Université de Montréal

Prédicteurs de l'instabilité de placement des jeunes abusés sexuellement desservis par les services de protection de la jeunesse

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Résumé

Pour les enfants placés à l'extérieur de leur milieu familial, vivre de l'instabilité de placement est associé à de nombreux effets délétères sur leur santé mentale. Les enfants placés en raison d'un abus sexuel (AS) connaissent généralement une plus grande instabilité de placement que ceux n'ayant jamais vécu d'AS, justifiant la nécessité de comprendre quels facteurs sont associés à une plus grande instabilité de placement pour ce groupe. L'objectif principal était d'identifier les facteurs qui posent un risque accru d'instabilité de placement pour les enfants victimes d'AS. Cette étude a combiné les données d'un système public d'assurance maladie et d'une agence de protection de la jeunesse. L'échantillon comprend 202 enfants abusés sexuellement placés entre 2001 et 2021. Une analyse des risques proportionnels de Cox a été réalisée pour déterminer si le sexe, l'âge, le statut socioéconomique, le type de premier milieu de placement et les diagnostics de troubles mentaux précédant le placement des participants étaient liés à l'instabilité de placement subséquente, définie comme étant un minimum de trois déplacements. Les analyses suggèrent que les enfants placés pour AS font face à un plus grand risque d'instabilité de placement lorsqu'ils ont reçu un diagnostic antérieur de trouble intériorisé et lorsqu'ils sont placés dans une famille d'accueil plutôt qu'avec de la parenté. Des interventions promouvant l'attachement des enfants qui sont placés à l'extérieur de leur milieu familial ainsi que l'engagement entre eux et leurs gardiens pourraient prévenir les interruptions de placement et favoriser une meilleure santé mentale.

Mots-clés : instabilité de placement, maltraitance à l'enfance, abus sexuel à l'enfance, placement par les services de protection de la jeunesse, santé mentale, troubles intériorisés

Abstract

For children placed in out-of-home care, experiencing placement instability is associated with deleterious mental health effects. As children in out-of-home care due to sexual abuse are generally found to experience more placement instability than those who never experienced sexual abuse, the main objective was to determine risk factors for their heightened risk of placement instability. This study combined data from public health services and a child protective agency. Two hundred and two sexually abused children who experienced out-of-home care between 2001 and 2021 were included. A Cox proportional hazard regression analysis was performed to determine whether sex, age, socioeconomic status, type of first out-of-home care setting, and mental health disorder diagnoses before participants' placement were associated with subsequent out-of-home placement instability, defined as a minimum of three placement changes. Analyses suggest that sexually abused children placed in out-of-home care face a greater risk of placement instability when they received a prior diagnosis of an internalizing disorder and when they were first placed in foster rather than kinship care. Understanding which factors may predispose sexually abused children in out-of-home care to experience greater placement instability can help practitioners and program implementers identify which placed children may need increased support. Attachment-based interventions could prevent placement disruptions and their associated mental health consequences.

Keywords: placement instability, child maltreatment, child sexual abuse, out-of-home care, mental health, internalizing disorders

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Predictors of Placement Instability for Sexually Abused Children Served by Child Protection Services

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Introduction

Child sexual abuse is a prominent worldwide issue, as international meta-analytic data suggest that 18 % of women and 8 % of men report having been sexually abused before age 18 (Stoltenborgh et al., 2015). When child sexual abuse is reported to authorities and is deemed substantiated, child protective services can remove children from their family environment and place them into out-of-home care if their security and development are compromised. Approximately 17 % of children who receive child protective services concerning their reported sexual abuse are placed (Esposito et al., 2017).

Psychological consequences of childhood sexual abuse

Although not all sexually abused children develop mental health difficulties (Collin-Vézina et al., 2013; Sawyer & Hansen, 2014), child sexual abuse is a non-specific risk factor for greater subsequent mental health service use (Cutajar et al., 2010; Daigneault et al., 2017; Guha et al., 2019) and numerous mental health disorders (Ensink et al., 2020; Hillberg et al., 2011; Maniglio, 2009; Tyler, 2002). In particular, sexually abused children tend to present higher levels of internalized and externalized problems than children who have experienced other forms of abuse (Lewis et al., 2016; McWey et al., 2010). Specifically, Lewis and colleagues (2016) report that on the Child Behavior Checklist (CBCL), a well-established measure of child internalizing and externalizing problems, children followed by child protective services presented an average externalizing problems score of 15.52 and an average internalizing problems score of 9.42 when they were sexually abused, while children who were not sexually abused presented average scores of 12.59 and 7.09 on the same scales. These differences are found to be statistically significant below $p = .0001$. A potential explanation is that sexually abused children often face multiple cooccurring forms of maltreatment (Vachon et al., 2015). Indeed, Cyr and colleagues (2012) find that in a sample of children followed by child protective services, all of the children who experienced sexual victimization also experienced another category of victimization in the past year. According to the cumulative risk theory, cumulative exposures exacerbate each maltreatment effect (Masten & Wright, 1998). In turn, these exacerbated effects can lead to a greater risk of developing behavioral problems and functional

impairments (Layne et al., 2014; Liming et al., 2021). Thus, sexually abused children may require increased support in out-of-home care settings and may present different patterns of out-of-home placement trajectories.

