). According to ACYF, only sixteen of the 32 states reviewed in the second round of the CFSR have achieved the national standard for reunification. This is an increase of four states over the previous three years. Although the percentage of children who re-enter foster care within 12 months of reunification has decreased since 2005, it has remained between 13.1% and 13.2% (ACYF, 2005).

Other sources of information, such as the Child Welfare Outcomes reports, support the CFSR findings about reunification and reentry to care (ACYF, 2009). One would expect promising practices to have already been identified in this area as this pattern of poor performance by states in the area of reunification and reentry has been evident for at least ten years. Unfortunately, upon review of the ACYF database of promising approaches, it is evident that none has been identified to increase successful reunification or decrease reentry to care. Given this continued failure of child welfare agencies to improve outcomes for children around reunification and reentry, the lack of promising approaches in this area, the large numbers of children placed in substitute care, and the high stakes of decisions to return abused or neglected children to their families of origin, research is necessary to help workers identify appropriate services for these children and to make educated decisions about factors that contribute to increased risk or reunification success.

## **Research Background and Hypotheses**

In most areas of social work practice, there is a need for evidence to guide practice. Child welfare is no different. As a result, a body of research is needed that comprehensively analyzes the myriad of existing studies on any particular question for quality of research and evaluates the reported outcomes of these studies. Scholars have been attempting to identify characteristics that result in successful reunification and interventions for supporting reunification since the 1970's. Efforts to synthesize the body of reunification and reentry research have been conducted in the past, but as the body of primary research continues to grow, it becomes more difficult to apply this research to practice and policy in a meaningful manner. Systematic reviews and meta-analyses can serve as valuable tools in translating research to practice (Schlosser, 2006). Because systematic reviews synthesize large bodies of research while minimizing bias, they become a quick reference for practitioners when making practice decisions. By answering the following questions, this systematic review and meta-analysis serve this purpose for child welfare practitioners and policy makers when planning for reunification services and policies.

1. What interventions are effective in increasing the success of reunification of abused or neglected children with their family of origin upon placement into substitute care?
2. What factors are related to reunification likelihood of abused or neglected children with their family of origin upon placement into substitute care?
3. What interventions are effective in reducing reentry to substitute care for abused and neglected children upon reunification with their family of origin?
4. What factors are related to reduced reentry to substitute care for abused and neglected children upon reunification with their family of origin?

In addition to the use of a systematic review to synthesize the best available evidence to address the questions identified above, meta-analyses were conducted on several key hypotheses. Those hypotheses are presented below:

**Hypothesis #1:** *There will be a difference in odds of reunification for families that received supportive services compared to families that did not receive supportive services.*

**Hypothesis #2:** *There will be a difference in odds of reunification for families who received reunification services compared to families that did not receive reunification services.*

**Hypothesis #3:** *There will be a difference in odds of reunification for children of families who receive substance abuse interventions compared to those that did not receive substance abuse interventions*

**Hypothesis #4:** *There will be a difference in odds of reunification for children who experience kinship care compared to those that did not experience kinship care.*

**Hypothesis #5:** *There will be a difference in odds of reentry for children of families who receive supportive services compared to those that did not receive supportive services.*

## **Methodology**

Both systematic reviews and meta-analysis, whether done in conjunction or independently, serve as tools to summarize existing empirical research in a way that allows meaningful conclusions to be drawn from many studies to answer one (or a few) questions (Littell, Corcoran & Pillai, 2008). This systematic review builds upon and expands a 2008 review conducted by Bronson, Saunders, Holt and Beck and sought to answer the identified questions by locating, evaluating and synthesizing research on reunification and reentry and including meta-analyses.

In this research, several efforts were undertaken to ensure all possible studies were identified for the review. A listing of key search terms used in the following searches can be found in Table 1.

