



# Screening decisions for non-abuse concerns reported to child protection agencies- a structural equation model for referral content and decision outcome

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## ABSTRACT

**Objectives:** Child protection referrals that contain information about incidents of physical child abuse, sexual abuse, and domestic violence have a high chance of being screened in for investigation. The aim of the current study is to investigate which case factors that affect the decision to screen-in cases with other types of concerns.

**Method:** A sample of referrals (N = 1365) to child protection services in Norway was randomly drawn. Information was collected regarding (i) child and family characteristics, (ii) the content of the referral (iii) the decision to investigate. A structural equation model that describe how case characteristics and the contents of the report influence the screening decision was estimated.

**Results:** Non abuse-concerns were grouped in three latent variables. The first consisted of referrals that contained concerns about a wide range of problems related to the child's health and development. The second consisted of referrals that contained concerns about parental conflicts and child safety. The third consisted of concerns related to different types of family and environmental risk factors. Families with immigrant background have an increased chance of being screened-in, irrespective of referral content. Cases with previous referrals have a decreased chance of being screened-in.

**Conclusions:** When controlling for other case factors, more complex referrals with multiple concerns have increased chance of being screened in.

## 1. Introduction

One of the main tasks of the Child Protection Services (CPS) is to investigate reports of concern about children submitted by professionals or private citizens. According to the Norwegian child protection act, people or institutions bound by the professional duty of confidentiality are required to report cases of concern to CPS (Lindboe, 2011). Mandatory reporting applies to anybody who comes into contact with children or their families in a professional capacity. In the year 2019 mandatory reports came from either health professionals (i.e physicians, dentists, nurses or mental health therapists) (19.5% of the reports), a teacher (17.5% of the reports) a police officer (14.9% of the reports) or from a different child protection agency (14.8% of the reports). About one in five reports came from private parties that are not mandated to report, most of those were from the parents or someone within the child's family (11.0%) (Statistics Norway 2020). In Norway CPS is obligated to record every report of concern they receive and to make a decision within a week whether the report should be subject to further investigation. The case processing procedures are the same irrespective of who filed the report. If the report is investigated it is screened in, if the

report is closed it is screened out. There is no specific definition of child abuse or neglect that has to be met for screen-in. The Norwegian Child Welfare Act states that the CPS should investigate a referral not only if there is a risk for the child's health, but also when there are conditions that may be detrimental for the child's development (The Child Welfare Service Act, 1993). The official guidance issued by the The Norwegian Directorate for Children Youth and Family affairs (2019) states that the threshold for admitting a report for further investigation should be low. Policy states that it is sufficient that there are reason to assume that the child is in need of any type of services that is offered by CPS. There is a large variety in types of services offered by CPS in Norway. This includes parenting programs, general counseling, support for childcare, coordination and support for contact with other services, respite care and supported leisure activities for children at risk. It is important to point out that in Norway, the CPS is complementary to other social services and that the most predominant type of intervention is voluntary support for families (Skivenes, 2011). The aim of this study is therefore first to identify which types of concerns other than child abuse are reported to the CPS. The second aim is to identify the types of non-abuse referrals that will most likely lead to a CPS investigation.

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We define non-abuse cases as cases where the initial referral contain allegations other than incidents of physical child abuse, sexual abuse or domestic violence. According to national statistics allegations about physical abuse were present in 8.3 percent of the referrals, allegations of sexual abuse were present in 2.6 percent of the referrals and allegations of domestic violence were present in 17.9 percent of referrals in the year 2019.

In 2019, about 58 thousand children were reported to the child protection services in Norway, representing 4.5 percent of the population of children aged 17 years or younger. Out of these referrals, 16.7 percent were screened out (Norwegian Directorate for child and family affairs, 2019).

## 2. Trends and international perspectives

During the last decade there has been a trend of increasing numbers of children reported to CPS in Norway. From 2008 to 2017 there was an increase in reports to CPS of 57 percent (Statistics Norway, 2020). This development can be explained by factors such as (i) increased public awareness about mandatory reporting, (ii) increased resources provided for CPS has made it possible to offer services for families with less severe problems, and (iii) increased marginalization of subgroups in the population such as immigrants and families with low income and education (Frønes, 2015). As to marginalization, the percentage of children living in families that score below the threshold of relative poverty has increased in this period, as has the number of immigrant children. One study found that the risk of CPS involvement in Norway increases with low parental educational level, non-Western ethnic background and household income below the poverty line (Staer, 2015). Whether this is a matter of social bias or if there is also a higher prevalence of abuse and neglect in such families is not clear.