Out-of-home care placement trajectories of sexually abused children

Yet, little is known regarding the placement trajectories of sexually abused children, as studies seeking to understand the association between child maltreatment and out-of-home care placements often categorize sexual abuse under the general rubric of maltreatment. Only one study, to our knowledge, has simultaneously examined multiple characteristics of the placement trajectories of sexually abused youth compared to those who experienced other forms of maltreatment (Esposito et al., 2017), by investigating factors influencing the risk of a first out-of-home placement, placement disruption, and the length until family reunification via hazard analyses. The authors found that when sexually abused children were placed, a longer period separated them from reunification with their families than it did for placed children who were not sexually abused. Also, when sexually abused children had severe behavioral problems, they were at greater risk of being placed than their counterparts with similar behavioral problems that were not sexually abused.

Other studies have specifically investigated differences in placement instability between sexually abused children and those who experienced other forms of maltreatment. Placement instability occurs when children in out-of-home care change placement settings repeatedly. Sexually abused children in out-of-home care tend to experience greater placement instability than those who experienced other forms of maltreatment (Eggertsen, 2008; Holland & Gorey, 2004; James et al., 2004; Nalavany et al., 2008; Osborn et al., 2008). For instance, compared to children who experienced other forms of maltreatment, those who were sexually abused have been found to be nearly twice as likely to live in at least three different placement settings (Eggertsen, 2008). Although few studies have suggested an explanation, sexually abused children likely have more difficulty forming attachment bonds with adults responsible for them in their placement settings considering these children's more frequent emotional and behavioral problems, which, in turn, may explain their more frequent placement interruptions (Nalavany et al., 2008). This explanation is consistent with findings that sexual abuse increases children's vulnerability to disorganized and insecure forms of attachment (Ensink et al., 2020).

Nevertheless, other studies have not found that sexual abuse, compared to the experience of other forms of maltreatment, is associated with greater risks of placement instability (Esposito et al., 2017; McGuire et al., 2018).

Psychological consequences of placement instability

Despite some inconsistencies in the literature regarding the types of abuse associated with greater placement instability, the latter's damaging effects on children's mental health warrants attention (James et al., 2004; McGuire et al., 2018; Mishra et al., 2020; Osborn et al., 2008; Rubin et al., 2007). For instance, Koh and colleagues (2014) found that children who lived in at least three different out-of-home care placement settings had more psychiatric diagnoses than those who resided in less than three placement settings, despite their similar number of diagnoses pre-placement. Moreover, qualitative studies examining the perspectives of people placed in their youth find that placement instability, especially when it is rapid, leads to children feeling rejected, unwanted, in danger, and with a sense of powerlessness (Chambers et al., 2018; Chambers et al., 2020; Hyde & Kammerer, 2009; Rostill-Brookes et al., 2011; Skoog et al., 2015; Unrau, 2007).

Furthermore, it has been found that children who change placements at least three times more rapidly are at risk of experiencing even more placement instability afterwards, compared to their peers who also experience at least three placement moves, but dispersed over a greater time period (Esposito et al., 2017). This implies that children who experience placement instability more quickly would be at risk of experiencing even more subsequent placement instability, rendering them more vulnerable to the aforementioned detrimental consequences.

Placement instability risk factors

Several risk factors for placement instability for children from out-of-home care populations have been identified. Systemic and political decisions (e.g., group home closings, funding problems, placement coordination errors) tend to explain most first and second placement changes (James, 2004). Moreover, children from socioeconomically disadvantaged areas tend to experience more unstable placements (Andersen, 2014; Esposito et al., 2017), while children who have a greater number of successive caseworkers face a greater likelihood of multiple placement changes (Eggertsen, 2008; Rock et al., 2015). Additionally, the type of placement setting has been found to contribute to placement instability. Children placed in

kinship care (i.e., with family members other than their parents) are those who tend to experience the least placement changes (James, 2004; Jedwab et al., 2019; Konijn et al., 2019; Rock et al., 2015; Winokur et al., 2018), followed by group homes, foster families, and emergency accommodations (Connell et al., 2006).

Personal risk factors for placement instability have also been identified, such as older age at placement (Barber & Delfabbro, 2004; Eggertsen, 2008; Esposito, 2014; Jedwab et al., 2019; Konijn et al., 2019; Park & Ryan, 2009; Rock et al., 2015) and being a male (Esposito, 2014; Jedwab et al., 2019; Park & Ryan, 2009). However, sex is not always a significant factor (Eggertsen, 2008; Konijn et al., 2019). Behavioral problems before a child's placement in out-of-home care have also been frequently investigated, with meta-analytic results suggesting that they are a significant risk factor for subsequent placement instability (Konijn et al., 2019; Oosterman, 2007).

