

Risk factors of self-reported physical child abuse during the COVID-19 pandemic in Japan: Work-related changes in men and fear of COVID-19 in women (#77873)

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Risk factors of self-reported physical child abuse during the COVID-19 pandemic in Japan: Work-related changes in men and fear of COVID-19 in women

Haruaki Naito^{Equal first author, 1, 2}, Katsuya Nitta^{Equal first author, 1}, Yasuhiro Kakiuchi^{Corresp. 1, 2}

¹ Department of Forensic Medicine, School of Medicine, Kindai University, Sayama, Osaka, Japan

² Department of Forensic Medicine, School of Medicine, Tokai University, Isehara, Kanagawa, Japan

Corresponding Author: Yasuhiro Kakiuchi
Email address: kakiuchi@yokohama-cu.ac.jp

Background: There has been no consensus regarding whether the pandemic-related factors equally lead to child abuse globally. The factors include a history of infection, attitude toward vaccination, job loss, and a sudden increase in telework. How the pandemic reinforces the risk factors of child abuse might depend largely on individuals' current and past lifestyles in each country. Some changes of lifestyles continue after the pandemic, and it is important to understand which factors and mechanisms are strongly associated with child abuse. We analyzed the pandemic-related characteristics of offenders and non-offenders of self-reported child physical abuse from Internet survey data in Japan and discussed how the pandemic affected physical child abuse and what caused the difference by gender.

Methods: We conducted a cross-sectional study on physical child abuse by caregivers based on the Japan COVID-19 and Society Internet Survey (JACSIS) from September to October 2021. We divided the participants who were living with their child aged 0-14 years into offenders and non-offenders based on the answer to the question about physical child abuse. The association between their characteristics and physical child abuse was analyzed using Pearson's chi-squared (χ^2) test and logistic regression analysis.

Results: As risk factors of male offenders, "work from home 4-7 days/week," "decreased work," "normal relationships with household members (compared to good relationships)," "COVID-19 infected, both themselves and household members, within a year," "unwillingness to receive COVID-19 vaccination because the license process of the vaccine is doubtful," "high levels of benevolent sexism," and "history of child abuse" were observed. As risk factors of female offenders, "bad relationships with household members (compared to good relationships)," "fear of COVID-19," "COVID-19 infected, both themselves and household members, within a year," "feelings of discrimination related to COVID-19 in the past two months," and "history of child verbal abuse" were observed.

Conclusions: Risk factors specific to male offenders were work-related changes, which could be reinforced by the pandemic. Further, the extent of these changes vary according to the strength of gender roles in each country. Risk factors specific to female offenders were directly related to fear of infection itself, consistent with other studies. This study provides a hypothesis that men are likely to have dissatisfaction with the families due to their inability to adapt to work-related changes by some crisis, while women are likely to have dissatisfaction with the families due to their strong fear of infection itself and uncooperative attitudes of their husband or children to infection prevention, especially in some countries with prominent stereotyped gender roles.

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4 Haruaki Naito^{#,1,2}, Katsuya Nitta^{#,1}, Yasuhiro Kakiuchi^{*,1,2}

5

6 ¹Department of Forensic Medicine, School of Medicine, Kindai University, Sayama, Osaka, Japan

7

8 ²Department of Forensic Medicine, School of Medicine, Tokai University, Isehara, Kanagawa,

9 Japan

10

11 #Contributed equally

12

13 *Corresponding author

14 E-mail: kakiuchi@yokohama-cu.ac.jp

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23 **Abstract**

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32 physical child abuse and what caused the difference by gender.

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36 non-offenders based on the answer to the question about physical child abuse. The association
37 between their characteristics and physical child abuse was analyzed using Pearson's chi-squared
38 (χ^2) test and logistic regression analysis.

39 **Results:** As risk factors of male offenders, "work from home 4-7 days/week," "decreased work,"
40 "normal relationships with household members (compared to good relationships)," "COVID-19
41 infected, both themselves and household members, within a year," "unwillingness to receive
42 COVID-19 vaccination because the license process of the vaccine is doubtful," "high levels of
43 benevolent sexism," and "history of child abuse" were observed. As risk factors of female
44 offenders, "bad relationships with household members (compared to good relationships)," "fear

45 of COVID-19,” “COVID-19 infected, both themselves and household members, within a year,”
46 “feelings of discrimination related to COVID-19 in the past two months,” and “history of child
47 verbal abuse” were observed.