When comparing the Norwegian CPS to that in other countries, differences in screening practices are evident, and the differences are attributable to different CPS systems (Falch-Eriksen & Skivenes 2019). England and the USA are often described as having a risk-based child protection system (Samsonsen, 2016; Fuller 2014) whereas Norway and other Nordic countries are often described as having a predominantly welfare based system (Pösö, Skivenes & Hestbæk 2014; Kojan 2011). In a risk-based system, referrals are typically screened in if they meet statutory definitions of child abuse and neglect. As a result there is a comparably higher national threshold for screening in cases (56%) in the USA (USHHS, 2020) compared to Norway (83.3%). In a welfare oriented CPS system such as Norway, cases are screened in if there is reason to believe that a child or a family is in need of services. Many children and families can be in need of services for other reasons than outright abuse and neglect. In a welfare oriented CPS system such as Norway's a low bar for intake to assessment has been set. In the official guidelines for case processing it is clearly stated that the purpose for this low intake threshold is that a more in depth needs assessment should normally be carried out unless the referral is obviously unjustified. That said, many US states set a very low threshold for responding to reports. This may have more to do with concerns regarding child abuse related risk management though, and is not primarily motivated by assessment for service provision. This makes it difficult to generalize about system orientations based on screening rates. More recently, there has also been a shift towards a needs and support based CPS in England and the United States. In the USA one indication of this pattern is the proliferation of differential response systems (Fluke et al, 2019; Fuller et al., 2015). Differential response introduces a family assessment response path as an alternative to the traditional investigation which aims to substantiate or unsubstantiate a claim that a child has been subject to abuse or maltreatment. In the UK there are differential responses in cases assessed as "child protection" and cases assessed as "child in need"

### 2.1. Assessment of children and their families

A family assessment is intended to be less adversarial and focused on discovering child and family needs for the purpose of providing voluntary supporting services. In England, the Framework for the Assessment of Children in Need and their Families (FACNF) (United Kingdom Department of Health, 2000) was introduced in order to provide guidance to assure that the referral and assessment process discriminates between different types and levels of need. The framework identifies three main areas for assessment of needs; (i) the child's development, health and social functioning, and education (ii) parents ability and willingness to provide basic care, guidance and safety for the child and (iii) factors within the family and close environment that might limit parents' ability to care for the child. This framework was adopted and has been developed into systems for needs-based assessment in CPS in the Nordic countries (Vis, Lauritzen & Fossum, 2019).

Baumann, Dagleish, Fluke and Kern (2011) have developed a theoretical framework in which knowledge from decision-making theory is used in a child welfare context, i.e. the Decision-Making Ecology (DME) model. The theory is based on the idea that, when child welfare services make a decision, the outcome of that decision is dependent on characteristics of (i) the case, (ii) the decision maker (iii) the organization and (iv) the external circumstances. In this study we focus mainly on case factors. The case factors can be categorized according to three domains of the Assessment Framework, i.e., the child domain, the parenting domain and the domain of the family and local environment. The DME-model and the Assessment Framework hence embodies the complexity of the societal response to child neglect and abuse. The body of research justifying intervention by the CPS is substantial on each domain. The main logic behind the FACNF is that risks and resources within the family and local environment impacts parents ability to care for their child and that the quality of the child care in turn impacts the child's health and development.

The most important risk factors in the family and local environment that commonly lead to child protection investigations are: domestic violence (Skinner, 2021) parental mental health problems, (Goldman, Salus, Wolcott & Kennedy, 2003; Kowalenko et al., 2012; Sigenthaler, Munder & Egger, 2012) parental substance abuse (Williams Tonmyr, Jack, Fallon & MacMillan, 2011) and parental cognitive impairment or physical health issues (Stoddart, Fallon Trocme & Fluke, 2018). Environmental factors such as the family's social support, economy and housing are also possible risk factors that should be considered. However as pointed out in the review by Skinner and colleagues (2021) the evidence for these "toxic" factors in child protection policy is lacking in detail and depth, and they call for more sophisticated research methods such as latent class analyses and multi-level modeling. They concluded that "the dominance of the trio factors, embedded in routine processes and practices, data collection and reporting, and professional mind sets, has crowded out attention to other factors." (Skinner et. al., 2021, p.9)

In Norway, 1 in 10 children grow up in relative poverty (Epland & Kirkeberg, 2017). Relative poverty is defined as not being able to meet the minimum level of living standards, compared to others in the same time and place. According to Brattbakk & Andersen (2017), more than half of the children living in relative poverty in Norway have an immigration background. Internationally there are many studies regarding the impact of the local environment on the individual's chances of having a good life. The local environment has been found to have an impact on crime, substance abuse, academic achievement and education, choice of occupation and income (Brattbakk & Wessel 2013).

Apart from abuse, the main areas of assessment on the parenting domain includes basic care, parenting and guidance, emotional care, medical care and child safety. Basic care includes provision of food, shelter clothing and stable routines for daily life activities. Assessment of parenting and guidance focus on how parenting practices, i.e the use of discipline and support, targets the child's individual developmental needs. Emotional care addresses parents understanding of the child's

needs and parents involvement and emotional support while caring for the child. Child safety includes how parents monitor the child to keep the child safe. These are all aspects of parental care that affects the child's health and development. On the child domain the main reason for referral to CPS and which may be subject for further assessment of needs are the child's mental health problems, i.e. internalizing and externalizing problems or the child's social problems. With younger children, focus may be on attachment and interaction with caregivers while with older children behavior problems and relations to peers are considered.