Beyond behavioral problems and their associated symptoms, diagnosed mental health disorders also pose a greater risk of placement instability (Koh et al., 2014). Yet, it remains unclear whether specific mental health disorders pose a heightened risk. Some findings nevertheless suggest that children with conduct disorders (Ward & Skuse, 2001), attachment disorders (Strijker et al., 2008), depression (Barth et al., 2007), and clinically significant dissociation and trauma symptoms (Akin et al., 2021; Clark et al., 2020; Kisiel et al., 2020) are more at risk of experiencing placement instability. Moreover, meta-analytic findings suggest that externalizing problems have a greater influence on the risk of experiencing placement instability than internalizing problems (Konijn et al., 2019).

Only one study to our knowledge has examined placement instability risk factors for sexually abused children more specifically, finding that older age at first placement, having requested youth criminal justice services, and facing more socioeconomic disadvantages were risk factors for this subgroup (Esposito et al., 2017). Moreover, it was found that sexually abused youths' behavioral problems did not influence their risks of experiencing placement instability, while it was the case for other placed youth (Esposito et al., 2017).

Prior study limitations

Few studies have compared how different mental health disorder diagnoses are associated with placement instability, often studying mental health as an overarching construct rather than

distinguishing between different disorders and symptom profiles. Additionally, little is known regarding which factors predict greater and more rapid placement instability for children who experienced sexual abuse, although they represent a subgroup generally found to experience greater placement instability and they largely present more mental health difficulties than children placed for other reasons, justifying the importance of examining this group distinctly.

Purpose of the study

The main objective of the present study was to determine which factors could predict a greater risk and more rapid onset of placement instability for sexually abused children in out-of-home care. No specific hypotheses were set forth as information is scarce concerning the placements of sexually abused children, and we cannot rely entirely on studies of placed children in general since sexually abused children form a distinct at-risk subgroup with regards to placement instability risk and mental health. Understanding which factors predispose sexually abused children to experience placement instability can help identify children that may need increased support once placed to prevent multiple placement disruptions and their associated deleterious mental health effects.

Method

The present study employed a longitudinal observational design, an ideal choice to document associations underpinned by causal mechanisms (Black, 1996), especially when an experimental study cannot be conducted for practical and ethical reasons. Four ethical committees granted authorization certificates for obtaining administrative data before beginning the study: the child protective agency, the information commissioner's office (CAI), the public health services authority (RAMQ), and the first author's university ethical review board.

Procedures and sample

Three data sources were merged to create the dataset used in this study: (1) clinical-administrative data from the Child Protective Service (CPS) of a large Canadian city collected from each child's initial service request with the CPS until October 14th, 2021; and medical-administrative data collected between January 1st, 1996, and March 31st, 2013, from (2) the area's public health services authority; and (3) the Ministry of Health and Social Services.

All children for whom a sexual abuse report was substantiated between January 1st, 2001, and December 21st, 2010, at the CPS of a large Canadian city were initially selected for the study (n = 955). Deterministic matching between CPS and administrative public health services data using each participants' health insurance number, full name, address, and date of birth was successful for 92 % (n = 882) of the sample. The participants in this sample who were placed in out-of-home care at least once were identified (n = 321, 36 %). An initial out-of-home placement was defined as a participant's entry into a placement setting outside of their family environment for at least 72 hours following an initial maltreatment investigation.

However, not all participants' entire mental health medical data prior to their first placement was available in the current study. Indeed, 70 % (n = 224) of the sample was born before the date at which this data is available for this study, i.e., before January 1st, 1996. For the participants for whom the entire mental health medical data was available (i.e., those born on or after January 1st, 1996), it was determined that only 2 % of their mental health diagnoses occurred in their first five years of life. Considering the small proportion of diagnoses received during this period, it was deemed acceptable to include participants for whom medical data was only available from age five and above in the present study. Therefore, only the participants born on or after January 1st, 1991 (i.e., five years prior to the date at which mental health medical data is available), were included (n = 202). This final selection enabled maintaining an appropriate sample size while limiting potential missing information for mental health diagnoses and services to 2 %. Table 1 provides the descriptive characteristics of the final sample.

Measures

Independent variables

Sociodemographic data. Participants' age and sex at the time of their first out-of-home placement were documented. Age at first placement was measured as a dichotomous variable by categorizing each child as initially being placed between ages (1) 0 and 12 years or (2) 13 and 17 years. Sex was a nominal variable, with the female sex as the reference group. Participants' socioeconomic status when their sexual abuse was first reported was estimated using their neighbourhood's material and social deprivation indices based on their respective postal codes. These two percentile indices were calculated according to the 2006 assignment program's June 1st, 2009 version (Hamel, 2009; Pampalon, 2010), and were derived from six socio-economic

indicators (e.g., average income, proportion of people with no high school diploma, proportion of single parent families). A higher score indicated greater socioeconomic disadvantage.

Youth criminality preceding the first out-of-home placement. Whether youth received a request for youth criminal justice services before first being placed was measured as a nominal variable.

Type of initial placement setting. The first type of out-of-home care setting children were placed in for over 72 hours was computed as a categorical variable, comprised of three types of placements: (1) kinship care; (2) foster care; (3) rehabilitation center or another type of placement setting (e.g., an intermediate resource).