48 Conclusions: Risk factors specific to male offenders were work-related changes, which could be
49 reinforced by the pandemic. Further, the extent of these changes vary according to the strength of
50 gender roles in each country. Risk factors specific to female offenders were directly related to
51 fear of infection itself, consistent with other studies. This study provides a hypothesis that men
52 are likely to have dissatisfaction with the families due to their inability to adapt to work-related
53 changes by some crisis, while women are likely to have dissatisfaction with the families due to
54 their strong fear of infection itself and uncooperative attitudes of their husband or children to
55 infection prevention, especially in some countries with prominent stereotyped gender roles.

56

57 **Background**

58 The negative impacts of child abuse are maintained throughout the victims’ lifespan, and result
59 in various mood disorders, anxiety disorders, suicidal behavior, and the intergenerational cycle
60 of child abuse (Chapman et al., 2004; Fujiwara & Kawakami, 2011; Stickley et al., 2020;
61 Horikawa et al., 2016; Berlin, Appleyard & Dodge, 2011). Many studies have concluded that
62 more attention to child abuse is necessary during the COVID-19 pandemic because some risk
63 factors such as mental stress, economic stress, social isolation, and a decrease in the chances of
64 detecting child abuse must be reinforced by the pandemic (Eleni Romanou & Emma Belton,
65 2020; Pereda & Díaz-Faes, 2020; Brown et al., 2020).

66

67 However, there is a fundamental question about whether the pandemic equally reinforces the risk
68 factor of child abuse in each country. A systematic review that analyzed 12 articles reported that
69 the number of areas where abuse increased and decreased from pre-COVID-19 pandemic was
70 approximately the same (Rapp et al., 2021). The impact of the COVID-19 pandemic on child
71 abuse might largely depend on each country's past and current conditions, including the extent of
72 fear of COVID-19, the degree of telework penetration, and attitudes toward gender roles. To the
73 best of our knowledge, no study in Japan has identified a significant relationship between
74 physical child abuse and pandemic-related factors of offenders.

75

76 Hence, we used Internet survey data and performed statistical analysis by including various
77 factors directly and indirectly related to the COVID-19 pandemic. There are several drawbacks
78 to using official reports or self-reports of child abuse concerning the quality and number of child
79 abuse cases (Gilbert et al., 2009). However, it is plausible to estimate that self-reports were
80 closer to the true number of child abuse cases during the pandemic when many child protection
81 agencies and schools—major resources of official reports of child abuse—reduced their
82 activities. This study is the first in Japan to report that some pandemic-related characteristics in
83 offenders were significantly associated with physical child abuse; notable differences by gender
84 were also observed.

85

86 **Methods**

87 *Data collection*

88 Data was obtained from the Japan COVID-19 and Society Internet Survey (JACSIS). The survey
89 focused on public health issues regarding COVID-19 pandemic and was conducted by an

90 Internet research company (Rakuten Insight, Inc.), which had 2.3 million registered panelists.
91 From September 27 to October 29, 2021, questionnaires were distributed to 59,219 panelists to
92 represent the Japanese population regarding age, gender, and residential prefecture using a
93 simple random sampling process (the Japan COVID-19 and Society Internet Survey, 2022).

94 *Outcome Variables*

95 We focused on the question about child physical abuse:

96 “Have you used violence on your child in the past two months?”

97 The question was only asked to caregivers living with child aged 0-14 years. Those who
98 answered “Yes” were classified as an experimental group, and those who answered “No” were
99 classified as a control group. Those who answered “not sure” or “not want to answer” were
100 excluded from the analysis.

101 *Explanatory Variables*

102 The following sociodemographic characteristics of the subjects were obtained: “age (20-29, 30-
103 39, 40-49, and 50-59 years),” “work from home (none, 1-3 days/month, 1-3 days/week, 4-7
104 days/week, and unemployed),” “change of job status within a year (did not change, work
105 decreased, leave of absence or furlough, resigned, and others),” “relationships with household
106 members (good, normal, and bad),” “benevolent sexism scale (≤ 24 and > 24),” “experienced or
107 witnessed physical abuse by parents before age of 18 (no and yes),” and “experienced verbal
108 abuse by parents before the age of 18 (no and yes).”