- Electronic Database searching
- Hand-searches of child welfare journals
- Review of conference presentations
- Citation searches and reference mining
- Contact with identified experts in the field
- Snowball method

Table 1: Search Terms

Population		Problem	Outcome	Research	Limiters
Child* Youth Infant Toddler Family Teen Adolescent	Abuse Neglect Dependent Maltreated At risk High risk	Separated Foster Care Substitute Care Kinship Care Looked- after children Dependent Out-of- home care Placement	Reunification Reentry/Reentry Reintroduction to care Recidivism Permanency	Factors Association* Correlation* Related Relationship Relational Empirical Quantitative Experimental Quasi- experimental Observational	NOT: Incarcerated Cancer Unruly Delinquent

An initial search of each of these sources was conducted using the identified search terms. Abstracts of all relevant titles were subsequently reviewed to determine if the study still appeared to meet the criteria for inclusion. Studies that met the inclusion criteria after an abstract review received a full review to determine appropriateness for inclusion in the systematic review and meta-analysis. Upon full review, studies that met the inclusion criteria were retained as the “sample” of studies for this review. To be included in this review studies must have:

1. Included only abused or neglected children who were placed in substitute care as a result of abuse or neglect and were under the age of 18
2. Included reentry or reunification as outcomes
3. Conducted using an observational, quasi-experimental or experimental methodology
4. Been available in English
5. Conducted between 1970 and 2010
6. Reported on interventions to increase the success of reunification or factors related to reunification success or failure (reentry).

Reunification and reentry were the outcomes of interest in this review. In both of these, success is frequently measured using different methods. In some cases, the actual event of reentry to care is used as a measure for reunification success. For example, during federal reviews, reentry to care is measured by a child’s return to substitute care

within the first 12 months after reunification. Other methods may include two, three or more years as length of time to consider beyond reunification prior to reentry to care. Although it was necessary to identify the differences in reentry measures, all reentry outcomes were included in this review. Similarly, successful reunification is also measured using a variety of methods. In some cases, reunification is measured by whether the child returned home or not. In others, the amount of time between a child's placement and their return to the family of origin is considered. For this review, studies that include reunification success as an outcome were included. Reunification success was determined by whether or not a child returned to their family of origin following a placement in substitute care and whether or not their reunification with their family lasted. Studies also measured reunification "success" differently, as the length of time families are followed post reunification varied. Therefore studies that reported on the following with regard to reunification were included in the review:

1. Occurrence of reunification (did it occur or not),
2. Length of stay prior to reunification,
3. Length of time between reunification and reentry, and
4. Occurrence of reentry (did it occur or not).

After studies were identified for inclusion, they were coded on their relevance to the research question and study quality (Wilson, 2009). The protocol for coding was developed for the 2008 review and the same data abstraction form was used to ensure both transparency and replicability of the process.

Wilson (2009) offers many recommendations for what data to collect to allow for assessment of bias and threats to validity in primary research. However, as the data abstraction form was developed for the 2008 review, many of the categories he recommends were not coded in this review. The abstraction form did not capture data on the type of statistical analysis, confidence intervals, or assumptions of effect sizes. Data from each study were collected in each of the following areas:

- Study identification information
- Identified population
- Identified outcomes
- Potential Interventions
- Research quality using the Maryland Scale
- Study characteristics (i.e. sampling strategy, research design, rigor, reliability, validity)
- Factors associated with successful reunification
- Factors associated with reentry to care
- Statistical conclusions for inclusion in meta-analysis (i.e. means, correlations, sample size, chi-square and other bivariate statistics)
- Study strengths and limitations

The scientific rigor of each study in the sample was evaluated using the Maryland Scale of Scientific Methods and against the criteria established in the Campbell Collaboration Research Design Policy Brief (Higgins & Green, 2009; Shadish & Myers,

2004). Studies were also evaluated to determine their appropriateness for inclusion in a meta-analysis. Following this evaluation, data analysis was conducted. This review included two types of analysis. A narrative synthesis was conducted on all studies in the sample. In this synthesis, study outcomes and findings were categorized according to similar variables and then within these categories, the studies were summarized in an effort to draw conclusions from the entire body of research. In addition to the narrative synthesis, meta-analyses were conducted on studies that were appropriate for inclusion in this type of quantitative analysis. Comprehensive Meta-Analysis software was used to conduct random effects meta-analyses using the Odds Ratio as the identified effect size.