The number of CPS personnel involved with the child. The number of CPS personnel assigned to each participant's case before their first placement was estimated based on the employees' identification numbers in each child's file. CPS personnel included caseworkers and other personnel involved in different steps of the reporting, assessment, and follow-up services.

Mental health before the first out-of-home placement. Three indicators were examined to estimate the mental health of participants before their first placement: (1) types of mental health diagnoses received pre-placement, (2) frequency of mental health service use pre-placement, and (3) comorbidity of mental health disorders pre-placement. First, to determine what types of mental health problems participants had before their first placement, mental health disorder diagnoses were divided into six categories (see Table 2 for the diagnoses included within each category) to reflect the types of mental health difficulties associated with the risk of placement instability in the literature: (1) externalizing disorders; (2) internalizing disorders; (3) stress-related disorders; (4) intellectual disabilities or developmental disorders; (5) other childhood disorders; (6) other mental health disorders. Six dichotomous variables indicating whether the child had received each type of diagnosis before being placed for the first time were created. Second, a continuous variable measuring the extent of children's mental health service use was calculated based on the number of times a participant consulted outpatient services or was hospitalized for mental health problems before being placed for the first time. Finally, to measure the comorbidity of participants' mental health problems before their first placement, a categorical variable indicating whether the participants received (1) zero, (2) one or two, or (3)

three or more types of mental health diagnoses based on the six identified categories (see Table 2) before their first placement was created.

Dependent variable: Placement instability

Placement instability was assessed by measuring the total number of placement changes participants experienced. Placement changes were only considered if they lasted longer than 72 hours to account for respite or emergency placements that were not part of a participant's long-term plan. Earlier findings from Esposito and colleagues (2014) suggest that the cumulative risk of changing placements starts at the third placement change and continues to increase over time, while James' (2004) findings indicate that first and second placement changes are usually explained by systemic and political reasons rather than individual factors, which were more emphasized in the current study. Thus, based on the total number of placement changes, a dichotomous measure of placement instability was created according to whether participants experienced (0) less than three placement changes or (1) three or more placement changes (i.e., placement instability).

The follow-up period for the dependent variable starts from the date of each child's first placement into out-of-home care to either the date of the third placement change, for those who experienced at least four placement settings, or for those who did not experience four placement settings, to the end of the study period (October 14th, 2021) or the child's 18th birthday, whichever came first. A variable providing the length of the follow up period was also entered into the analytic model.

Analytic method

A Cox proportional hazard regression analysis (Cox, 1979) was used to examine which factors contribute to the risk that a child will experience at least three placement changes after their initial placement. This type of analysis has two important functions (Singer & Willett, 2003): it allows for determining the speed at which an event occurs and the factors associated with its occurrence, as well as for the analysis of censored cases that do not experience the event investigated during the study, i.e., placement instability. The dataset was built, transformed, and analyzed using SPSS version 27.

The analytic process was comprised of four main steps. First, the proportional hazards assumption was assessed by comparing estimated -ln(-ln) survival curves. Second, an ordinary least squares regression was conducted with all the independent variables used in the final Cox proportional hazard models, which indicated no multicollinearity issues. Third, the Cox proportional hazards model was examined to determine which covariates predicted the cumulative risk that a child will have experienced at least three placement changes. Finally, survival analyses were conducted with the Kaplan-Meier method (Kaplan & Meier, 1958) to measure to what extent the speed at which children experienced placement instability was affected by relevant covariates.

Results

Sample characteristics

The sample studied included 202 children placed in out-of-home care by CPS. Of the overall cohort of children, 59 % (n = 119) changed placements three or more times, thus experiencing placement instability. Participants experienced an average of 6.32 different placement settings (SD = 5.94) during the study period. More female (69 %) than male (31 %) children were included in the sample. Most children were placed into out-of-home care before age 13 (71 %). Children's first placement setting was either foster care (63 %), residential care (24 %), or kinship care (13 %). Regarding their mental health before being placed for the first time, 45 % of children had received at least one mental health disorder diagnosis, and the average number of consultations these children had for mental health problems before being placed was 7.57 (SD = 20.01). The most frequent types of mental health disorder diagnoses these children received before being placed for the first time were internalizing disorders (27 %) and externalizing disorders (23 %). Table 2 presents the frequencies of each type of mental health disorder diagnosis participants received before being placed.

Preliminary analyses

As the final sample size was relatively small (n = 202), creating a parsimonious model using only some of the initial covariates was deemed necessary to maintain appropriate power. The rule of thumb in Cox models is that there should be a minimum of ten events per covariate (Peduzzi et al., 1995). Considering the exploratory nature of the present study, univariate Cox regressions were completed with each potential covariate to select the most relevant ones (see

Table 3). Those with a *p*-value below .20 (diagnosis of an internalizing disorder pre-placement, type of initial placement setting, and diagnosis of an intellectual disability or developmental disorder pre-placement) were then retained for the final Cox proportional hazards model. Other covariates with a *p*-value above .20 that were particularly relevant in the literature and reflected the ecological factors associated with placement instability were also retained (age at first placement, sex, material deprivation, social deprivation, and diagnosis of an externalizing disorder pre-placement). Although stress-related disorders and youth criminality have been associated with placement instability in the literature (Akin et al., 2021; Clark et al., 2020; Kisiel et al., 2020; Esposito et al., 2017), these variables were not selected for the final Cox proportional hazards model as their frequencies in the sample were very small (respectively n = 11 and 6).