## 2.2. Screening decisions

In Norway, the initial screening decision regarding whether or not to accept a case for investigation is based upon information given in the referral, and in some instances previous knowledge about the family when the child already has a record with CPS. Although the type of information given in a referral varies a great deal depending on who made the report, it is generally limited. Apart from descriptions of why the reporter is concerned for the child, some additional information such as age, sex, who cares for the child, members of the household and if the family are immigrants are often provided. If even this limited information is not available, it is usually obtained by re-contacting the reporter or by conducting a search in the national registry of Norwegian residents. In the Norwegian CPS a single person rarely makes the screening decision. Referrals are usually discussed at a meeting where a manager and several case workers are present. Such meetings are usually held once or twice a week depending on the agency caseload and the referral will be discussed to reach a screening decision. In about 80 percent of cases the decision is made based solely on the information provided by the reporting party. In about 10 percent of the cases the reporter is contacted for more detailed information, and in about 9 percent of the cases the parents are contacted for information (Lautitzen, Vis, Ulset, Tjelflaat & Rustad, 2019). At this stage no assessment tools are used, thus the decision is based on professional judgement through a consensus discussion (Havnen, Fossum, Lauritzen & Vis, 2021). Sometimes, but not always, a pathway for the investigation is detailed. If a referral requires immediate attention before an intake meeting can be arranged an immediate response may be provided by an on duty case-worker, while the formal screening decision is made at the first subsequent meeting.

There is evidence from studies conducted in the United States that some referrals have a high chance of being screened in. These are mainly referrals that contain information about incidents of physical child abuse, sexual abuse, and domestic violence. Hutchinson (1989) found in a study of intake screening decisions ( $n = 228$ ) that predictors for screened-in referrals were report content indicating clear evidence of physical or sexual abuse and alleged victim being non-Caucasian. Those conclusions were later confirmed (Wells, Fluke & Brown, 1995) in a study ( $n = 2504$ ) that involved CPS agencies from five different states in the US. In addition, Wells and colleagues found that children under the age of two years and cases with previous reports were more likely to be screened in. In a study that investigated social workers ( $n = 87$ ) initial screening decision for intake to CPS investigations in Virginia (US), Howell (2010) manipulated child age and race across 24 different vignette scenarios that represented hypothetical maltreatment concerns. The purpose was to isolate the effect of age and race across types of referral content. The study found that child age influenced decision for some types of reports indicating risk, e.g., lack of parental supervision. There was no strong race influence on any social-workers hypothetical decisions. Because these studies were conducted in CPS systems quite different from that in Norway, i.e. within child protection focused systems, the results may have limited generalizability to the Norwegian context.

All the studies on intake decisions reviewed acknowledged that most referrals to CPS contain more than one concern and that many if not

most referrals do not contain concerns related to specific incidents of abuse. In our literature review we were unable to find any study that looked at how non-abuse concerns are associated with age, race and previous referrals or which factors that influenced decisions to screen-in different types of non-abuse referrals. The aim of the current study is therefore to explore reports of concern submitted to the CPS in Norway, and to investigate relevant child-related factors and agency factors in relation to thresholds to screen-in cases. In Norway there is ongoing debate about CPS investigation rates and whether the trend towards higher thresholds for early dismissal and the large differences in dismissal rates among agencies is justified. This is why we wanted to look more closely at the different characteristics of referrals in order to determine the circumstances that may predict the decision to screen-in at intake.

## 2.3. Research questions

1. What are the non-abuse concerns found in referrals and which concerns are most commonly occurring together?
2. Are thresholds for screening-in of non-abuse referrals influenced (moderated or mediated) by child age, family immigrant background and number of previous reports to CPS?

The variables noted in research question 2 are those that previously found to influence screened in referrals (Howell 2009, Hutchison, 1989, Wells et al. 1995)

## 3. Methods

The study was designed as a cross-sectional archive study that was carried out retrospectively.

For this study, a random sample of referrals was drawn from 16 child protection agencies comprising the four different regions of Norway. The agencies were (i) six districts from the three major cities in Norway with a population ranging from 190 000 to 680 000, (ii) six regional cities with a population ranging from 20 000 to 80 000 and (iii) four agencies from smaller towns and rural areas with a population below 15 000. For the purpose of random case-file selection from these agencies, a sample selection computer program was used (Rørnes, 2017). A total of 1365 cases were randomly drawn from all referrals that had been registered in the period January 2015 to December 2017 in the participating agencies. This represented the most recent three year block of concluded investigations at the time of the study. The number of cases from each agency varied between 50 and 150 depending on the size of the agency. The reason why we sampled agencies by size is that we wanted the number of cases drawn from each agency to be about the same proportion of the total available sample from that agency. In this study, it is the child referral that is the unit of analysis. There were 53 % boys among the participants and the mean age was 9,1 years ( $SD = 5,1$ ). There were higher proportions of children with immigrant background in the major cities (53.2%) compared to the regional cities (31.8%) and the agencies from more rural areas (28.1%) A total of 39.5 % in the referrals of the families had immigrant background.

