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#### Abstract

This article presents the findings from a systematic review of the literature regarding factors related to positive placement outcomes. Children in care are particularly vulnerable to problems with their emotional and behavioral development. It is important to know which factors affect whether children will have a positive placement outcome or not. Previous research has aimed to examine this, and has found that certain child characteristics can affect placement outcome. Reviews have not reported their search strategy in line with PRISMA guidelines, nor have they always reported the source of the data. This review was particularly interested in which studies had contact with the children or carers themselves, as opposed to a reliance on administrative data. There appear to be child characteristics that affect placement outcome, but findings need to be interpreted with caution due to a high volume of results from administrative data. Future research should aim to conduct full assessments with children when they come into care.

## Keywords

Child; foster care; placement outcome.

#### 1. Introduction

American foster care statistics for 2010 have been recently published (Child Welfare Information Gateway, 2012), which detail that an estimated 408,425 children are in foster care with approximately 254,375 entering care each year. Of the estimated 254,114 children who exited foster care during 2010, the median amount of time spent in care was 13.5 months with about half (51%) exiting to be reunited with their parents or primary caregivers. Leve at el (2012), when reviewing interventions to work with children in care, identified three key areas of risk and vulnerability for foster children. They reported that children in care are particularly vulnerable to problems with their emotional and behavioral development; brain and neurobiological development and their social relationships with their parents and peers. It is important to know which factors affect positive placement outcome, as this may provide valuable insight into how to best tackle these issues and use resources where they are needed most.

There are a range of possible predictors of a child's outcome from care, for example; reason for entering care; the physical or mental health of the birth parent; the skill or experience of the foster carer; the degree of support the family receives as well as influences of various services involved. While acknowledging the potential effect of these contributors, this review focusses on the potential influence of child characteristics because this seems to be a relatively neglected area.

There appear to be child characteristics that make a child more likely to suffer abuse. Sobsey et al (1997) found that boys were more likely to be abused than girls, and children with disabilities compared to those without were more likely to be abused. We wanted to know whether child characteristics such as these continued to influence the parent child relationship and placement outcome once the child was in care.

There have already been attempts at reviewing the literature in this area. Rosenthal (1993) examined the outcomes of adoption of children and barriers to placement, and reviewed the literature on both the adoption disruption and the child and family functioning in non disrupted families. The author concluded that younger age of the child, absence of behavioural problems, complete background information on the child, adoption by the foster carers and the child not having been sexually abused prior to placement all predicted a positive adoptive outcome for the child.

Wulczyn (2004) looked at trends in family reunification. This article described the legal framework of reunification, assessing what is known about the factors that influence successful reunification as well as examining the broader context of outcomes and implications of unsuccessful reunification. There was no systematic search of the literature but the author stated that a child's age and race were associated with likelihood of reunification with birth parents. Wulczyn also stated that infants and adolescents were less likely to be reunified than children in other age groups, and that African-American children were less likely to be reunified than children of other ethnic backgrounds.

Oosterman et al (2007) conducted a review and meta-analysis regarding disruptions in foster care. They described the results of 26 studies, involving 20,640 children in foster families. The review examined risk and protective factors associated with placement breakdown and concluded that, amongst other factors, child characteristics were important in predicting placement breakdown. They concluded that older age at placement as well as behaviour problems showed significant small to moderate associations with placement breakdown. It was further suggested that mental disabilities and developmental problems show little association with placement breakdown. The

authors reported other child characteristics having an effect on placement outcome, for example attachment behaviours, adjustment and resilience. However, they also noted that parental behaviour seemed to moderate the relationship between child behaviour and placement breakdown.

Kimberlin et al (2009) conducted a review examining the factors that result in re-entry to care. They found the child characteristics of health problems, mental health problems, behaviour problems, infant or pre-teen/teenage all to be risk factors that correlate to re-entry to care.

All of these reviews provide interesting results which support the idea that there are child characteristics that can affect placement outcome. What is missing for each of these reviews however is evidence of a systematic search of the literature, detailing exactly how many studies were included and why studies were removed from the review, as outlined in the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA guidelines ,Moher et al, 2009). These guidelines help authors improve the reporting of systematic reviews by providing an evidencebased minimum set of items to report using a 27-item checklist and a four-phase flow diagram. In addition, although Kimberlin et al go some way to doing this, none have truly assessed the source of the data in the research studies. They report on the findings of many studies examining the effects of child behaviour, child mental health etc on the effect of placement outcome. What is not clear from any of these reviews is how these variables were measured. When children were assessed regarding mental health, we usually do not even get the information whether or not the children have been assessed face to face.

Unrau (2007) emphasised the importance of seeking the perspectives of foster children and reported on studies not including the children as data sources. Selwyn et al (2010) further acknowledged that research consistently has shown that children feel they have little say in decisions about placements. It appears that children are not always included when it comes to placement outcome so it is important to examine whether children are included when examining how their individual characteristics affect outcome.