Cox regression results

Table 4 presents the multivariate Cox proportional hazard regression estimates for the risk of experiencing placement instability, i.e., changing placement settings at least three times compared to changing placements less than three times. The increased risk of placement instability was statistically explained by having been diagnosed with an internalizing disorder before being placed into out-of-home care and by first being placed into foster care rather than kinship care. Children diagnosed with an internalizing disorder before being placed in out-of-home care were two and a half times more likely to experience placement instability than children without this diagnosis. Additionally, the risk of placement instability was nearly two times greater for children first placed into foster care compared to children first placed into kinship care. The other variables included the model did not add to the prediction of placement instability.

Survival analysis

Table 5 shows the mean and median length of time (in days) until children experience placement instability whether they were diagnosed with an internalizing disorder before being placed into out-of-home care[1]. The mean number of days until children experience placement

[1] Survival analysis was not conducted with the variable pertaining to the type of first placement setting as the Cox regression results revealed that there was only a significant difference between two types of settings (i.e., foster and kinship care) in terms of increasing the risk of placement instability, while there was no significant difference between all three types of settings (see Table 4, where p = .074 for the variable "Type of initial placement setting"). This rendered the survival analysis with the Kaplan-Meier method non-significant.

instability (i.e., three placement changes) was shortest for children with an internalizing disorder diagnosis before being placed compared to children without one (i.e., 1635 vs 3066 days) (see Figure 1). This result indicates that children with a prior internalizing disorder diagnosis were at risk of experiencing placement instability significantly more rapidly than their counterparts, i.e., almost four years earlier ($\chi^2 = 15.875$, $p = .015$).

Discussion

The goal of this study was to determine which factors were associated with a greater risk for and more rapid onset of placement instability for sexually abused children placed in out-of-home care. The results suggest that children with an internalizing disorder diagnosed pre-placement and those first placed in foster care rather than kinship care were significantly more at risk of experiencing placement instability, when controlling for age, sex, material and social deprivation, externalizing disorder diagnosis, and intellectual disability or developmental disorder diagnosis pre-placement. In addition, instability occurred significantly faster when internalizing disorders were diagnosed pre-placement.

Interpretation of the main findings

Internalizing disorders

Sexually abused children diagnosed with an internalizing disorder were 2.5 times more likely to experience placement instability and to do so nearly four years earlier than those without this diagnosis pre-placement. These results are consistent with meta-analytic findings concerning the general population of children placed in out-of-home care (Konijn et al., 2019). However, although an internalizing disorder diagnosis pre-placement was found to be the most robust predictor in the current study, findings should be interpreted with caution considering the small number of observations and large confidence intervals. Indeed, a small sample size is indicative of less power, while wide confidence intervals indicate that that the estimates are more uncertain.

The effect of internalizing disorders on subsequent placement instability may reflect three factors. First, children with internalizing disorders tend to be more withdrawn (Chesmore et al., 2017; Tandon et al., 2009), and may, in turn, have more difficulties forming relationships with their caregivers, a factor that has been associated with greater risks of placement instability

(Leathers, 2006). Withdrawn children may also receive less attention and personalized care, which could otherwise have helped prevent their experience of multiple placement breakdowns. Second, considering that internalizing disorders tend to be less observable and more challenging to detect than externalizing disorders (McGinnis et al., 2019; Mian, 2014), children diagnosed with an internalizing disorder are likely to have particularly severe symptoms, which in turn may be associated with greater placement instability. Finally, the significant effect may be attributable to the greater proportion of females in our sample compared to other studies, suggesting a possible interaction of internalizing disorders and sex, as females tend to have more internalizing problems diagnoses than males (Lewis et al., 2016; Martel, 2013; Sterba et al., 2007). Indeed, since our sample was only comprised of sexually abused children, females were overrepresented in contrast to studies including children placed due to a variety of types of maltreatment. Until the interaction between internalizing disorders and sex is examined, it remains unclear whether the effect of internalizing disorders on subsequent placement instability could explained by sex differences, type of maltreatment, or other potential factors.

Type of first placement

The other significant risk factor of placement instability for sexually abused children in the current study was an initial placement in foster care rather than kinship care. Specifically, children first placed in foster care were nearly twice as likely to experience placement instability than those in kinship care. This result supports data suggesting that kinship placements are most stable (Konijn et al., 2019; Rock et al., 2015). A possible explanation is that kinship foster parents appear to be more dedicated and personally involved than non-kinship foster parents, offering care unconditionally and feeling a greater sense of duty towards children in their care (Andersen & Fallesen, 2015; Rock et al., 2015), potentially preventing placement breakdown. Additionally, children in kinship care tend to exhibit less psychopathology than those placed in other care settings (Winokur et al., 2014; 2018), which may decrease their risk of later placement instability, suggesting a potential interaction between these factors.