109

110 The following pandemic-related characteristics of the subjects were also obtained: “fear of
111 COVID-19 (not strong and strong),” “infection with COVID-19 within a year (neither myself nor
112 household member, only myself, only household member, and both myself and household

113 member),” “feelings of discrimination related to COVID-19 (never, before two months ago, and
114 in the past two months),” and “willingness to receive COVID-19 vaccination (yes, no because
115 the license process of the vaccine is doubtful, and no due to other reasons).”

116

117 Regarding “fear of COVID-19”, those who answered “very applicable” to any one of the
118 questions regarding physically or mentally serious reactions to simply considering COVID-19
119 were defined as having a strong fear of COVID-19. Among the all reasons of “unwillingness to
120 receive COVID-19 vaccination,” “the license process of the vaccine is doubtful” is the most
121 skeptical reason. Other reasons indicate that people did not want to receive the vaccination
122 because they were concerned with the side effects, doubted its effectiveness, had low risk of
123 serious complications, were previously infected, or did not have time to get the vaccine.

124 “Benevolent sexism scale” was set to see whether the attitudes toward gender role are related to
125 child abuse. Glick et al. proposed that sexism is divided into hostile and benevolent one in
126 modern times, and it is reported that benevolent one has more negative impact on women’s
127 career advancement than hostile one (Glick & Fiske, 1996; Dardenne, Dumont & Bollier, 2007;
128 King et al., 2012; Jones et al., 2014). Moreover, victims of dating violence or child abuse had
129 reportedly higher scores for benevolent sexism scale (Cuadrado-Gordillo, Fernández-Antelo &
130 Martín-Mora Parra, 2020; Vives-Cases et al., 2021; Melissa Abi Rached, Ahmed Hankir &
131 Rashid Zaman, 2021). To our knowledge, common criteria for the benevolent sexism scale do
132 not exist; we set 24 out of 48 as a cut-off value for the explanatory variable.

133 *Statistical analysis*

134 Pearson’s chi-square (χ^2) test and logistic regression analysis were performed to estimate the
135 strength of associated risk factors to physical child abuse. At 5% significance level, these gender-

136 stratified analyses were conducted by EZR ver. 1.54.

137 *Ethics approval*

138 Ethical approval was obtained from the Research Ethics Committee of the Osaka International
139 Cancer Institute (approval no. 20084). Before answering the distributed questionnaire, in the first
140 page of the questionnaire, all the participants read the purpose of the study, how personal
141 information would be handled, and how to deny participating the study. Those who answered the
142 questionnaire were considered to have consented to participate in the study.

143

144 **Results**

145 Figure 1 shows the flowchart of participant selection. Among the caregivers with child aged 0-14
146 years, a total of 134 men answered “Yes” and 2,034 answered “No” to the question of physical
147 child abuse in the past two months. A total of 187 women answered “Yes” and 2,038 answered
148 “No”.

149

150 Table S1 shows the numbers of offenders and non-offenders according to their characteristics
151 and the results of Pearson’s χ^2 test. Among men, physical child abuse was significantly
152 associated with “change of job status within a year,” “infection with COVID-19 within a year,”
153 “feelings of discrimination related to COVID-19,” “willingness to receive COVID-19
154 vaccination,” “benevolent sexism scale,” and “history of child abuse.” Among women, it was
155 significantly associated with their “age,” “relationship with household member,” “fear of
156 COVID-19,” “infection with COVID-19 within a year,” “feelings of discrimination related to
157 COVID-19,” and “history of child abuse.”

158

159 Table S2 shows the association between participants' characteristics and physical child abuse by
160 logistic regression analysis. Among men, physical child abuse was significantly and positively
161 associated with "work from home 4-7 days/week," "decrease of work," "normal relationships
162 with household members (compared to good relationships)," "COVID-19 infected, both
163 themselves and household members, within a year," "unwillingness to receive COVID-19
164 vaccination because the license process of the vaccine is doubtful," "high levels of benevolent
165 sexism," and "history of child abuse." Among women, it was positively and significantly
166 associated with "bad relationships with household members (compared to good relationships),"
167 "strong fear of COVID-19," "COVID-19 infected, both themselves and household members,
168 within a year," "feelings of discrimination related to COVID-19 in the past two months," and
169 "history of child verbal abuse." It was significantly and negatively associated with "aged 50-59
170 (compared to aged 20-29)" and "unwillingness to receive COVID-19 vaccination for other
171 reasons than the license process of the vaccine is doubtful."