Children can have varying outcomes from care; they may return home, go to kinship care, be adopted, stay in foster care or move to another type of looked after accommodation. What is best for the child will vary between families and depend on a wide range of circumstances. When assessing outcome from care across a number of different studies, it is challenging to find a consistent optimal outcome. Rushton (2003) detailed such difficulties, arguing that devising varying and complex classification systems can lead to a lack of comparability of findings. We know that improving the quality of permanent placement decisions is beneficial to children (Zeanah et al, 2001) and so in this review, we simply view any placement outcome which resulted in a child finding a more permanent place to stay, for example, less placement moves, as a positive one.

The present systematic review aimed to include studies that have examined how child characteristics influence placement outcome. We examined the source of the data as well as summarising the main findings of various child characteristics. We wanted to know how many studies had actually had contact with the children and made thorough assessments of the child's health, disability and behaviour when determining how these impacted on placement outcome. A literature search of internet-based bibliographic databases was completed identifying research that had looked at what child factors influenced outcome of care placement. The search was carried out using the guidelines of PRISMA, which stands for Preferred Reporting Items for Systematic reviews and Meta-Analyses (Moher et al, 2009). The search was conducted using the following databases: (i) WEB OF SCIENCE, (ii) PsychInfo, (iii) MEDLINE, (iv) CINAHL, (v) ASSIA, and (vi) Social Services Abstracts. All searches were limited to journal articles published in English between 1971 and March 2012. References were excluded on the basis of title if they were not in the relevant subject area: children in care. Titles and abstracts were then checked by a single reviewer (RP) who sought advice regarding inclusion and exclusion from other authors in case of doubt. Articles had to report original data examining how a child characteristic affected any aspect of their outcome from care.

Search terms were tried and modified iteratively in order to find articles of interest. This was done in collaboration with a University librarian who had knowledge in the subject area. Once a relevant article had been identified, other relevant search terms were identified through mapping subject headings and examining keywords. Terms used in the final search were

- 1. Adopt\* or foster\*
- 2. Reunification or "return and family" or rehabilitation or permanency
- 3. Factor\* or influence\* or predict\*

These three searches were conducted individually and then combined (1 and 2 and 3) (see Fig. 1). Additional references were sought where appropriate using a secondary search of the reference lists from key papers. Experts in the field were consulted to ensure that we had not omitted any key papers. This was particularly important due to the search terms necessary in this subject area: these were commonly used words, out with the subject area, which led to a high volume of non relevant articles.

All the papers that were in the relevant subject area of children in care were then reviewed using a data extraction sheet (appendix A) and key findings reviewed.

Many studies include ethnicity as a child characteristic. It was decided that we would not report these findings here, as ethnicity is so interlinked with social class that it would be impossible to differentiate which was being measured, for example, Strand (2011) examined the role of social class and ethnicity on educational attainment of children concluding that socioeconomic variables could be the cause of the attainment gaps between white British and Black African; Pakistani and Bangladeshi students.

# 3. Results

# 3.1 Tabulated results

The table below (Table 1) displays all the research studies which reported original quantitative data on how child characteristics can affect placement (N=74).

## 3.2 Main Findings

#### 3.2.1 Age

The main child characteristic that was investigated as a potential contributor to placement outcome was child age. Many studies looked at what age the child was when they entered care and how this affected placement. Slightly more than 15% showed no effect of age on placement outcome, while the remaining papers did find that age impacted on placement. Of the papers reporting an effect, about three quarters showed more positive results for younger children, for example, Kemp et al (2000) showed that younger children were more likely to achieve permanence, while Rosenthal et al (1988) showed that younger age of placement predicted an intact placement. The remaining quarter showed a more positive result for older children, e.g. Cooper et al (1987) showed that younger children spent longer times in transitional placements resulting in longer disruptions than older children. There were seven studies included in this review with sample sizes of greater than 10,000 children that report on the effect of age on placement outcome. Because these are based on administrative datasets in which age is an easy variable to check, they have highly representative samples unlikely to be vulnerable to bias. Of those seven, three found little or no effect once other factors were controlled for. The remaining four did find effects. Snowden et al (2008) found children placed under 5 years old were more likely to be adopted, Yampolskaya et al (2007) found that younger children had a slower exit from care, and Yampolskaya (2011) et al found that older children were more likely to re-enter out of home care, while Hayward et al (2007) reported that those in middle childhood were less likely to reunify than infants, with a further decrease for older adolescents. Although there was mixed evidence on the effect of age, about half of the studies found that children who come into care earlier have more positive placement outcomes than those coming into care at an older age.