**Ethics and procedures.** The study protocol was subject to review of research ethics by the Norwegian Council for Patient Confidentiality in Research, and review of data handling procedures by the Norwegian Centre for Research Data. Access to case files were granted to the researchers through a legal decision made by the Norwegian Directorate for Children and Family Affairs, which exempted the participating CPS agencies from confidentiality. The license to collect and store data was issued by The Norwegian Data Protection Authority.

The researchers were given access to the casefiles and to electronic systems for recordkeeping by the CPS agency. All case files were coded on site at the agency by the use of an electronic web-based data entry form that was developed specifically for this purpose. The data were encrypted and subsequently transported to a secure sandbox zone

approved for storage of sensitive client data.

The on-line instrument for data collection was developed in three steps. First, a pilot study was employed to identify the types of information that could possibly be found in client case files and in electronic systems for recordkeeping. Based upon this, a coding form was developed and tested for interrater reliability by independent coding of 20 cases by two researchers. The results showed an average interrater agreement of 86,9%. A total of 13 variables had low reliability (<80% interrater agreement). Three of those were eliminated from the form because it was concluded that reliable information could not be obtained. The remaining 10 variables were reformulated and the coding manual was revised with better explanation of codes. After this revision the reliability of the instrument was re-tested by independent coding of 42 cases by two researchers. At this second step, interrater agreement was 90,8%. In health research, an interrater agreement over 80% generally are considered acceptable (McHugh, 2012).

**Measures.** The coding form information was collected regarding (i) child and family characteristics, (ii) the content of the referral (iii) the decision to investigate or to screen-out.

**Information about child and family** consisted of child age, child gender and immigrant background. Immigrant background was defined as one parent (either mother or father) being born outside Norway. The number of prior referrals of the child to the CPS was recorded.

**The content of the referral** was categorized into 32 different reasons for referral. These categories were based upon the structure and main contents of the Assessment framework. Nine categories were related to the child's needs and development, nine categories were related to parental care and safeguarding, and 14 categories were variables related to family and environmental factors. See table 3 for complete list of reasons for referral. Each of these were counted as present or absent by the researcher. This allowed for multiple reasons for the referrals to be counted in each case. The coding was based upon the written referral, or if the referral was oral, minutes from the contact found in case files.

**Analysis.** Information about the parents' birth place was missing in 9,3% of the cases. Inspection revealed that this data was not missing at random. The reason for this is that if a case that had no prior referrals was screened out, CPS would rarely conduct a search in the Norwegian National Registry that contain information about birth place of Norwegian residents. In order to avoid bias, missing data for these cases was therefore imputed by regression. The imputation regression model included all the other measures described above. To account for the impact the CPS organization and the previous referrals of the child had on model estimates, agency specific screening threshold and number of previous referrals were included in the analysis as control variables.

Factor analysis of reasons for referral was conducted in two steps. First, exploratory factor analysis was carried out on a randomly drawn subset (n = 458) of the sample. Factor solutions with one, two, three, four and five latent variables were evaluated. Based on assessment of eigenvalues and model fit, a three factor solution was considered to represent the data best (RMSEA = 0.016, CI = 0.000–0.023). Thereafter, a confirmatory factor analysis (CFA) was conducted with the remaining cases (n = 907). At this step the model was expanded by allowing indicators to load on multiple latent variables, through inspection of modification indices, until better model fit could not be obtained (RMSEA = 0.028, CI = 0.024–0.032, CFI = 0.873).

A structural equation model that describe how case characteristics and contents of the report influence threshold for screening out referrals to the CPS was estimated through a path analysis with direct and mediated effects between observed and latent variables. The model that was tested is shown in Fig. 1.

#### 4. Results

A total of 242 (17,7%) cases in the sample were screened out and 1123 (82,3%) were screened in. There were quite large difference between agencies. The proportion of screened out referrals varied between 4.0% and 43.9%. The agency average was 17.4%. The relationships between observed case characteristics and screening decision is shown in

table 1. Younger children and families with immigrant background

**Table 1**  
Relationship between observed variables and screening decision N = 1365.

	Screened out N = 242	Screened in N = 1123	p
	N (%)	N (%)	
<i>Case characteristics</i>			
Child Age (M/SD)	9.97 (5.35)	8.90 (5.05)	**
Gender = Boys	140 (57.9)	595 (53.0)	NS
Immigrant background = yes	72 (29.8)	467 (41.6)	***
Number of previous reports (M/SD)	1.90 (2.81)	1.09 (1.79)	***
<i>Number of concerns in the report to CPS</i>			
Related to child health and development (M/SD)	0.79 (1.38)	0.78 (1.28)	NS
Related to parental care (M/SD)	0.62 (0.87)	0.95 (0.98)	***
Related to family and environment (M/SD)	0.83 (0.82)	1.12 (1.14)	***
Total number of concerns (M/SD)	2.24 (1.79)	2.85 (2.05)	***