Externalizing disorders

An interesting finding was that contrary to most of the literature, no significant effect of externalizing disorder diagnosis on subsequent placement instability was observed, while a negative trend, although non-significant, was instead detected. Meta-analytic findings regarding

placed children who faced various forms of abuse have revealed that the effect of externalizing problems on placement instability is the greatest of all factors studied, as their presence has been found to increase the risk of placement breakdown between 2.4 and 3.8 times (Konijn et al., 2019; Oosterman, 2007).

While the reasons for this discrepancy are unclear, it may reflect methodological differences between the current study and other investigations. Notably, the measure of externalizing disorder *diagnosis* used in this study (rather than measuring externalizing *problems* or *behaviors*) may be particularly stringent, leading to an underestimation of the effect of externalizing disorders and symptoms on placement instability. Moreover, the fact that only sexually abused children were included in the current study, rather than placed children in general, may explain that no effect of externalizing disorder diagnosis on the risk of placement instability was found. The only study to our knowledge that compared the placement trajectories of sexually abused youth to those who experienced other forms of abuse found that behavior problems did not significantly influence the risk of placement instability for youth served for child sexual abuse, while it did for youth placed in out-of-home care for other reasons (Esposito et al., 2017), which supports the current study's findings, although these authors' measures of externalizing problems differed from those used in the current study. Additionally, Esposito and colleagues (2017) only found this difference when they controlled for youth criminality, a proxy for severe behavioral problems. Yet, in the current study, too few participants exhibited criminal behavior requiring services for this factor to be considered in the analyses. Esposito and colleagues (2017) also only included participants older than ten years, while the current study's participants were on average 8.5 years old when they were first placed, suggesting that criminality and severe behavior problems may only increase the risk of placement instability for older children and teens. Overall, it remains unclear why children who were sexually abused and who have a diagnosis of externalizing problems are not more at-risk of placement instability than their counterparts without this diagnosis. The impact of sexually abused children's generally more complex mental health clinical picture on placement instability would have to be examined more specifically in future studies.

Other factors

Intriguingly, no other risk factors frequently associated with placement instability in the literature, such as sex, age at placement, and socioeconomic status, were statistically significant predictors in the current study. This may be because these factors are less important within this subgroup of sexually abused children than among children exposed to other forms of abuse. On the other hand, it may be due to the relatively small sample size of this study compared to other research using similar methodologies. This may have confounded unique effects or rendered them more difficult to detect. However, with regards to sex, being a male was still found to be a marginally significant risk factor for placement instability ($p = 0.72$).

Implications for practice

The current study results suggest that with sexually abused children, child protection providers should be particularly mindful of those who have been diagnosed with an internalizing disorder and who have been placed in foster care to take suitable measures to prevent their more likely placement instability. Considering that internalizing symptoms may be more challenging to detect due to their inward nature (McGinnis et al., 2019; Mian, 2014), regular screening for these before and during a child's placement trajectory is essential to enable caseworkers' prompt interventions (Hurlburt et al., 2010).

Moreover, considering that foster care is found to be the setting where the risk of placement instability is the greatest, attempts should be made to promote more stability in these contexts. Seeing that the disengagement and withdrawal of children and their caregivers in out of home care have been found to be associated with greater placement instability (Leathers, 2006), efforts to target these internalizing disorder symptoms and to promote greater attachment security between children and their foster parents appear to be warranted, especially in foster care where guardians may feel less personally involved with the children than in kinship care settings. Examples of associated interventions include the "Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline in Foster care" (Juffer et al., 2008; Schoemaker et al., 2020), which involves six intervention home-visits teaching foster parents to respond to their children's behavioral signals and to set rules and boundaries in a sensitive manner, as well as the "Basic Trust Intervention" (Colonnesi et al., 2013; Zeegers et al., 2020), which involves training with video feedback, psychoeducation, and advice for dealing with

children's attachment difficulties. Interventions should also address foster parents' knowledge of the impact of childhood sexual trauma (Konijn et al., 2021), as foster parents who have trauma-informed attributions of children's behaviors are more likely to respond in ways that help establish secure and stable relationships (Kelly & Salmon, 2014; Sullivan et al., 2016). An example of this type of intervention is the trauma-informed parenting training "Caring for children who have experienced trauma" developed by the National Child Traumatic Stress Network (Grillo & Lott, 2010), which involves eight modules covering topics aimed at improving foster parents' knowledge and skills for providing adequate care for traumatized children.

For children placed in their teens, who frequently report powerlessness and exclusion from decision-making processes in the face of placement instability (Chambers et al., 2020), advocating for their voices to be considered and actively prioritizing their concerns and needs would likely be beneficial to preventing placement breakdown by reinforcing the bonds between adolescents and foster caregivers. What's more, creating team decision-making activities that involve adolescents placed in out-of-home care, their caseworkers, and their caregivers has been found to improve youths' emotional and behavioral symptoms and promote their optimism about their futures (Chambers et al., 2020; Leathers et al., 2021), a worthy goal and means to prevent placement breakdown.