#### 3.2.2. Gender

The majority of papers that looked at child characteristics that might have an effect on their placement investigated gender as a potential contributor. Over 70% of these found no effect of gender on placement outcomes, for example, to predict successful reunification or multiple placements. Of those that did find an effect, the results varied, with approximately two thirds showing more positive outcomes for girls in care (eg Snowden et al, 2008 and Rosenthal et al 1988) while the remaining third showed more positive results for boys in care (eg Farmer et el, 2009 and Fernandez, 1999). There were six studies included in this review with sample sizes of greater than 10,000 children that reported on the effect of gender on placement outcome. These are unlikely to be vulnerable to bias, as they are based on datasets in which gender is an easy variable to complete, providing a representative sample. Four of these studies reported non-significant findings (for example, Hayward et al, 2007; Courtney et al, 1997) while two of the large studies reported an effect of gender. Yampolskaya et al (2007) found that boys had a delayed exit from care while Snowden et al (2008) report that girls are more likely to be adopted than boys, the effect sizes however were both very weak. Overall there did not seem to be a clear effect of gender which affects the child's outcome.

#### 3.2.3. Health / disability

Some papers examined whether the health, or any disability, of the child affected placement outcome. Approximately one third did not report any significant effect of health/disability on placement. Of the papers that did report an effect, less than a third reported an increased chance of a positive outcome if the child had a health problem or disability (e.g. Selwyn et al, 2006). In contrast, more than two thirds of the studies showing an effect found an increased chance of a negative outcome if the child has a health problem or disability: For example, Courtney (1995) found

that children with health problems were more likely to re-enter care after reunification, while Eggertson (2008) found that major health problems led to more placements for children. Only a few studies assessed the health of the children by asking their caregiver. The study by Selwyn et al (2006) was based on interviews with adoptive parents; with an 80% opt in rate. The authors found that following a decision for adoption, children with a physical disability or chronic health problems were more likely to achieve a successful adoption than those without such health issues. This study involved 130 children, of whom 4% had a moderate to marked physical disability. Glisson et al (2000) obtained data from both teachers and caregivers for child characteristics, however when assessing disability their conclusions came from case files or staff members, and was coded as a single variable describing the number of disabling conditions the child was affected by. They found that children with disabilities are less likely to return home. Proctor et al (2011) conducted child assessments and caregiver interviews. They found that health problems did not predict placement stability in a sample of 285 children in out-of-home care. Although many studies did not find an effect of health or disability, it seems that where there is an effect, it is more likely to be negative, with health problems or disabilities being related to poorer outcomes for children in care.

#### 3.2.4. Mental health / behaviour

Many papers investigated whether the child's mental health or behaviour problems affected their placement. Just over 10% found no effect of mental health/behaviour issues; however the remaining papers reported these as contributing to placement outcome. Of those reporting an effect, over 90% showed that a child having mental health or behaviour issues was detrimental to their placement outcome, for example, Dance and Rushton (2005) found that behaviour problems predicted placement disruption using the Parental Account of Children's Symptoms (PACS) with parents of 99 children while Glisson et al (2000) showed that children with mental health problems had a lower probability of exiting custody. Mental health was assessed using the Child Behaviour

Checklist (CBCL) and the Teacher's Report Form (TRF), which were completed by parents and teachers of 700 children, from a random sample of 750. Almost all the studies where the caregiver was asked about the child's mental health (for example, Landsverk et al, 1996; Newton et al 2000; Dance et al, 2005) showed clear detrimental effects of mental health problems on placement outcome. It seems that mental health is a key characteristic which can influence what happens to a child when they enter care.

#### 3.2.5. Education / cognition

Of the papers that examined whether education/cognition affected placement outcome, more than half found no effect. Of the small number that did find an effect however, almost all found an increased chance of a negative outcome if the child had problems in education or cognition; for example, Jones (1998) found that having a learning disability or problems at school led to an increased chance of re-entering care. The data came from case files of 445 children who entered care, with the presence or absence of such problems coded by a professional when they first entered care. Only two papers directly assessed the cognitive ability of children. Kraus (1971) found that IQ as measured on the WISC (Wechsler Intelligence Scale for children) with 157 children had no effect on placement success/failure, however recently Proctor et al (2011) found that lower score on the WPPSI (Wechsler Preschool and Primary Scale of Intelligence) block design task, but not language score, was related to an increased chance of placement instability in 285 children. As the majority of papers did not find an effect of education or cognition on placement outcome it is not clear what effect this has on placement outcome, however it does appear that if the child has problems in these areas, then unfortunately these are more likely to lead to negative placement outcomes than positive.

#### 3.2.6 Other

Some studies examined factors other than those described above as potential child characteristics that may affect placement outcome. One finding which appeared significant was that of child attachment with Walsh and Walsh (1990) finding that caseworker ratings of a child's inability to attach to a caregiver predicted placement breakdown with a sample of 51 children and Strijker et al (2008) showing that attachment disorders predicted a higher number of placements. A qualified professional made this assessment based on information in case files using DSM-IV criteria. In addition, substance abuse in children appeared to have an effect on placement outcome, with Jones (1998) showing that children with substance abuse problems were more likely to re-enter care while Becker et al (2007) showed that they were less likely to successfully exit care. Although these other factors were only investigated in a small number of papers, it is clear that there may be other child characteristics which are having an effect on placement outcome.