In this body of primary research, the most common effect size reported was Chi-Square. In many cases, studies reported a chi-square value as a measure of the magnitude of the effect. In addition, due to the dichotomous nature of the reunification and reentry outcome variables, when chi-square was not available, a 2X2 table containing the number of event for each group and the total number of each group could be used. An odds ratio was calculated from the 2X2 table using the following formula:  $OR = \frac{AD}{BC}$  and all were converted to log odds for analysis using the Comprehensive Meta-Analysis software. In this study, because the random effects model was used, both the within study and between study variance were calculated and then the total variance was computed. This allowed for the computation of the summary effect.

Following the computation of the summary effect, hypothesis testing was conducted. Confidence intervals were calculated at the 95% level, and a p-value was generated. In the case of random effects meta-analysis, the null hypothesis is that the mean distribution of summary effects falls outside of the summary effect. As with most research, the summary effect, p-value and confidence interval are available for interpretation.

## Findings

As indicated in **Error! Reference source not found.**, after completing the abstract review, 144 articles or reports were excluded because they did not meet the inclusion criteria. An additional 34 were excluded after determining that they did not meet the inclusion criteria after the full review. Thus, 109 articles remained for inclusion in the systematic review. A complete bibliography of included and excluded articles is available upon request.

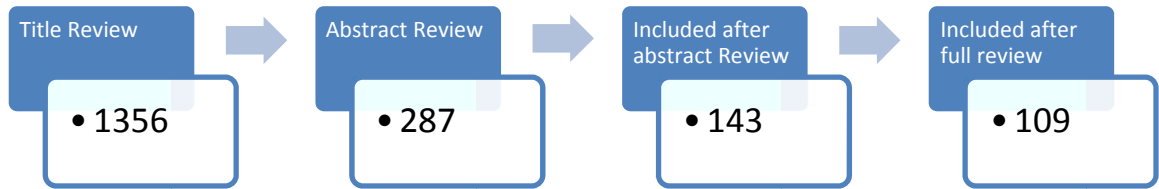


Figure 1: Article inclusion by phase

As indicated, all studies were evaluated using the MSSM. A summary of the levels of rigor for all studies included in the systematic review is presented in Table 2.

Table 2: Scientific Rigor Summary

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<b>Studies included in the systematic review</b>	
<b>Reentry Studies</b>	
Level 1: Correlation study with no comparison group	10
Level 2: Temporal sequence, or presence of control group without demonstrated comparability to the treatment group	2
<b>Reentry and Reunification</b>	
Level 1: Correlation study with no comparison group	10
Level 2: Temporal sequence, or presence of control group without demonstrated comparability to the treatment group	1
Level 3: Comparison between two or more comparable units of analysis, one with the program, one without	2
Level 5: Random assignment and analysis of comparable units	1
<b>Reunification</b>	
Level 1: Correlation study with no comparison group	51
Level 2: Temporal sequence, or presence of control group without demonstrated comparability to the treatment group	15
Level 3: Comparison between two or more comparable units of analysis, one with the program, one without	9
Level 4: Comparison between multiple units with and without the program, or comparison between groups that evidence only minor differences	2
Level 5: Random assignment and analysis of comparable units	5
<b>Studies included in the meta-analysis</b>	
Level 1: Correlation study with no comparison group	17
Level 2: Temporal sequence, or presence of control group without demonstrated comparability to the treatment group	10
Level 3: Comparison between two or more comparable units of analysis, one with the program, one without	6
Level 4: Comparison between multiple units with and without the program, or comparison between groups that evidence only minor differences	1
Level 5: Random assignment and analysis of comparable units	2



After completing the systematic review, meta-analyses were conducted to examine the odds of reunification and reentry for children whose families receive certain services. The variables included in these meta-analyses are summarized in Table 1.

