Tohoku J. Exp. Med., 2025, **266**, 295-303

Development of a Temporary Custody Re-Entry Risk Prediction Model using Longitudinal Cohort Data in Japan

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The number of temporary custody cases due to child maltreatment and other reasons at child guidance centers in Japan is increasing, prompting imperative scrutiny of re-entry risk assessment. We aimed to derive and internally validate a risk prediction model for re-entry into temporary custody. The risk prediction model was developed from an analysis of data from 725 children recruited in this retrospective single-center longitudinal cohort study conducted in Japan. The anticipated outcome was re-entry into temporary custody. Predictor variables were selected from 15 prospective variables concerning information on children and their familial contexts. A risk prediction model was developed using stepwise logistic regression. The final risk model was validated via C-statistic using cross-validation and bootstrap resampling methods. Calibration was assessed using the Hosmer-Lemeshow test. Of 725 children under temporary custody, 178 (24.6%) experienced re-entry into temporary custody. The predictors in the conclusive risk model were a history of temporary custody ($p < 0.001$), age at first birth of < 25 years ($p < 0.002$), single mother or stepfamily ($p < 0.001$), reasons for temporary custody including child abuse ($p = 0.076$) and child sex ($p = 0.152$), and child disability certificate ($p = 0.252$). Calibration scrutiny via the Hosmer-Lemeshow test revealed no discernible irregularities ($p = 0.320$). The naïve C-statistic of the model was 0.70, whereas the optimism-corrected C-statistics was 0.67-0.69. The presented risk prediction model showed acceptable calibration and discriminatory capability. The model can optimize limited human resources by providing valid risk estimates of the likelihood of re-entry to temporary custody within one year.

Keywords: child guidance centers; child maltreatment; re-entry risk assessment; risk prediction model; temporary custody
Tohoku J. Exp. Med., 2025 July, **266** (3), 295-303.
doi: 10.1620/tjem.2024.J144

Introduction

Exposure to child maltreatment is a risk factor for psychiatric disorders, suicide attempts, drug use, sexually transmitted infections, and risky sexual behaviors (Norman et al. 2012; Hughes et al. 2017). Child maltreatment is a significant public health problem worldwide, including in East Asia and the Pacific (Fang et al. 2015).

In Japan, the number of child maltreatment cases handled by child guidance centers has increased. Child guidance centers are local government agencies responsible for providing child protection, including responding to reports of child maltreatment and problems with children in Japan (Ministry of Health, Labour and Welfare 2023a). The Japanese government has responded to child maltreatment by increasing the number of staff at child guidance centers; the number doubled between 2007 and 2020, but more than half of the staff have less than 3 years of work experience.

Temporary custody primarily serves the purpose of emergency custody. Emergency custody is not only invoked in cases of abuse endangering the child but also when the caregiver is absent or the child's behavior poses a risk to themselves or others. There is concern about the increase in re-entry to temporary custody (RTC) due to an increase in child maltreatment cases. RTC generally indicates chronic maltreatment, which is associated with worse long-term outcomes and is problematic for children and their families. Chronic exposure to child maltreatment

Received June 25, 2024; revised and accepted December 2, 2024; J-STAGE Advance online publication December 12, 2024
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compared with transient maltreatment causes more emotional problems, such as depression, and behavioral issues, such as aggressive behavior (Ethier et al. 2004). Thus, RTC is indicative of chronic child maltreatment and worsens the child's prognosis, making RTC an important issue to be resolved. It is used by child protection services in the United States, Australia, and other countries (Stewart and Thompson 2004).

To prevent RTC, it is necessary to identify and support children who are at high risk through assessment. However, RTC risk assessment has not been adequately conducted in Japan, and its reasons are as follows: first, there are no tools for RTC risk assessment in Japan; second, collecting the information necessary for assessment from caregivers is challenging; and finally, the increase in staff with little practical experience makes it even more difficult to collect information from caregivers.

This study aimed to develop and evaluate the performance of a model that uses information from the child guidance centers to predict RTC within one year after the end of temporary custody.