### 3.3 Qualitative Data

The literature search also revealed three papers that reported original qualitative data. Terling-Watt (2001), Brown and Bednar (2006), and Brown, Bednar and Sigvaldson (2007) all conducted qualitative work where they asked professionals and foster carers about their perceptions of placement breakdown. Each study identified between 6 -9 key concepts which were perceived factors in placement breakdown. These are detailed below (Table 2).

Sinclair and Wilson (2003) conducted a study combining both qualitative and quantitative methods to assess the factors which were important in placement success. They included children's social workers, foster carers and the children themselves to develop a model which would predict placement success. They identified three main predictors; the child's motivation, attractiveness and

difficulty; the carers' warmth, persistence and ability to set limits, and the interaction between these two factors.

It is clear from this qualitative research that foster carers and staff working with these families regard child characteristics, for example, the child's health or their behaviour, as important influences on placement outcome.

A further aim of this review was to look at data sources of the research conducted in this area. It was found that over half (n=40) of the 74 quantitative studies had based their findings purely on administrative or survey data. Of the 77 papers included in this review, only 5 appeared to have contact with the children and young people to make an assessment of the characteristic which they were investigating.

#### 4. Discussion

This review aimed to summarise studies that had examined how child characteristics influenced placement outcome. It found that numerous studies had investigated this and identified certain characteristics to have an effect; for example suggesting that older children, or those with mental health problems or disabilities can be particularly vulnerable to disrupted placements or multiple placements. Research on the influence of other factors, for example gender, was not as clearly identifiable as a risk factor for problems with placement. Our findings were similar to other reviews in the area (Kimberlin et al, 2009) which concluded that these same child characteristics could affect placement outcome and rates of re-entry to care after reunification.

It is useful to consider why certain characteristics may predict disrupted placements for children coming into care. Younger children may have experienced less prior adversity, or may settle into a new family more easily. They also may be easier to look after. Positive outcomes for these children may also be associated with more people being willing and committed to adopt these children. Children who have had time to accrue a greater number of difficulties, on the other hand, may be more difficult to look after and thus less likely to settle into a new family, or be adopted. The findings showing a lack of clear effect of gender was surprising. We know that boys tend to have higher levels of behavioural problems than girls in the general population, so it may be that the effect of abuse or neglect on girls increases the likelihood of them having behavioural problems to the same level of boys. These are areas of great interest which would require further research with more in depth child assessments.

Placement outcome can have a huge effect on children. Biehal et al (2009) compared the characteristics, outcomes and meanings of different placement outcomes and found that long term,

stable foster care may be very positive for children, providing them with emotional security. They found that children in long term foster placements may do as well as adopted children in terms of their emotional and social wellbeing as well as educational progress. Children who had disrupted placements however, were more likely to have emotional and behavioural difficulties. These findings emphasise the need to find stable placements for children as early as possible and highlight the need to fully understand the varying components which may influence outcome.

The review highlighted that a large amount of research in this area relies on administrative data. As the children involved in these studies were all children in the care system, this means that there was a potential to have robust data on these participants as information is routinely stored about each of them. There are a number of strengths to using administrative data to examine placement outcomes, in particular the ability to use large samples (outlined by DiLeonadi and Yuan, 2000). They, however, also acknowledged the problems; in particular they noted the importance of having common understanding of definitions. They acknowledge that people need to mean the same when they enter, discuss or retrieve data, or false conclusions can be easily drawn. Certain characteristics, for example, mental health, have the potential for confusion over definitions. Where this was measured using administrative data, it was often just a yes/no regarding whether the child had mental health issues or not. It is obvious how limited this dichotomous answer is and with what caution any results should be interpreted. This review was focussing on child characteristics which affected placement outcome yet highlighted that very few studies (n=5) had actually had contact with the child. There are some characteristics where meeting the children is not necessary and where administrative data is likely to be of good quality, for example, age and gender, however there are others where it would seem remiss not to make an assessment of the child, in particular regarding characteristics such as mental health.

Previous research has shown that children's views are often not directly considered when making placement decisions about them, and this review adds to this, finding that they are generally also not directly involved when making judgements about how their characteristics are affecting outcome.

A limitation of our review is that the way child characteristics affect placement outcome is a very difficult area to conduct a thorough search on. Despite attempts to cover the literature through contacting other sources it is likely that some studies in this area will have been missed. It was impossible to use specific search terms to identify the papers of interest and thus there may be relevant studies in the "grey literature". However, we have no reason to believe the studies we found using administrative data would be misrepresented in our search, especially since such large scale studies are likely to be published in peer reviewed journals. A further limitation of our review is the categorisation of different aspects of a child's functioning into sections. Studies often included a number of different characteristics therefore we were forced to use personal judgement to categorise these accordingly. There is however inevitable overlap, for example - health problems causing cognitive difficulties, which could not be avoided.