Table 1: Variables in meta-analyses

Reunification Variable	Definition	Number of studies
Supportive Services	Any service that was provided to a family and was subsequently evaluated to determine if reunification odds were impacted was included. Supportive services could be any of the following: reunification programs, traditional child welfare practice models (Family-Centered out of home care or Structured Decision Making), court-based interventions, and family counseling or substance-abuse interventions.	20
Reunification Services	Any service that was provided to a family with a primary goal of reunification.	6
Kinship Placement	Studies that reported data on the rate of reunification for children placed with kin or relatives were included here.	5
Substance Abuse Intervention	Studies that reported on interventions that were specifically designed for families with substance abuse problems were included here. In some cases, these studies evaluated substance abuse treatment completion; however other types of interventions were included.	6
Reentry Variable		
Supportive Services	Any service that was provided to a family and was subsequently evaluated to determine if rates of reentry differed between groups was included. Supportive services could be any of the following: reunification programs, traditional child welfare practice models (Family-Centered out of home care or Case Management), court-based interventions, family counseling or substance-abuse interventions.	7

Five hypotheses were examined with regard to reunification and reentry odds. Two hypotheses could not be rejected. These are  $H_1$ , there would be a difference in odds of reunification for families that received supportive services as compared to those that did not receive services, and  $H_4$ , there would be a difference in odds of reunification for families whose children were placed in kinship care as compared to those that were not. For  $H_1$ , the analysis revealed that the combined odds of reunification were slightly higher for those who did not receive supportive services than for those that did (Table 4). The summary odds ratio is 1.513 with a 95% confidence interval of 1.225 to 1.868. This finding is significant with a p-value of .000, suggesting that there is a difference between

rate of reunification for those who received supportive services and those who did not, therefore the null hypothesis is rejected. The direction of these findings is not what was expected. It was expected that supportive services would increase the odds of reunification.

When examining the publication bias funnel plot (Figure ), the lack of symmetry suggests that some amount of publication bias exists. To determine the likely impact of the publication bias, the *fail-safe N* was conducted (Figure ). The results suggest that an additional 316 studies would be needed to nullify the results of the meta-analysis. This is a fairly large number of studies and therefore it is likely that the publication bias displayed in Figure 1 has only a limited impact on the findings of this analysis.

Additional information can be garnered from the results display in Table 18. For example, when looking at the forest plot at the far right of the figure, one can see that the Landy & Munro (1998) study has a very large confidence interval. This is probably a result of a small sample size ( $n=13$ ) and substantial variability among study results. In addition, the forest plot also shows that the Armstrong, et al. (2005) study has a very small confidence interval, this is likely a result of the large sample size ( $n=14,413$ ) and small variability. The confidence intervals of the other studies vary considerably.