Materials and Methods

Data source

This retrospective cohort study was conducted by the Yokohama City North Child Guidance Center. Its jurisdiction is characterized by four wards in Yokohama City. Yokohama City is an urban area in Japan with a population of 3.76 million people. In Yokohama City, 9,100 cases of child abuse were received in fiscal 2022. All cases of child maltreatment, child-rearing difficulties, and delinquency in the areas under the jurisdiction of the North Child Guidance Center are registered. These areas have the highest number of children in Yokohama City, and many residents have a high level of education.

Participants

All children under the age of 18 years who were temporarily placed in the Yokohama City North Child Guidance Center were included in our study. The observation period was from January 1, 2017, to December 31, 2020. Children placed in temporary custody during the study period were followed up for one year after being released from temporary custody and returning to home care. The trend in the number of consultations provided by child guidance centers before and after the pandemic of the coronavirus disease 2019 remained unchanged. For the exclusion criteria, please see Appendix (Box 1).

This study was conducted based on de-identified data received from the child guidance center, with personal information removed, on December 1, 2022 and was approved by the Teikyo University Research Ethics Committee (Teirin 22-062).

Outcome measure

RTC within one year of the end of custody was ruled as recurrent. Temporary custody was determined by a council of managers, including the director of the child guidance center.

Predictors

We used variables based on previous research from highly reliable information provided by administrative agencies. The candidate predictor variables (independent variables) were classified into four categories: temporary custody factors (3 variables), child factors (3 variables), maternal factors (4 variables), and household factors (5 variables).

Temporary custody characteristics include history of temporary custody (Terling 1999; Mc Grath-Lone et al. 2017; Font et al. 2018; Parolini et al. 2018), duration of temporary custody (Mc Grath-Lone et al. 2017), and reason for placement emotional abuse (Ohashi et al. 2018), physical abuse, sexual abuse, neglect (Terling 1999; Font et al. 2018), voluntary (Mc Grath-Lone et al. 2017), and delinquency (Font et al. 2018).

The duration of temporary custody was analyzed by converting it into a categorical variable of 60 or more than 60 days. Some children were placed in temporary custody for more than one reason. In such cases, the main reason was selected. Voluntary refers to voluntary temporary custody from a caregiver (includes respite care). Individuals who were granted temporary custody due to emotional, physical, or sexual abuse were classified as "child abuse". Analysis was conducted using four variables: child abuse, neglect, voluntary, and delinquency. Neglect was not considered as child abuse because it differs from other types of abuse. For example, neglect is by omission, whereas other forms of maltreatment are intentional. In addition, the impact of inaction varies depending on the child's stage of development. Neglect is also frequently combined with other types of maltreatment (Brown et al. 2019) and was a strong predictor of RTC in previous studies.

Child characteristics included sex, age, and disability identification cards (physical, mental, and intellectual) (Parolini et al. 2018). Children's ages were categorized as 0-1 year, 2-11 years, and 12 years and older. We categorized children under 2 years of age because children under 2 years of age are at higher risk of death (Children and Families Agency 2023). Children who are 12 year or older may be placed in temporary custody due to mental illness or behavioral problems (Solmi et al. 2022). Disability identification cards were analyzed as a categorical variable of whether they had obtained any type of disability certificate.

Maternal characteristics included age, disability identification cards (physical, mental, and intellectual) (Font et al. 2018), fertility treatment (Okajima and Kabeyama 2006), and age at first birth (Lee et al. 2012). Age at first birth was analyzed as a categorical variable of whether the mother was younger or older than 25 years. Pregnancy before the completion of tertiary education is considered a risk factor for educational interruption.

Household characteristics included intimate partner violence (IPV) (Ohashi et al. 2018; Li et al. 2019), pregnancy during the follow-up period, household composition (biological, single-mother, stepfamily, three-generation, and single-father), receiving public assistance (Barth et al. 2008; Lee et al. 2012; Mc Grath-Lone et al. 2017), and number of siblings (Bae et al. 2009). Police report histories for IPV were collected. If a child is in a home with a history of a police report for IPV, the child guidance centers are notified of emotional abuse.