Strengths and limitations

The major strength of this study is that it was the first to consider the impact of such a wide range of risk factors on the placement instability of children who experienced sexual abuse and the influence of a variety of mental health disorder diagnoses on placement instability. This was important, as although studies have addressed the influence of mental health disorders in general and the effects of externalizing and internalizing *problems* on placement instability, few have considered the influence of various different mental health *disorders* on placement instability within the same study. In doing so, it was possible to capture a more stringent construct of mental health problems. Moreover, the current study's longitudinal design shed light on the temporal pathways between the diagnosis of mental health disorders and subsequent placement instability. Indeed, administrative health data permitted the identification of all mental

health disorder diagnoses occurring for participants before their placement, rather than assessing their mental health during their placement trajectory.

Results should nevertheless be interpreted in light of certain limitations. First, administrative health data limited the investigation of disorders to children who received mental health diagnoses. Other participants likely exhibited mental health problems below clinical thresholds or without them being noticed and diagnosed by their physician, highlighting an issue of inter-rater reliability between medical professionals and disparities in access to mental health care. This may also have led to an underestimation of the extent to which certain diagnoses, namely that of internalizing disorders, impacted the risk of placement instability. Second, administrative data provided limited information about children's specific contexts. File reviews and interviews with a sample of children could have provided a better understanding of other factors impacting their placement trajectories (Brownell & Jutte, 2013) beyond those included in the present study, such as their rapport with caregivers and caseworkers, birth parent characteristics, and social support. Third, the limited sample size restricted the number of covariates included in the final model. Other diagnoses such as stress-related disorders would likely have been relevant to investigate had there been a greater number of events in this diagnostic category.

Conclusions and future directions

The current study suggests that for sexually abused children placed in out-of-home care, a prior internalizing disorder diagnosis and being placed in foster rather than kinship care increased the risk for subsequent placement instability at least twofold. Children most at-risk of placement instability should be given particular care and appropriate resources to promote better attachment bonds with their caregivers in foster care and early detection and treatment for internalizing disorders to prevent multiple placement breakdowns. It is imperative that government policies include adequate funding for specialized psychological care and prevention for children in out-of-home care and their caretakers. Future studies are needed to replicate the current findings with a larger sample to determine whether other mental health diagnoses also increase the risk of subsequent placement instability and to better understand the interactions between mental health diagnoses, age at placement, sex, and placement settings. Moreover, as disorder comorbidity is frequent (Levy et al., 2016; Willner et al., 2016), studies addressing

various comorbidity profiles through cluster analyses to determine which combination of mental health diagnoses pre-placement are risk factors for placement instability would be highly relevant.

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Table 1.

Descriptive characteristics of the sample (n = 202)

	Total (*n* = 202)		No placement instability (*n* = 83, 41 %)		Placement instability (*n* = 119, 59 %)	
	n	%	*n*	%	*n*	%
Sex						
Female	140	69 %	63	45 %	77	55 %
Male	62	31 %	20	32 %	42	68 %
Age at first placement						
0 to 12 years	143	71 %	48	34 %	95	66 %
13 to 17 years	59	29 %	35	59 %	24	41 %
Comorbidity of mental health disorders pre-placement						
0 diagnoses	112	55 %	44	39 %	68	61 %
1-2 types of diagnoses	62	31 %	26	42 %	36	58 %
3-6 types of diagnoses	28	14 %	13	46 %	15	54 %
Type of initial placement setting						
Kinship care	27	13 %	15	56 %	12	44 %
Foster care	127	63 %	42	33 %	85	67 %
Residential care or other	48	24 %	26	54 %	22	46 %
	M	*SD*	*M*	*SD*	*M*	*SD*
Material deprivation	53.00	26.30	53.16	26.66	52.90	26.15
Social deprivation	62.83	29.71	62.92	28.39	62.77	30.72
Number of CPS personnel involved with the child pre-placement	9.40	8.90	11.01	9.599	8.28	8.229
Number of mental health consultations pre-placement	7.57	20.01	11.60	27.70	4.76	11.39

Table 2.

Categories of mental health disorders and prevalence in the sample (n = 202)