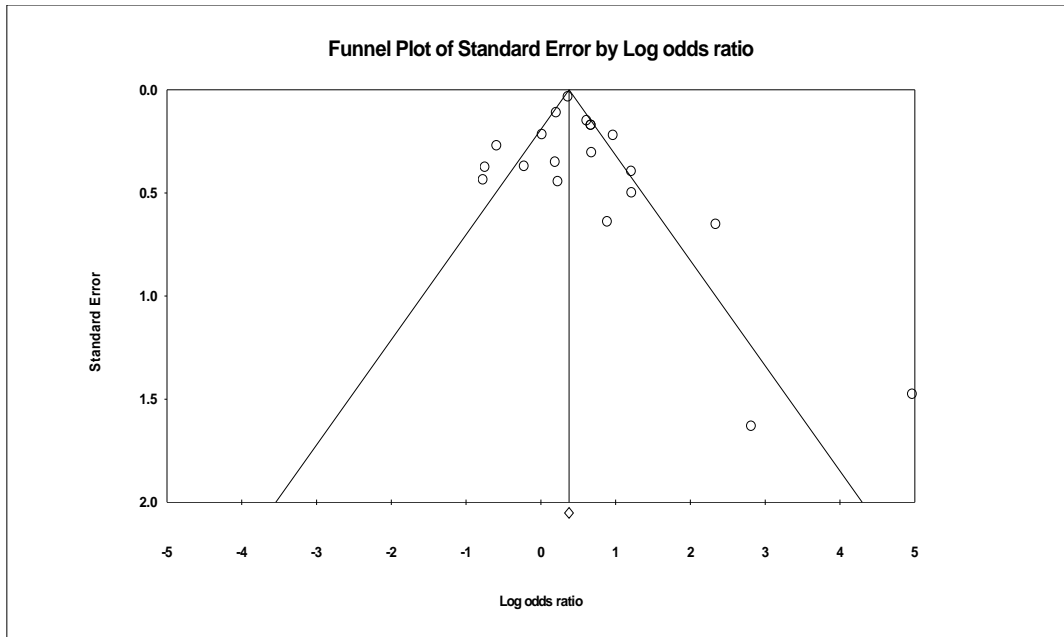


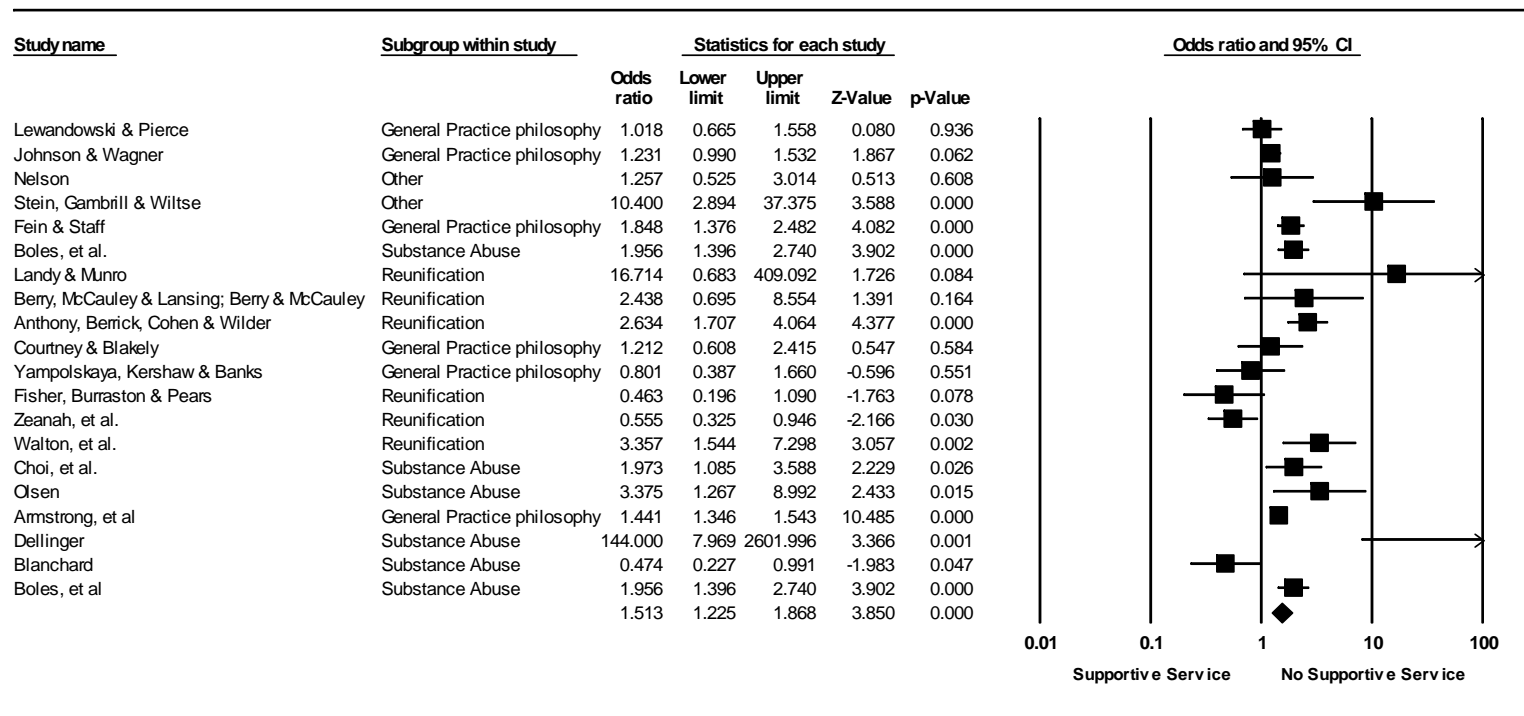
Figure 2 Reunification supportive services