This review highlighted the wealth of research in this field and identified the requirement for more in depth analysis. Future research should seek to address specific questions focusing on more homogeneous groupings and deal with the material in depth. It would also be interesting to explore the similarities or differences between studies utilising administrative data and those accessing informants directly. Child characteristics are of course only one source of potential influence on a child's outcome from care. Future research should aim to establish the relative importance of various contributors which affect this important outcome.

This review has highlighted that child characteristics do appear to be important predictors of placement success when a child comes into care. The implications of this are vast and a clearer understanding of this area may provide valuable pointers as to how best we can tackle these issues and use resources where they are needed most. If we were able to identify that children with certain characteristics are more vulnerable to placement disruption then we could focus our efforts when supporting these children in care. What is striking is that the majority of the research in this field has not involved contact with children. When assessing the importance of key child characteristics such as mental health, it is clear that before conclusions are reached, these children need to be met and properly assessed. Future research should aim to conduct full assessments with children when they come into care. This would allow for clearer conclusions as to how different child characteristics affect placement outcome and potentially provide the understanding required to provide effective interventions to improve these children's future development.

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#### References

- Akin, B. A. (2011). Predictors of foster care exits to permanency: A competing risks analysis of reunification, guardianship, and adoption. *Children and Youth Services Review, 33,* 999-1011.
- Albers, E. C., Reilly, T., & Rittner, B. (1993). Children in Foster Care: Possible Factors Affecting Permanency Planning. *Child & Adolescent Social Work Journal, no. 4*.
- Baker, C. (2007). Disabled children's experience of permanency in the looked after system. *British Journal of Social Work, 37,* 1173-1188.
- Barber, J. G., Delfabbro, P. H., & Cooper, L. L. (2001). The Predictors of Unsuccessful Transition to Foster Care. *Journal of Child Psychology and Psychiatry*, *42*, 785-790.
- Barber, J. G. &Delfabbro, P. H. (2009). The profile and progress of neglected and abused children in long-term foster care. *Child Abuse & Neglect, 33,* 421-428.
- Barth, R. P., Weigensberg, E. C., Fisher, P. A., Fetrow, B., & Green, R. L. (2008). Reentry of elementary aged children following reunification from foster care. *Children and Youth Services Review*, 30, 353-364.
- Becker, M. A., Jordan, N., & Larsen, R. (2007). Predictors of successful permanency planning and length of stay in foster care: The role of race, diagnosis and place of residence. *Children and Youth Services Review, 29,* 1102-1113.
- Biehal, N. (2009). Characteristics, Outcomes and Meanings of Three Types of Permanent Placement-Adoption by Strangers, Adoption by Carers and Long Term Foster Care. Department for Children, Schools and Families.
- Brown, J. D. &Bednar, L. M. (2006). Foster parent perceptions of placement breakdown. *Children and Youth Services Review, no.* 12.
- Brown, J. D., Bednar, L. M., &Sigvaldason, N. (2007). Causes of Placement Breakdown for Foster Children Affected by Alcohol. *Child and Adolescent Social Work Journal, no. 4*.

- Chamberlain, P., Price, J. M., Reid, J. B., Landsverk, J., Fisher, P. A., & Stoolmiller, M. (2006). Who Disrupts from Placement in Foster and Kinship Care? *Child Abuse & Neglect, no. 4*.
- Cheng, T. C. (2010). Factors associated with reunification: A longitudinal analysis of long-term foster care. *Children and Youth Services Review, 32,* 1311-1316.

Child Welfare Information Gateway. Foster Care Statistics 2010. http://www.childwelfare.gov/pubs/factsheets/foster.pdf#Page=1&view=Fit. Accessed March 2012.

- Connell, C. M., Vanderploeg, J. J., Flaspohler, P., Katz, K. H., Saunders, L., &Tebes, J. K. (2006). Changes in placement among children in foster care: A longitudinal study of child and case influences. *Social Service Review*, *80*, 398-418.
- Connell, C. M., Katz, K. H., Saunders, L., &Tebes, J. K. (2006). Leaving foster care--The influence of child and case characteristics on foster care exit rates. *Children and Youth Services Review*, 28, 780-798.
- Cooper, C. S., Peterson, N. L., & Meier, J. H. (1987). Variables associated with disrupted placement in a select sample of abused and neglected children. *Child Abuse & amp; Neglect, 11,* 75-86.
- Courtney, M. E. (1994). Factors associated with the reunification of foster children with their families. Social Service Review; 68 (1) Mar 94, -108.
- Courtney, M. E. (1995). Reentry to Foster-Care of Children Returned to Their Families. *Social Service Review, 69,* 226-241.
- Courtney, M.E, Piliavin, I., &Entner Wright, B.R. (1997) Transitions from and Returns to Out-of-Home Care. Social Service Review, 71, 4652-667.
- Dance, C. & Rushton, A. (2005). Predictors of Outcome for Unrelated Adoptive Placements Made during Middle Childhood. *Child and Family Social Work, no. 4*.