Statistical analysis

Data preparation: Continuous variables are summarized using means and standard deviations (with normal distribution) and medians and interquartile ranges (without normal distribution). Bivariate relationships were examined using Pearson product-moment correlation coefficients. The binary variables are summarized as numbers and proportions (%). "Unknown" was treated as a missing value. List-wise exclusion was used for multivariate analysis.

Selection of predictor variables: A risk model with a binary RTC outcome was developed and validated. Multivariate-adjusted logistic regression models (stepwise variable selection) were used during the development stage. The inclusion and exclusion criteria for the stepwise variable selection were $p = 0.3$ and $p = 0.3$, respectively. The criterion was set at $p = 0.3$ to avoid influencing variable selection when other data were used. The results are presented as odds ratios (OR) and 95% confidence intervals (CIs). To predict RTC risk, the risk score for each child was fitted using stepwise regression model.

Calibration and apparent performance: Discrimination in the model was measured using the area under the receiver operating characteristic (ROC) curve and the C-statistic (naïve C-statistic). Using the ROC curve, we calculated the optimal cutoff value that maximized the Youden index (Simundic 2009). We used a cross-validation method and bootstrap validation (500 bootstrap samples) (Matthew 2022) for internal validation. The validation results were evaluated using optimism-adjusted C-statistics to account for overfitting. Calibration was evaluated using the Hosmer-Lemeshow test.

Sensitivity analysis: Since it cannot be denied that a history of temporary custody may pose a potential risk of RTC, a sensitivity analysis was conducted by developing a model using only children with no history of temporary custody. Further, a stepwise variable selection model for another inclusion and exclusion criteria, with $p = 0.05$ for each, was conducted, and subsequent analyses were performed.

All analyses used in this study were conducted using the SAS software (version 9.4; SAS Institute, Cary, NC, USA). All tests were two-tailed, and the significance level was set at 5%.

Results

Characteristics of participants

During the observation period, 928 children entered into temporary custody (Fig. 1). A total of 725 participants were finally included in the analysis (reasons for exclusion: facility admission, 129 cases; moving house, 47 cases; living in other cities, 17 cases; temporary custody period of 0

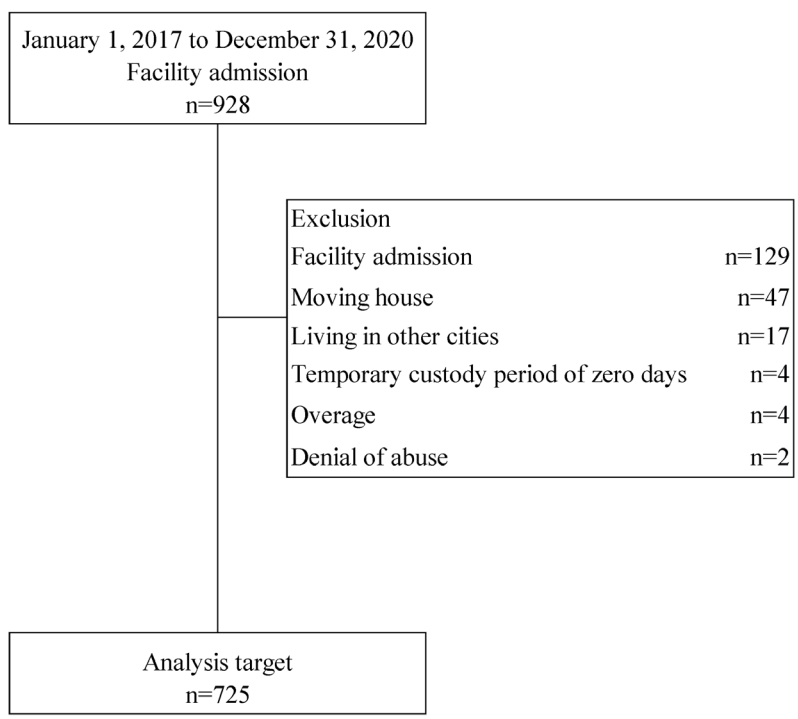

Fig. 1. Participant flow chart.

days, 4 cases; overage, 4 cases; and denial of maltreatment, 2 cases).