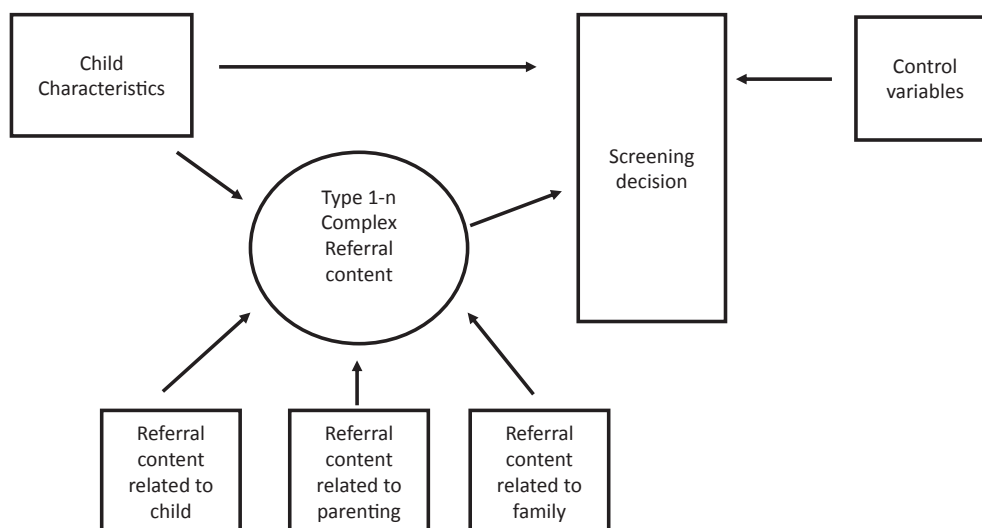


Fig. 1. Conceptual model – predictors of thresholds for screening decisions.

were more likely to be screened in for investigation following a report to the CPS. If there were previous reports to the CPS for the same child, the chance of being screened in was reduced compared to families that had no record with the CPS agency. The remaining contained concerns for the child's health and development, parents' capacity for providing care and safety, and concerns related to risk factors within the family and close environment. There was a cumulative effect of non-abuse concerns that lead to increased odds for being screened in when the referral contained several concerns.

Non-abuse referrals are usually not elicited by a specific incident but typically consist of a concern for the child's situation that developed over time. In 32.2 % of the referrals, only one concern was noted. In the rest of the referrals (67.8%), the reporter had more than one type of concern for the child. These are categorized as complex referrals. On average a report to CPS contained 2.74 (SD = 2.02) different types of concerns. The CFA showed that grouping non abuse-referrals in three latent variables provided best model fit (table 2).

The first factor consisted of referrals that contained concerns about a wide range of problems related to the child's health, development and social functioning combined with concerns about the caregivers' parenting skills and / or concerns that the caregivers were too exhausted to be able to provide proper parenting and guidance for the child. We labeled this factor "F1: Child symptomatology and parenting". The second factor consisted of referrals that contained concerns about conflicts between parents and / or parental mental health problems combined with concerns about psychological abuse/neglect and parents' inability to provide protection for the child. These referrals were also associated with concerns about deficiencies in parent - child interaction or attachment. We labeled this factor "F2: Parents problems and child safety". The final factor consisted of concerns related to different types of family and environmental factors that may influence the caregivers' ability to provide basic care. Those cases were also associated with concerns about whether the child's development was age appropriate. We labeled this factor "F3: Family stressors and basic care". The complete factor structure is displayed in table 3.

The results of the structured equation modeling of relationships between child age, family's immigrant background and typologies of complex referrals when controlling for number of previous CPS reports and the variability in threshold for screening decisions at the agency level, is shown in Fig. 2.

The results indicate that when the content of the referral is taken into consideration, the child's age has no direct effect upon the screening decision. We can therefore assume that the relationship that was observed between child age and decision outcome in the bi-variate analysis is in part explained by the risk factors in the referral. Families with immigrant background have an increased chance of being screened-in, independent of the referral content. Cases with previous referrals have a decreased chance of being screened-in.

None of the mediated paths between case characteristic's (age/immigration), referral content and screening decision were statistically significant.

## 5. Discussion

We found that non-abuse concerns can be grouped together in three latent factors that represent different typologies of cases in which non-

abuse concerns are present. Common for the three typologies is that they consists of concerns related to each of the three main dimensions in the assessment framework model (Department of Health 2000). The typologies can be summarized as (i) cases where the child has problems that may be explained by poor parenting, (ii) cases where there are family conflicts or parents have personal problems that affects the child's safety and (iii) cases with economical and social risk factors that affect parents ability to provide basic care for the child. These typologies represent combinations of different types of non-abuse concerns that typically appear together in referrals, and when they do, there is increased likelihood that the referral will be investigated. This means that more complex referrals that identify concerns related to the child, to parental child care and to family risk factors are more likely to be investigated when compared to referrals that are less complex and contain fewer combinations of concerns. Families with immigrant background had higher chance of being investigated irrespective of the concerns in the referral. Child age is related to the types of concerns that are reported but not the screening decision. If the case had previous referrals, it was less likely to be screened in.