**Classic fail-safe N**

Z-value for observed studies	9.17601
P-value for observed studies	0.00000
Alpha	0.05000
Tails	2.00000
Z for alpha	1.95996
Number of observed studies	20.00000
Number of missing studies that would bring p-value to > alpha	419.00000

Figure 3 Reunification services *fail-safe N*

Table 4 Reunification supportive services meta-analysis



As for H<sub>4</sub>, only four (4) studies were available for inclusion in this analysis, however much literature suggests that permanency outcomes for children in kinship care are different than those in other types of placement settings.

As can be seen in Table , the combined odds ratio is .506 with a 95% confidence interval of .365 to .698 (p=.000). Although caution is warranted, these findings suggest that the odds of reunification are greater for children in kinship care than for those in other types of care and the null hypothesis cannot be accepted.

The lack of symmetry in the publication bias funnel plot (

Figure ) suggests that bias exists. When the *fail-safe N* was conducted (Figure ) it was determined that an additional 220 studies would be needed to nullify these results. Considering that only seven (6) other studies were identified in this review as reporting on reunification and kinship care, quite a bit more primary research would be required to for this to occur.

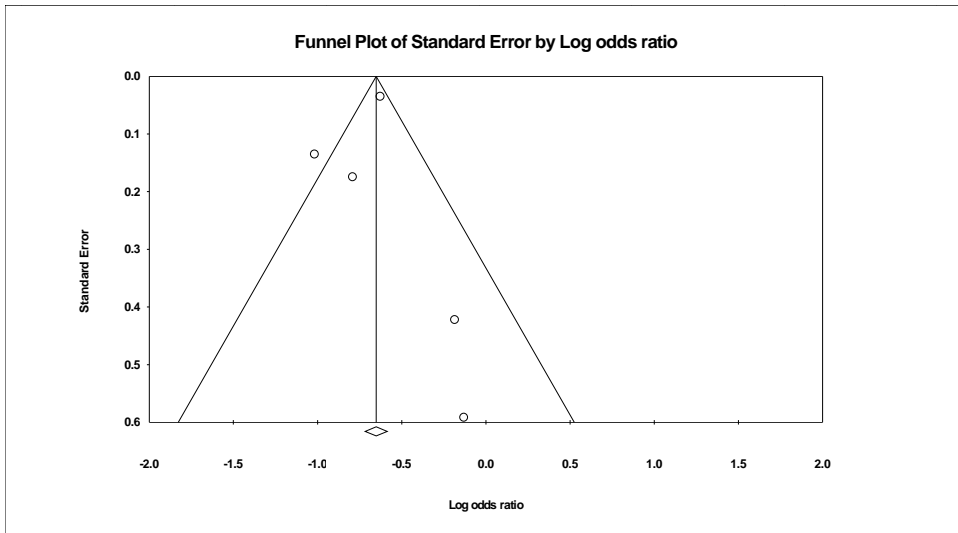
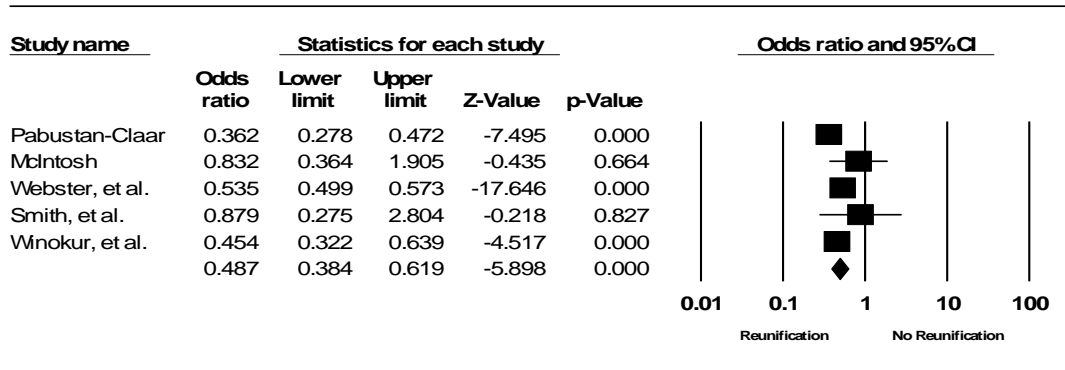