In total, 178 (24.6%) of the 725 children re-entered temporary custody. Participant characteristics are shown in Table 1. A total of 19.7% of the participants had a history of temporary custody. The most common reasons for temporary custody were physical abuse (38.2%) and voluntary (23.3%). Children were more likely to have a disability

Table 1. Participants' characteristics.

Variables	Summary statistics[$]
Out come	
Re-entered temporary custody	178 (24.6%)
Temporary custody characteristics	
History of temporary custody (n, %)	143 (19.7%)
Duration of temporary custody (day) [Median, Quartile points]	17 [7, 48]
Reasons for temporary custody: Emotional abuse (n, %)	108 (14.9%)
Physical abuse (n, %)	277 (38.2%)
Sexual abuse (n, %)	26 (3.6%)
Neglect (n, %)	90 (12.4%)
Voluntary (n, %)	169 (23.3%)
Delinquency (n, %)	55 (7.6%)
Child characteristics	
Sex (female) (n, %)	337 (46.5%)
Age (mean, SD)	8.7 [5.0]
Disability certificate: Physical (n, %)	8 (1.1%)
Mental (n, %)	34 (4.7%)
Intellectual (n %)	62 (8.5%)
Mother characteristics	
Age [mean, SD]	37.8 [8.1]
Unknown (n %)	35 (4.8%)
Disability certificate: Physical (n, %)	12 (1.7%)
Mental (n, %)	103 (14.2%)
Intellectual (n, %)	1 (0.1%)
Unknown (n, %)	34 (4.7%)
Fertility treatment (n, %)	10 (1.4%)
Unknown (n, %)	34 (4.7%)
Age at first birth (mean, SD)	27.4 [6.2]
Unknown (n, %)	33 (4.6%)
Household characteristics	
Interparental violence (n, %)	22 (12.4%)
Unknown (n, %)	1 (0.1%)
Pregnancy during the period of follow up (n, %)	72 (9.9%)
Unknown (n, %)	5 (0.7%)
Household composition: Both biological parents (n, %)	359 (49.5%)
Single mother (n, %)	284 (39.2%)
Stepfamily (n, %)	34 (4.7%)
Three-generation (n, %)	16 (2.2%)
Single father (n, %)	30 (4.1%)
Unknown (n, %)	2 (0.3%)
Receiving public assistance (n, %)	175 (24.1%)
Unknown (n, %)	2 (0.3%)
Number of siblings [Median, quartile points]	2 [1, 3]
Unknown (n, %)	24 (3.3%)

$, mean [SD], median [Q1, Q3], or (n, %).
SD, standard deviation, quartile points [25th percentile, 75th percentile].

certificate for intellectual disabilities (8.5%). A total of 35 individuals with no information on their mothers were included in the study. Mothers were more likely to have mental disability certificates (14.2%) and less likely to have intellectual disability certificates (0.1%). The mean (standard deviation) age at first birth was 27.4 (6.2) years. Household characteristics included IPV (12.4%) and household composition comprising single mothers (39.2%), stepfamily (4.7%), and three generations (2.2%). Those who received public assistance accounted for 24.1% of the total study sample.

Selection of predictor variables

The results of the multivariate logistic regression model are shown in Supplementary Table S1. We excluded maternal age to prevent multicollinearity because maternal age and age at first birth were strongly correlated. Six predictor variables were selected for inclusion in a stepwise logistic regression model as shown in Table 2. Among those, three variables were significant. The OR and its CI for the history of temporary custody were 2.65 and 1.73-4.05 ($p < 0.001$), for first birth below age 25 years were 1.83 and 1.25-2.67 ($p = 0.002$), and for single mother or stepfamily were 2.01 and 1.37-2.94 ($p < 0.001$), respectively.