The first latent factor "F1: Child symptomatology and parenting" loaded strongly on indicators related to the child's behavior problems, emotional problems and social problems. Together these are the main components of the most commonly used measures of mental health problems among children and are used as indicators of oppositional and defiant disorders linked to coercive parenting strategies. Although child conduct problems may have an early onset and typically become evident in the first years at school, such problems tend to diminish as the child reaches the early teens (Bevilacqua, Hale, Barker & Viner, 2018). This study indicated that referrals to CPS in such cases are predicted by the child being older. This may indicate that referrals may be held off until the reporter, which in these cases most often is a teacher, is concerned that problems will not decrease as the child becomes more mature. It is interesting that the child's mental health problems are sometimes linked to deficiencies in parenting but not at all to material and social risk factors. This does not allow us to infer what causes child symptoms but it does however suggest what the reporters' hypotheses might be. In some cases, reporters may hypothesize that the child's symptoms are caused by inappropriate parenting strategies, such as the use of harsh discipline and punishment. In other cases, the hypothesis may be that although the parenting is adequate, the child's problems have become too serious for the parents to handle, as indicated by the association with concerns that the parent is too exhausted to take properly care of the child. It seems that referrals with concerns about parenting, in addition to child symptomatology, are more likely to be investigated than referrals that only contain a concern about child health or development. An explanation for this may be that the CPS consider these latter types of concerns to be the responsibility of the child and adolescent mental health services, and hence not within the core mandate of the CPS. It follows that from the statutes to the Norwegian Welfare Act, that a case should be screened out if there are no reasons to believe that a child is need of services from CPS. One caveat to this line of reasoning is that when a child displays symptoms of mental health problems or social problems it is more difficult to determine the etiology of those problems without conducting a proper assessment. Indeed, even expert mental health professionals may find it difficult to separate child symptoms that appear because of improper parenting from symptoms that appear in spite of proper parenting.

The second latent factor "F2: Parental problems and child safety" had overall fewer and weaker indicator loadings compared to other factors. The strongest indicator in this typology is concern about child safety in combination, either with concern for a parent's mental health or concerns about high degree of conflict between parents. Within this typology, the child is typically younger. This may help explain why the child's problems are often classified as problems in attachment and interaction with parents rather than mental health problems. We do not know for certain why these types of referrals are less common for immigrant

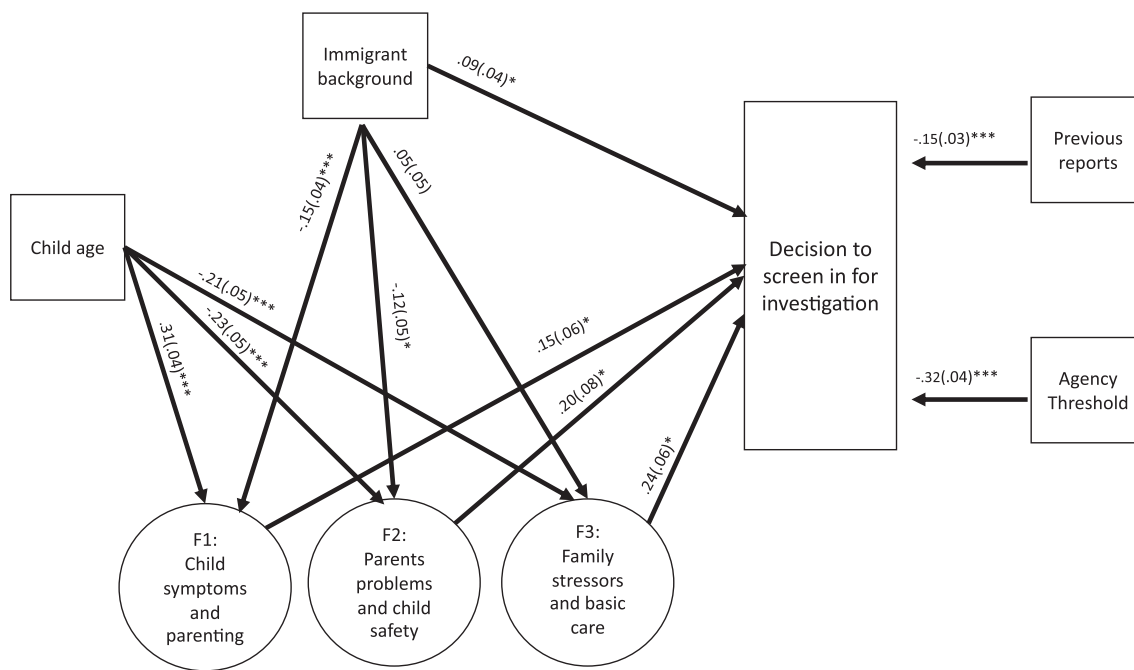
**Table 2**  
Goodness-of-Fit Indicators of factor models for referrals (n = 458).

Model	$\chi^2$	df	$\chi^2$ diff	Eigenvalues	CFI	RMSEA
Five factor	397.77	373	–	2.33	0.92	0.012
Four factor	428.36	402	34.8	2.48	0.91	0.012
Three factor	480.95	432	73.5***	3.56	0.83	0.016
Two factor	569.67***	463	120.7***	4.44	0.64	0.022
Single factor	667.48***	495	117.8***	5.94	0.41	0.028

**Table 3**  
Unstandardized Loadings (Standard Errors) and Standardized Loadings for 3-Factor Confirmatory Model (n = 907).