Figure 4 Reunification kinship care publication bias

**Classic fail-safe N**

Z-value for observed studies	-13.55572
P-value for observed studies	0.00000
Alpha	0.05000
Tails	2.00000
Z for alpha	1.95996
Number of observed studies	5.00000
Number of missing studies that would bring p-value to > alpha	235.00000

Table 5 Reunification meta-analysis, kinship care



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Meta Analysis

A summary of the results of all service-related analyses is presented in Table 6.

Table 6: Summary of service-related meta-analyses

Variable	Odds Ratio	Confidence Interval	p-Value
Reunification Supportive Services	1.520	1.232-1.875	.005*
Reunification Services	1.585	.675-3.722	.291
Substance Abuse Intervention	1.291	.560-2.976	.549
Kinship Care	.506	.366-.698	.005*
Reentry Supportive Services	1.482	.530-4.142	.751

\* Represents statistical significance at the .05 level

In addition to the findings reported above, several factors were identified in the review as being related to reunification success. While the research support for each of these factors varies, they are presented in table 7 below.

Table 7: Factors related to reunification success

Factor	Reunification/Reentry
Age	Infants less likely to reunify Adolescents less likely to reunify
Child Problems	Children with behavior, emotional, cognitive problems or physical disabilities less likely to reunify and may be more likely to reenter care
Parental Problems	Parent mental health problems impact reunification reentry likelihood Other parental problems impact reentry likelihood
Visitation/ Parental Contact	Parental contact/visitation impacts reunification likelihood- the more contact, the more likely to reunify
Length of Stay in Care	After 1 year in care reunification likelihood decreased The more time spent in care, the more likely a child is to reenter care
Family Composition	Children from single mother homes are less likely to reunify Children from single parent homes are more likely to reenter care
Number of placements	Greater number of placement moves, less likely to reunify and more likely to reenter care
History of CPS involvement	Children who reunify are more likely to have prior history of CPS involvement without removal and are also more likely to reenter care
Social-economic status	Families with financial challenges less likely to reunify and more likely to have children re-enter care

Findings of this systematic review and meta-analyses are mixed. Many services and characteristics were identified as promising practices; however, the quality and quantity of rigorous research limit the ability to draw conclusions about service effectiveness. Given the quality of research available for inclusion, the definition of these variables and the risk levels of the families that are likely to receive these services, caution is necessary when interpreting these results. Although there is limited ability to accept these findings with certainty, the study results can still be quite informative to the field of social work and child welfare practice.

### Utility for Social Work Practice

Systematic reviews and meta-analyses are relatively new to the field of social work, specifically as dissertation research. As a result, there is much to be learned from the process and methodology of conducting this type of research. For example, there is limited statistical

support available to those conducting meta-analyses and there is limited understanding of the value of this type of research among many academicians and therefore, there are challenges that must be overcome if this type of research is to become a useful tool in bridging the research-practice gap.

Although systematic reviews and meta-analysis are becoming a growing research methodology, the field is not yet prepared to support these types of tools. Much of the available research is not appropriate for inclusion and there is limited support for someone to conduct the statistical analysis. This must change. If the child welfare profession intends to progress toward a profession that uses the best available evidence to direct work with children and families, then systematic reviews and meta-analyses are essential tools to help practitioners make sense of entire bodies of research. Without increased quality research and additional statistical support, this will never occur. In a field where the safety, permanency and well-being of children are always at stake, practitioners cannot afford to make decisions that are not based on the best available evidence. There is still much to examine to determine how best to serve children and families who are experiencing reunification. This research is a definite step in that direction.



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