Calibration and apparent performance

A risk prediction model was constructed using the selected variables in the stepwise logistic regression model (Table 2). The discriminative ability of the model was assessed using naïve C-statistics, and the result was 0.70. The probability of the model predicting RTC ranged from 8% to 72%. ROC curves were generated, and a cut-off value of 24% was set as the maximum Youden index. The sensitivity and specificity were 63.3% and 64.8%, respectively. Calibration was evaluated using the Hosmer-Lemeshow test, which was not statistically significant ($p = 0.32$). Internal validation using the bootstrap method yielded an optimism-adjusted C-statistic of 0.69, and the cross-validation C-statistic was 0.67.

Sensitivity analysis

Since the selected model included a history of temporary custody as a predictor, we conducted a sensitivity analysis by deriving a model using only children with no history of temporary custody. The results were not largely different from the final model as shown in Supplementary Table S1. An almost similar C-statistic was obtained for the other model developed using the inclusion and exclusion criteria with $p = 0.05$; however, the optimism-adjusted C-statistic was slightly lower than the naïve C-statistic.

Discussion

We developed and evaluated the performance of a risk model designed to predict RTC using data from the child guidance centers. These comprised a history of temporary custody, reasons for temporary custody included child abuse, child sex (female), child disability certificate, age at first birth (< 25 years), and household composition (single-mother or stepfamily).

This was consistent with previous studies showing that a history of temporary custody was a factor for RTC (Terling 1999; Mc Grath-Lone et al. 2017; Font et al. 2018; Parolini et al. 2018). Three possible reasons explain the association between a history of temporary custody and an increase in RTC. First, RTC is more common because temporary custody is a tool used in high-risk populations. Second, ongoing support can possibly facilitate the detection of abuse (Holland et al. 2024). Third, the support provided once the patient returns home may be inadequate.

Previous research has shown that temporary custody due to child abuse (excluding neglect) compared with other types of maltreatment results in fewer re-entry cases (Font et al. 2018; Parolini et al. 2018). There are two possible reasons why temporary custody due to child abuse has lower re-entry rates than that observed with other forms of maltreatment. First, delinquency tends to be externalized because of the difficulty of exhibiting appropriate behavior

Table 2. Re-entry to temporary custody prediction model.

Variables	Estimate	OR (95% CI)	p-value
Intercept	−1.7149		
History of temporary custody	0.9744	2.65 (1.73-4.05)	< 0.001
Reasons for temporary custody: Child abuse[$]	−0.3430	0.71 (0.49-1.04)	0.076
Child sex (female)	−0.2733	0.76 (0.52-1.11)	0.152
Child disability certificate	0.3045	1.36 (0.81-2.28)	0.252
Age at first birth (< 25 years)	0.6038	1.83 (1.25-2.67)	0.002
Household composition: Single mother or stepfamily[*]	0.6965	2.01 (1.37-2.94)	< 0.001

OR, odds ratio; CI, confidence interval.
Hosmer–Lemeshow test: $p = 0.320$.
naive C-statistic: 0.70, optimism-adjusted C-statistic of the bootstrap method: 0.69,
cross-validation: 0.67.
$, reference to other reasons for temporary custody.
*, reference to other household characteristics.

required in social life due to neglect and other factors since childhood. These problems are difficult to solve in a short period of time because they are formed based on the accumulation of maltreatment over a long period of time. Second, in the case of physical abuse, wounds and bruises are easy to detect. In addition, it is possible to objectively prove abuse through forensic or radiological expert testimony to clarify the cause and effect of injuries. Because of the ease of detection and proof of physical abuse compared with other reasons for RTC, it is highly possible that prevention of recurrence has been effective.