Item	Factor 1		Factor 2		Factor 3	
	Unstd. (SE)	Std.	Unstd. (SE)	Std.	Unstd. (SE)	Std.
<i>Related to the child:</i>						
Age adequate development	0.59 (0.17)	0.40***			1 (-)	0.29**
Psychological health	1.06 (0.22)	0.64***				
Behavior problem	1.55 (0.32)	0.77***				
School functioning	1.60 (0.34)	0.78***				
Emotional problem	1.43 (0.31)	0.74***				
Relations to peers	2.07 (0.50)	0.85***				
Attachment and interaction	1.43 (0.35)	0.64***	1.2 (0.70)	0.33*		
Conflicts with adults	1.07 (0.25)	0.64***				
<i>Related to child care:</i>						
Psychological abuse / neglect	0.46 (0.16)	0.33***	1(-)	0.37**		
Parenting and guidance	1 (-)	0.57***			1.69 (0.73)	0.41***
Basic care and provision					2.86 (1.19)	0.69***
Ensuring child safety			2.17 (1.01)	0.66***		
<i>Related to family and environment:</i>						
Parent somatic health					1.30 (0.69)	0.40***
Parent psychological health			1.25 (0.53)	0.45***		
Parent exhausted	0.41 (0.13)	0.31***				
Conflict between parents			1.08 (0.44)	0.40***		
Stressful events in family					0.89 (0.44)	0.28**
Family's social network					3.34 (1.37)	0.74***
Economy					2.62 (1.07)	0.66***
Housing					2.78 (1.08)	0.68***
Family social integration					1.52 (0.74)	0.49**
Employment					2.15 (0.99)	0.58***

Notes: \*p < .05, \*\*p < .01, \*\*\*p < .001. The covariance between factor 1 and 2 was -0.08 (SE = 0.07, p = .07), the covariance between factor 1 and 3 was -0.01 (SE = 0.02, p = .58) and the covariance with factor 2 and 3 was 0.06 (SE = 0.03, p = .05).



**Fig. 2.** Relationship between observed variables, latent variables and screening decision (n = 1365). Note : \*p < .05 ; \*\*p < .01 ; \*\*\*p < .001. show direction of the regression. Squares are observed variables. Circles are latent variables. Estimates are standardized regression coefficients (Standard Error). Model  $\chi^2 = 620.84(df = 306)p < .0005$ ; RMSEA = .027(CI = .024 – .031); CFI = .84. The factor indicators shown in table three were included in the equation but is not shown in Fig. 2.

families. It is however known that although mental health problems among adult immigrants are higher compared to ethnic Norwegians (Dalgard & Thapa, 2007), the immigrant subpopulation is comparably underrepresented among those that are in contact with health services (Fadnes & Diaz, 2017). Thus, less contact with mandated reporters may reduce the chance of being reported. Cases of this typology have an increased chance of being screened-in for investigation. This means that

when CPS decides to initiate an investigation, reports that identify multiple types of parental risk factors are in general considered serious irrespective of the presence of specific child symptoms. This corresponds with studies of Norwegian CPS investigations which found that during investigations that social workers are mostly focused on the parents and to a lesser degree address child functioning and the child's views and concerns in the assessment (Christiansen & Andersen, 2010).

The third factor “F3: Family stressors and basic care” loaded most strongly on indicators of concerns about family economy, housing and the families social network together with concerns about the parents basic care and provision for the child. Less often these concerns also coincide with concerns for the parent’s physical health and parenting skills. These concerns may be linked to stressful events that may have happened in the family such as, death, illness, unemployment or forced change in housing. It can be assumed that these are cases where reporters worry that families are affected by different kinds of hardship that makes it more difficult for parents to care and provide for their child. Apparently, additional concerns related to whether the child’s development is age appropriate increase the likelihood of an investigation. This typology of cases fit descriptions of marginalized families (Brattbakk & Andersen, 2017). It is surprising that this third typology of reports was not mediated by families having immigrant background, because immigrant families generally have more problems with employment, economy and housing as well as social contact and integration. It is possible that a racial bias exist with respect to how serious such problems have to be before a report is submitted to the CPS. Perhaps this is because being marginalized is considered more common for certain groups of immigrants and that this has the effect of raising the threshold for reporting immigrant families to the CPS on the basis of certain types of external family stressors. It should also be noted that because there was a direct effect between immigrant status and screening decision, there is evidence for a racial bias in decision making in CPS system for all types of non-abuse referrals. This corresponds with findings from previous studies (Hutchison, 1989; Wells, Fluke & Brown 1995) that discovered a racial bias in screen-in decisions for abuse referrals in the United States. It is striking that this bias is found across all different types of referrals, and in both risk based and welfare based organizational contexts. This is a strong indication that bias is not primarily caused by variables related to decision makers or by the CPS organization, but rather attributable to the seriousness of the concerns in reports.