- Delfabbro, P. H., Barber, J. G., & Cooper, L. (2002). Children entering out-of-home care in South Australia: Baseline analyses for a 3-year longitudinal study. *Children and Youth Services Review, 24,* 917-932.
- Delfabbro, P., Barber, J., & Cooper, L. (2003). Predictors of Short-Term Reunification in South Australian Substitute Care. *Child Welfare: Journal of Policy, Practice, and Program, 82,* 27-51.
- Denby, R. W. (2011). Predicting Permanency Intentions Among Kinship Caregivers. *Child and Adolescent Social Work Journal, no. 2.*
- DiLeonardi, J.W., & Yuan, Y, T. (2000). Using Administrative data. Child Welfare, 79 (5), 437-43.
- Dion, K. K. (1974). Children's physical attractiveness and sex as determinants of adult punitiveness. *Developmental Psychology*, *10*, 772-778.
- Doelling, J. L. & Johnson, J. H. (1990). Predicting Success in Foster Placement: The Contribution of Parent-Child Temperament Characteristics. *American Journal of Orthopsychiatry, no. 4*.
- Eggertsen, L. (2008). Primary Factors Related to Multiple Placements for Children in Out-of-Home Care. *Child Welfare, no. 6*.
- Farmer, E. A. Z., Southerland, D., Mustillo, S. A., & Burns, B. J. (2009). Returning Home in Systems of Care Rates, Predictors, and Stability. *Journal of Emotional and Behavioral Disorders, 17,* 133-146.
- Fernandez, E. (1999). Pathways in substitute care: Representation of placement careers of children using event history analysis. *Children and Youth Services Review, 21,* 177-216.
- Fernandez, E. & Lee, J. S. (2011). Returning Children in Care to Their Families: Factors Associated with the Speed of Reunification. *Child Indicators Research, 4,* 749-765.
- Festinger, T. (1996). Going home and returning to foster care. *Children and Youth Services Review, 18,* 383-402.
- Frame, L., Berrick, J. D., &Brodowski, M. L. (2000). Understanding Reentry to Out-of-Home Care for Reunified Infants. *Child Welfare, 79,* 339-369.

- Frame, L. (2002).Maltreatment reports and placement outcomes for infants and toddlers in out-ofhome care.*Infant Mental Health Journal, 23,* 517-540.
- Fuller, T. L. (2005). Child safety at reunification: A case-control study of maltreatment recurrence following return home from substitute care. *Children and Youth Services Review, 27,* 1293-1306.
- Glisson, C., Bailey, J. W., & Post, J. A. (2000). Predicting the time children spend in state custody. *Social Service Review*, 74, 253-280.
- Havlicek, J. (2010). Patterns of Movement in Foster Care: An Optimal Matching Analysis. Social Service Review, no. 3.
- Hayward, R. A. & DePanfilis, D. (2007). Foster children with an incarcerated parent: Predictors of reunification. *Children and Youth Services Review, 29,* 1320-1334.
- Helton, J. J. (2011). Children with behavioral, non-behavioral, and multiple disabilities, and the risk of out-of-home placement disruption. *Child Abuse & Neglect, 35,* 956-964.
- Hines, A. M., Lee, P. A., Osterling, K. L., & Drabble, L. (2007). Factors Predicting Family Reunification for African American, Latino, Asian and White Families in the Child Welfare System. *Journal of Child and Family Studies, no. 2.*
- James, S. (2004). Why Do Foster Care Placements Disrupt? An Investigation of Reasons for Placement Change in Foster Care. *Social Service Review, no. 4.*
- Jones, L. (1998). The social and family correlates of successful reunification of children in foster care. *Children and Youth Services Review, 20,* 305-323.
- Kalland, M. & Sinkkonen, J. (2001). Finnish Children in Foster Care: Evaluating the Breakdown of Long-Term Placements. *Child Welfare, no. 5, -*Oct.
- Kemp, S. P. &Bodonyi, J. M. (2000). Infants who stay in foster care: child characteristics and permanency outcomes of legally free children first placed as infants. *Child & Family Social Work*, *5*, 95-106.