The sex of a child was not consistently associated with re-entry (Mc Grath-Lone et al. 2017; Font et al. 2018; Ohashi et al. 2018), which was also the case in this study. There was a trend toward an increase in re-entry when the child had a disability certificate. The most common disability certificate obtained by children was a certificate for intellectual disability; children with intellectual disabilities, including those with autism spectrum disorder, are at higher risk of maltreatment (McDonnell et al. 2019). Children with disabilities may develop externalizing behaviors. This may be because mothers are more likely to experience stress due to the difficulty of parenting. Regarding maternal factors, the results for first births under age 25 years are similar to those of previous studies that reported that pregnancies under age 18 years were associated with increased RTC (Lee et al. 2012). The lack of parenting skills of caregivers was postulated as a possible cause. Although this study did not assess pregnancy intention, many young pregnant women experience unwanted pregnancies, possibly due to a lack of parenting intention (Brown and Eisenberg 1995). In addition, young pregnant women are more likely to be unmarried or divorced and more likely to be in mother-child households. Such households tend to have lower incomes than that had by other households (Ministry of Health, Labour and Welfare 2023b), and economic difficulties have been noted to be associated with RTC (Barth et al. 2008; Lee et al. 2012; Mc Grath-Lone et al. 2017). To evaluate the relationship between economic status and temporary protection recurrence, a detailed analysis of economic status is needed, including not only welfare recipients but also those with economic deprivation who are not receiving public assistance. Furthermore, research is also needed to verify the effectiveness of economic support, such as welfare benefits, in preventing RTC.

The fact that many of the children's disabilities and maternal factors are predictors suggests that mothers need more parenting support. Currently, the support provided by child guidance centers in Japan is limited. Therefore, childcare support should be provided in cooperation with the Maternal and Child Health Department. Specifically, this department can connect children with disabilities to developmental support and help mothers learn parenting skills. Thus, it is crucial to prevent abuse before it becomes serious.

Performance evaluation of the model developed to predict RTC yielded a naïve C-statistic of 0.70, indicating acceptable discrimination of RTC (the C-statistic ranged from 0.5 to 1.0 for the measure, with 1.0 being perfect discrimination). Furthermore, internal validation did not show significant changes in the C-statistic. The calibration of the model was good, and the Hosmer-Lemeshow test was not significant. These results suggest that the model has excellent discriminative ability and adequate calibration. The same variables were chosen in the model derived for only those with no history of temporary custody, who were analyzed using sensitivity analysis (see Supplementary Table S1). The same trends were confirmed in the results shown by the estimates, so the impact of unmeasured variables is also expected to be small. This predictive ability is not inferior to that of the tools shown in previous studies (McNellan et al. 2022). The most important difference from other risk assessment tools is that we do not use subjective information, but only objective information to predict risk. The results suggest that information that can be collected by administrative agencies may be sufficient to accurately predict the risk of RTC. This methodology can be used in areas where the assessment of the risk of RTC is insufficient due to the lack of practical experience of child welfare workers.

Strengths and limitations of this study

The strength of the model is that it employs actuarial methods to develop a forecasting model. Actuarial methods have better discriminative power than that of consensus-based risk assessment. However, such methods must be used in conjunction with traditional clinical approaches. If the RTC risk model indicates a high risk, the risk of re-entry should be considered without terminating preventive services, even if the caseworker considers the risk to be low. In addition, if the caseworker's judgment and the results of the RTC risk model are the same, decision-making can be enhanced. If RTC risk can be properly assessed, limited human resources can be efficiently invested in high-risk households to prevent RTC.

Next, we assessed whether the characteristics of the target population were representative of children receiving temporary protection. Since the distribution of reasons for temporary custody does not differ from that of a previous Japanese study (Ohashi et al. 2018), the participants in this study are representative of the population of children receiving temporary custody, at least in terms of the reasons for their custody.

This study has seven limitations. First, while information on obtaining a disability certificate is accurate, it excludes those who have a disability but do not have a disability certificate, leading to under-reporting of the risk of re-entry. This is also true for the measurement of IPV. IPV levels that were not reported to the police were not included. Additionally, some individuals experiencing IPV may be unable to seek help (Han et al. 2022). Therefore, only people who can report to the police seek help. The