In contrast to findings in previous research that child age predicts screen-in decision of abuse reports (Howell, 2009; Wells, Fluke & Brown 1995), we were not able to confirm that this is also true for non-abuse reports. This indicates that for non-abuse cases the effect of child age is confounded by the types of concerns in the referral.

We don’t know for certain why previous reports predict a lower chance for being screened-in. It may be assumed that more previous reports is a predictor of cases being more serious so solely based on this, an opposite effect could be expected. Because such a high proportion of cases are being investigated in Norway, most cases with previous reports would also have a previous investigation. The second and third report may already contain information that is known to the CPS, and consequently, whatever action CPS has already taken may be viewed as an adequate response given the capacity of the system and the services available. This means that our finding may be specific to Norway and not applicable to countries with higher thresholds for screen-in decisions.

We find it interesting that the three latent factors that were developed to represent non abuse concerns may be related to different parts of an ecological developmental framework (FACNF). We are curious why referrals containing environmental risk factors are stronger predictors of screen-in than are referrals of problems based on symptoms related to child health and functioning. One possible explanation is a recent development that has taken place in Norwegian social work involves the influence of a possible external DME factor (Baumann, et al., 2011), where an increase in resources has been provided for CPS. The intention was to develop a more prevention oriented service, and to offer services and support to families in less serious cases (Frønes 2015). According to Frønes (2015), this increased resource allocation has primarily focused on children living in marginalized families and to a lesser degree on children with mental health problems.

Another explanation may be that decisions to screen-in are influenced by the types of services that are available from CPS in the different

local community settings. Parenting training programs combined with therapy for children may be considered the most suitable measure of assistance for problems related to the child domain. These services are however predominantly offered as a health service and constitutes a very small part of the services offered by the CPS in Norway. It is therefore possible that these types of cases are less likely to be screened in because the CPS consider many types of child mental health problems to be beyond the scope of their mandate.

### 5.1. Strengths

The study developed an innovative instrument for collection of information from casefiles that is not available from administrative databases or national statistics. This enabled us to take into consideration many different concerns that may appear in a referral and which had not been previously studied. The study sample was representative of the population of CPS referral cases in Norway.

### 5.2. Limitations

Although this study primarily looked at case level factors as predictors for screening thresholds we do acknowledge that decisions to investigate a referral is also affected by individual social workers as well as organizational factors and external factors (Baumann et al., 2011). We have no information about the social workers who came to the decision or managed the cases included in the study so we are not able to account for decision makers in our analysis. Although we did include agency as a control variable in our model this does not fully account for the clustering effect of cases within agencies. It is likely that there are some underlying variables external to the child protection organization that may help explain the large differences in investigation intake among agencies. While we speculate about the possible influence of an external factor related to prevention funding, the study has no direct measurement of this potential influence. Because this study was primarily designed to discover the effects of case level factors we do not have any information about other important influences on the decision to accept non-abuse referrals for investigation.

### 5.3. Implications

Although the Norwegian threshold for screening a referral in for investigation is generally low, there are large differences among agencies with respect to the proportion of cases that are accepted. A paramount consideration in this decision, when the referral does not contain allegations of outright abuse, is the interpretation of what constitutes a reason to assume that a child is in need of a service provided by CPS. Hence the decision is not solely based upon considerations about the merit of the referral, i.e. the child’s needs, but also on the services that are available. We do not know if variations in service availability within local communities may explain the large agency differences in screened-in referrals but this is something that future studies should take into consideration. For this same reason we would be careful to conclude anything about what is the “right” threshold for screening decisions in Norwegian CPS. We would rather encourage CPS agencies to look more closely at how local thresholds match service availability and how resources used for investigations and assessments are balanced toward resources used for service provision.

More generally the implication for child protection services internationally is that triaging of referrals and the thresholds for case dismissal at the different decisions points in case processing is intrinsically linked to external contexts and what the mandate for CPS are. Therefore, norms that are universally valid for how much weight should be assigned to different types of non-abuse risk factors cannot easily be established. As a final thought we would like to add that in our opinion, service provision that is not founded on proper assessment of needs are no more useful than are conducting thorough assessments when services

are not available. Based on local contexts and available resources, there needs to be a reasonable balance between the proportion of cases that are subject to more extensive assessments and the proportion of families that can be helped.

## 6. Conclusion

When controlling for other case factors, more complex referrals with multiple concerns have increased chance of being screened in. In particular, when the concerns are related to all of the three different dimensions of the assessment framework, i.e. the child, the parental care and the family risk factors there is a high chance the case will be screened in.

## CRedit authorship contribution statement

**Svein Arild Vis:** Conceptualization, Methodology, Formal analysis, Investigation, Data curation, Writing – original draft, Writing - review & editing, Visualization, Supervision, Project administration, Funding acquisition. **Camilla Lauritzen:** Conceptualization, Investigation, Data curation, Writing – original draft. **John Fluke:** Conceptualization, Methodology, Visualization, Writing – original draft, Writing - review & editing.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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