Type of mental health disorder	Mental health disorders included within the category	ICD-10 codes	Number of children with this type of mental health diagnosis pre-placement		
			Total *n*	No placement instability	With placement instability
Externalizing disorders	Attention-deficit hyperactivity disorders; conduct disorders; mental and behavioral disorders due to psychoactive substance use	F900 to F929; F10-F19	47 (23 %)	25 (53 %)	22 (47 %)
Internalizing disorders	Emotional disorders with onset specific to childhood; mood [affective] disorders; phobic anxiety disorders; other anxiety disorders; obsessive-compulsive disorder; somatoform disorders; other nonpsychotic mental disorders	F930 to F939; F300 to F399; F400 to F429; F450 to F489	55 (27 %)	20 (36 %)	35 (64 %)
Stress-related disorders	Reaction to severe stress and adjustment disorders; dissociative and conversion disorders	F430 to F439; F440 to F449	11 (5 %)	5 (45 %)	6 (55 %)
Intellectual disabilities and/or developmental disorders	Pervasive and specific developmental disorders; intellectual disabilities	F800 to F89; F70 to F79	26 (13 %)	15 (58 %)	11 (42 %)
Other childhood disorders	Disorders of social functioning with onset specific to childhood and adolescence; tic disorder; other behavioral and emotional disorders with onset usually occurring in childhood and adolescence	F940 to F949; F950 to F959; F980 to F989	27 (13 %)	11 (41 %)	16 (59 %)
Other mental health disorders	Mental disorders due to known physiological conditions; schizophrenia, schizotypal, delusional, and other non-mood psychotic disorders; behavioral syndromes associated with physiological disturbances and physical factors; disorders of adult personality and behavior; unspecified mental disorder	F00 to F09; F20 to F29; F50 to F59; F60 to F69; F99	29 (14 %)	14 (48 %)	15 (52 %)

Table 3.

Preliminary univariate Cox regressions of the potential covariates for the final model

Covariate	Beta	S.E.	Wald	*p*	Adj. HR[a]	95% CI
Age at first placement (0 to 12 years = 0)	.088	.237	.137	.711	1.092	[.686, 1.738]
Sex (female = 0)	.238	.192	1.534	.216	1.269	[.871, 1.848]
Type initial placement setting (kinship care = 0)			4.046	.132		
Foster care	.574	.309	3.462	.063	1.776	[.970, 3.251]
Residential care or other	.320	.360	.791	.374	1.377	[.680, 2.789]
Material deprivation	-.001	.003	.063	.802	.999	[.992, 1.006]
Social deprivation	.000	.003	.001	.979	1.000	[.994, 1.006]
Number of CPS personnel involved with the child pre-placement	-.006	.012	.234	.629	.994	[.972, 1.017]
Dx of an externalizing disorder pre-placement	-.040	.239	.028	.868	.961	[.602, 1.535]
Dx of an internalizing disorder pre-placement	.493	.205	5.757	.016*	1.637	[1.094, 2.447]
Dx of a stress-related disorder pre-placement	.179	.420	.183	.669	1.197	[.525, 2.725]
Dx of an intellectual disability and/or developmental disorder pre-placement	-.422	.317	1.775	.183	.656	[.352, 1.220]
Dx of another childhood mental health disorder pre-placement	-.053	.269	.039	.844	.948	[.560, 1.607]
Dx of another mental health disorder pre-placement	.019	.277	.005	.945	1.019	[.592, 1.756]
Number of mental health consultations pre-placement	-.008	.006	1.591	.207	.992	[.981, 1.004]
Comorbidity of mental health disorders pre-placement (0 Dx = 0)			1.223	.543		

1-2 types of diagnoses	.208	.208	.992	.319	1.231	[.818, 1.851]
3-6 types of diagnoses	.210	.289	.529	.467	1.234	[.701, 2.172]

* $p < .05$
** $p < .01$
[a] Ajd. HR = Adjusted hazard ratio

Table 4.

Final Cox proportional hazard model of placement instability for sexually abused children at initial placement (n = 202)

Covariates	Beta	S.E.	Wald	*p*	Adj. HR[a]	95% CI
Child Characteristics						
Sex (female = 0)	.384	.213	3.242	.072	1.468	[.967, 2.231]
Age at first placement (0 to 12 years = 0)	.400	.280	2.039	.153	1.492	[.862, 2.583]
Material deprivation	.000	.004	.006	.936	1.000	[.993, 1.007]
Social deprivation	-.002	.003	.446	.504	.998	[.992, 1.004]
Types of mental health diagnoses received pre-placement						
Externalizing disorder (no disorder = 0)	-.582	.323	3.235	.072	.559	[.297, 1.054]
Internalizing disorder (no disorder = 0)	.922	.259	12.673	<.001**	2.514	[1.513, 4.177]
Intellectual disability and/or developmental disorder (no disorder = 0)	-.564	.342	2.716	.099	.569	[.291, 1.113]
Type of initial placement setting (Kinship care = 0)			5.216	.074		
Foster care	.632	.316	3.987	.046*	1.881	[1.012, 3.498]
Residential care or other	.248	.374	.440	.507	1.282	[.616, 2.669]

Overall model statistics: $X^2(9, 202) = 20.761$, $p = .014$

* $p < .05$

** $p < .01$

[a] Ajd. HR = Adjusted hazard ratio

Table 5.

Mean and median survival time of placement instability by internalizing disorder diagnosis pre-placement

	Mean survival time (days)	Median survival time (months)	Logrank test (χ^2)	*p*
No internalizing disorder diagnosis	3066.02	494.00	5.87*	.015
Internalizing disorder diagnosis	1634.65	258.49		

*$p < .05$

Figure 1.

Time to placement instability by presence of an internalizing disorder diagnosis pre-placement