Conflict Tactics Scales - Short Form (Straus and Douglas 2004), which is used internationally to measure IPV, may help with information collection by surveying all cases at the start of temporary protection. Third, although the results of this study may be generalizable to urban areas in Japan, institutional differences need to be considered for their application in other countries. Furthermore, although the model has been validated through cross-validation and other means, external validation using external data has not been conducted to confirm whether the discriminative power performs well on other data sets. Therefore, a further study in the future is warranted. Fourth, organizational factors may influence outcomes for child guidance centers. Factors that influence the decision-making of child protective services include time constraints, decision-making constraints, and other agency-specific influences (Font and Maguire-Jack 2015). However, in Japan, the child guidance centers make decisions based on the "Guidelines for the operation of child guidance centers" (Ministry of Health, Labour and Welfare 2023c) set by the national government; therefore, differences among local governments are relatively small. Fifth, factors that are not addressed in this study may have impacted the results. For example, it is possible that variables not measured in this study may have influenced RTC. We included "history of temporary custody" in the analysis because we believe that it includes the influence of unmeasured variables. However, considering that the variables derived in this study were used even when only children with no history of temporary custody were analyzed, the influence of unmeasured variables did not seem to pose a significant problem. Sixth, a history of temporary custody was a predictor, but there was insufficient information on when the previous temporary custody occurred. Among the history of temporary custody, re-entry after a short period of time may be associated with a higher risk. Therefore, future studies should include additional information on when a history of temporary custody occurred. Finally, of the 178 children who re-entry the temporary custody, 59 (33.1%) had previously experienced temporary custody. Unlike prospective studies, which can align observation periods, this retrospective study did not examine the duration of previous temporary custody periods or the interval since the last instance of temporary custody before the study began, representing a limitation of our research. By the end of the study period, re-entry the temporary custody averaged approximately 4 months, though this varied widely, with some cases lasting only a few days and others nearly a year. Additionally, children with re-entry temporary custody episodes tended to have higher recurrence rates; however, comparisons are challenging due to the variation in follow-up periods among subjects.

While a prior history of temporary custody was included in our model, it did not affect the influence of other variables, suggesting that our risk model may incorporate independent risk factors. To enhance the predictive power of the model, future prospective studies are recommended to further clarify the quantitative and qualitative impacts of the interval since the last temporary custody.

Conclusions

We demonstrated the development and validation of a model that predicts RTC. The predictors in the conclusive risk model were a history of temporary custody, age at first birth of < 25 years, single mother or stepfamily. It has been shown that it is possible to predict RTC using only the information collected by administrative agencies. This development method can be applied in child welfare settings where child welfare officers have little practical experience. We also suggest that it is crucial for child guidance centers to cooperate with the maternal and child health departments to support childcare. In the future, further research will be required to practically apply RTC prediction models.

Author Contributions

Sotaro Tanaka, Mariko Inoue, and Kazue Yamaoka were responsible for designing the research questions. Sotaro Tanaka, Mariko Inoue, and Kazue Yamaoka drafted the study protocol. Sotaro Tanaka was responsible for data management. Sotaro Tanaka and Kazue Yamaoka were responsible for statistical analyses. Sotaro Tanaka, Mariko Inoue, and Kazue Yamaoka wrote the first draft of this paper. All authors read and approved the final manuscript.

Conflict of Interest

The authors declare no conflict of interest.

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Supplementary Files

Please find supplementary file(s);
https://doi.org/10.1620/tjem.2024.J144

Appendix

Box 1. Exclusion criteria

(I) Facility admission: facility admission refers to a case of long-term admission to an orphanage before the start of the observation. In some cases, children who have been in long-term care facilities are placed in temporary custody because of maladjustment in the facility.

(II) Moving house: moving house entails the case of moving out of Yokohama City during the observation period. Those who had moved out of Yokohama were excluded because they could not be traced.

(III) Living in other cities: this is the case of living outside Yokohama City. Those who live outside of Yokohama City are temporarily protected if the incident occurred in Yokohama City. However, no information is available because it will be transferred to the child consultation center of the address.

(IV) Temporary custody period of zero days: in this case, the handing over of the child to the caregiver is completed on the day of temporary custody.

(V) Overage: overage refers to those who were over 18 years of age during the observation period, as child guidance centers are involved with children under 18 years of age.

(VI) Denial of maltreatment: In this case, a child is temporarily protected based on the suspicion of maltreatment, but at a later meeting, it is determined that there is no evidence of maltreatment.