- Kemp, S. P. &Bodonyi, J. M. (2002). Beyond termination: Length of stay and predictors of permanency for legally free children. *Child Welfare*, *81*, 58-86.
- Kimberlin, S. E., Anthony, E. K., & Austin, M. J. (2009). Re-entering foster care: Trends, evidence, and implications. *Children and Youth Services Review, 31,* 471-481.
- Kraus, J. (1971). Predicting Success of Foster Placements for School-Age Children. *Social Work, 16,* 63-72.
- Landsverk, J., Davis, I., Ganger, W., Newton, R., & Johnson, I. (1996). Impact of child psychosocial functioning on reunification from out-of-home placement. *Children and Youth Services Review, 18*, 447-462.
- Leathers, S. J. (2006). Placement Disruption and Negative Placement Outcomes among Adolescents in Long-Term Foster Care: The Role of Behavior Problems. *Child Abuse & Neglect, no. 3.*
- Leathers, S. J., Falconnier, L., & Spielfogel, J. E. (2010). Predicting Family Reunification, Adoption, and Subsidized Guardianship Among Adolescents in Foster Care. *American Journal of Orthopsychiatry, 80,* 422-431.
- Leve, L. D., Harold, G. T., Chamberlain, P., Landsverk, J. A., Fisher, P. A., &Vostanis, P. (2012). Practitioner Review: Children in foster care ΓÇô vulnerabilities and evidence-based interventions that promote resilience processes. *Journal of Child Psychology and Psychiatry,* no.
- McAuley, C. &Trew, K. (2000). Children's adjustment over time in foster care: cross-informant agreement, stability and placement disruption. *British Journal of Social Work, 30,* 91-107.
- McDonald, T. P., Poertner, J., & Jennings, M. A. (2007). Permanency for children in foster care: A competing risks analysis. *Journal of Social Service Research*, 33, 45-56.
- McSherry, D., Weatherall, K., Larkin, E., Malet, M. F., & Kelly, G. (2010). Who goes where?: Young children's pathways through care in Northern Ireland. *Adoption & Fostering, no. 2*.

- Miller, K. A., Fisher, P. A., Fetrow, B., & Jordan, K. (2006). Trouble on the Journey Home: Reunification Failures in Foster Care. *Children and Youth Services Review, no.* 3.
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med, 6,* e1000097.
- Newton, R. R., Litrownik, A. J., &Landsverk, J. A. (2000). Children and youth in foster care: disentangling the relationship between problem behaviors and number of placements. *Child Abuse & Neglect, 24,* 1363-1374.
- Oosterman, M., Schuengel, C., Slot, N. W., Bullens, R. A. R., &Doreleijers, T. A. H. (2007). Disruptions in foster care: A review and meta-analysis. *Children and Youth Services Review, no. 1.*
- Palmer, S. E. (1996). Placement stability and inclusive practice in foster care: An empirical study. *Children and Youth Services Review, 18,* 589-601.
- Pardeck, J. T. (1984). Multiple Placement of Children in Foster Family Care: An Empirical Analysis. *Social Work, 29,* 506-509.
- Pine, B. A., Spath, R., Werrbach, G. B., Jenson, C. E., & Kerman, B. (2009). A better path to permanency for children in out-of-home care. *Children and Youth Services Review, 31*, 1135-1143.
- Potter, C. C. & Klein-Rothschild, S. (2002). Getting home on time: Predicting timely permanence for young children. *Child Welfare, 81,* 123-150.
- Proctor, L. J., Randazzo, K. V. D., Litrownik, A. J., Newton, R. R., Davis, I. P., &Villodas, M. (2011). Factors associated with caregiver stability in permanent placements: A classification tree approach. *Child Abuse & Neglect, 35,* 425-436.
- Romney, S. C., Litrownik, A. J., Newton, R. R., & Lau, A. (2006). The relationship between child disability and living arrangement in child welfare. *Child Welfare, 85,* 965-984.

- Rosenberg, S. A. & Robinson, C. C. (2004). Out-of-Home Placement for Young Children with Developmental and Medical Conditions. *Children and Youth Services Review, no. 8.*
- Rosenthal, J. A., Schmidt, D., & Conner, J. (1988). Predictors of special needs adoption disruption: An exploratory study. *Children and Youth Services Review, 10,* 101-117.
- Rosenthal, J. A. (1993). Outcomes of Adoption of Children with Special Needs. *The Future of Children, 3,* 77-88.
- Rushton, A. (2004). A scoping and scanning review of research on the adoption of children placed from public care. *Clinical Child Psychology and Psychiatry*, *9*(1), 89-106.
- Santen, E (2010) .Predictors of exit type and length or stay in non-kinship family foster care-he ermanxperience. *Children and Youth Services Review, 32,* 1211-1222
- Schmidt-Tieszen, A. & McDonald, T. P. (1998). Children Who Wait: Long Term Foster Care or Adoption? *Children and Youth Services Review, no. 1-2, -*Feb.
- Schwartz, I., Ortega, R., Guo, S., & Fishman, G. (1994).Infants in nonpermanent placement.*Social* Service Review; 68 (3) Sep 94, -16.
- Selwyn, J., Frazer, L., & Quinton, D. (2006). Paved with Good Intentions: The Pathway to Adoption and the Costs of Delay. *British Journal of Social Work, 36,* 561-576.
- Selwyn, J., Saunders, H., & Farmer, E. (2010). The Views of Children and Young People on Being Cared For by an Independent Foster-Care Provider. *British Journal of Social Work, 40,* 696-713.
- Shaw, T. V. (2006). Reentry into the foster care system after reunification. *Children and Youth* Services Review, 28, 1375-1390.
- Sinclair, I. & Wilson, K. (2003). Matches and Mismatches: The Contribution of Carers and Children to the Success of Foster Placements. *British Journal of Social Work, 33,* 871-884.

- Smith, D. K., Stormshak, E., Chamberlain, P., & Bridges Whaley, R. (2001). Placement Disruption in Treatment Foster Care. *Journal of Emotional and Behavioral Disorders, 9,* 200-205.
- Snowden, J., Leon, S., & Sieracki, J. (2008). Predictors of children in foster care being adopted: A classification tree analysis. *Children and Youth Services Review, 30,* 1318-1327.
- Sobsey, D., Randall, W., & Parrila, R. K. (1997). Gender differences in abused children with and without disabilities. *Child Abuse & amp; Neglect, 21,* 707-720.
- Starr, R. H. (1988). Pre- and perinatal risk and physical abuse. *Journal of Reproductive and Infant Psychology, 6,* 125-138.
- Stone, N. M. & Stone, S. F. (1983). The prediction of successful foster placement. *Social Casework,* 64, 11-17.
- Strijker, J. &Zandberg, T. J. (2005). Breakdown in Foster Care. *International Journal of Child & Family Welfare, no.* 2-3.
- Strijker, J., Zandberg, T., & Van DerMeulen, B. F. (2005).Typologies and Outcomes for Foster Children.*Child & Youth Care Forum, no. 1.*
- Strijker, J., Knorth, E. J., & Knot-Dickscheit, J. (2008). Placement History of Foster Children: A Study of Placement History and Outcomes in Long-Term Family Foster Care. *Child Welfare, no.* 5.
- Terling, T. (1999). The Efficacy of family reunification practices: Reentry rates and correlates of reentry for abused and neglected children reunited with their families. *Child Abuse and Neglect,* 23, 12,1359-1370.
- Terling-Watt, T. (2001). Permanency in Kinship Care: An Exploration of Disruption Rates and Factors Associated with Placement Disruption. *Children and Youth Services Review, no. 2.*
- Unrau, Y. A. (2007). Research on placement moves: Seeking the perspective of foster children. *Children and Youth Services Review, 29,* 122-137.
- Walsh, J. A. & Walsh, R. A. (1990). Studies of the maintenance of subsidized foster placements in the Casey Family Program. *Child Welfare, 69,* 99-114.

- Webster, D., Barth, R. P., & Needell, B. (2000). Placement stability for children in out-of-home care: a longitudinal analysis. *Child Welfare, 79,* 614-632.
- Wells, K. & Guo, S. (1999). Reunification and reentry of foster children. *Children and Youth Services Review, 21,* 273-294.
- Wulczyn, F., Kogan, J., Harden, B.J. (2003). Placement stability and movement trajectories. *Social Service Review, 77, 2, 212-236.*
- Wulczyn, F. (2004). Family reunification. Future of Children, 14, 94-113.
- Yampolskaya, S., Armstrong, M. I., & Vargo, A. C. (2007). Factors associated with exiting and reentry into out-of-home care under Community-Based Care in Florida. *Children and Youth Services Review, 29,* 1352-1367.
- Yampolskaya, S., Armstrong, M. I., & King-Miller, T. (2011). Contextual and individual-level predictors of abused children's reentry into out-of-home care: A multilevel mixture survival analysis. *Child Abuse & Neglect, 35,* 670-679.
- Zeanah, C. H., Larrieu, J. A., Heller, S. S., Valliere, J., Hinshaw-Fuselier, S., Aoki, Y., & Drilling, M.
  (2001). Evaluation of a preventive intervention for maltreated infants and toddlers in foster care. *Journal of the American Academy of Child & Adolescent Psychiatry*, 40(2), 214-221.

# Appendix A

# **Data Extraction Sheet**

Questions are adapted from the Journal of the American Medical Association users' guide to the medical literature, Cochrane collaboration NHS CRD guidelines for systematic reviews.

RefMan ID:

Authors:

Title:

Source:

Child factors Y / N Outcom Stop here if either answer is No.

Outcome of placement Y / N

1. Study Characteristics Aim/objectives of the study Study design Recruitment procedures used

2. Participant Characteristics Sample size Age Gender Ethnicity Socio-economic status

#### 3. Main Methods and Outcome Measures

Child factor (eg mental health, cognitive ability)

4. Main Findings

**Summary of critical appraisal sheet** (list strengths and potential confounders in the study):