172

173 **Discussion**

174 *Common risk factors for both genders*

175 The common risk factors of self-reported physical child abuse in offenders of both genders are
176 "COVID-19 infected, both themselves and household members, within a year," "poor
177 relationships with household members," and "history of child abuse." The intergenerational
178 cycle of child abuse is known worldwide as a major risk factor (Berlin, Appleyard & Dodge,
179 2011; Horikawa et al., 2016; Assink et al., 2018; Anderson et al., 2018). In this pandemic,
180 "COVID-19 infected, both themselves and household members, within a year" had a high odds
181 ratio, exceeding that of "history of child abuse." Considering that "only themselves being

182 infected” did not show a high prevalence of self-reported physical child abuse, depression
183 symptoms due to COVID-19 or Long COVID would not significantly change their responses.
184 Therefore, physical child abuse is very likely to occur in a household where the offender and
185 someone else were infected within a year. Considering the high odds ratios exceeding that of
186 “history of child abuse,” the abuse is more likely to occur during periods of physical, mental, or
187 social stress when household members are frustrated with each other. For offender, the stress
188 largely differs between “only offender infected” and “offender and someone infected.” For
189 example, it is difficult to determine the source of infection in most cases. When several family
190 members are infected simultaneously, they often assume that the others might be responsible for
191 the infection. In addition, as described below, it is assumed that infected men are more likely to
192 be dissatisfied with their families due to reduced working hours and fear of losing their jobs. In
193 contrast, infected women are dissatisfied with their families due to anxiety related to the
194 infection.

195 *Male offenders*

196 Risk factors specific to male offenders were “work from home 4-7 days/week,” “decreased work,”
197 “unwillingness to receive COVID-19 vaccination because the license process of the vaccine is
198 doubtful,” and “high benevolent sexism scale.” Benevolent sexism measures the attitude toward
199 stereotyped gender roles; men should work and women should do household chores. We estimate
200 that high levels of benevolent sexism of men reflect an emphasis on the importance of an
201 occupation, leading to the strong stress caused by “work from home 4-7 days/week” and
202 “decreased work.” The strength of gender roles is inferred from the gender gap in the labor force
203 participation. Substantial gaps in labor force participation prevalence between married men and
204 women (25-30%) were observed in countries such as Japan, South Korea, Italy, and Brazil,

205 compared to the gaps (less than 15%) in countries such as France, Sweden, Finland, England, and
206 Denmark (ILOSTAT, 2022). In Japan, half of the employed women quit their jobs after childbirth
207 (Ministry of Health, Labour and Welfare in Japan, 2021). As Japan has very established gender
208 roles, it is unclear whether the work-related risk factors in our results are also found in countries
209 with gender roles as prominent, such as in Italy and Brazil. Notably, law telework penetration is
210 consistent with high gender gap in the labor force participation to some extent. It is reported that
211 telework penetration before the pandemic was low in Japan, Italy, and Brazil and high in France,
212 Sweden, Finland, England, and Denmark (OECD, 2021). The pandemic has increased telework
213 globally, but it was a rapid change for the country with prominent stereotyped gender roles, such
214 as Japan. Moreover, “work from home 4-7 days/week” and “decreased work” are associated with
215 increased time spent at home and anxiety about potential job loss. For men with strong stereotyped
216 gender roles, the sudden increase in time with their children is largely inconsistent with their
217 previous lifestyles. This may be a primary cause of dissatisfaction with their children and spouses
218 because they were previously uninvolved in childcare. In addition, the situation where the husband
219 is the only one working can increase their dissatisfaction with the family when they faced with the
220 uncertainty of unemployment. It is reported that “working remotely” and “becoming unemployed
221 during the COVID-19 pandemic” were not associated with anxiety symptoms in Finland
222 (Savolainen et al., 2021).

223

224 “Unwillingness to receive COVID-19 vaccination because the license process of the vaccine is
225 doubtful” was a risk factor for male offenders. Considering that “fear of COVID-19” and
226 “feelings of discrimination related to COVID-19 infection” were risk factors associated with
227 female offenders, men with no vaccination owing to skepticism might be subject to domestic

228 discord due to their uncooperative attitude toward infection prevention.

229 *Female offenders*

230 Risk factors specific to female offenders were “bad relationships with household members
231 (compared to good relationships),” “strong fear of COVID-19,” and “feelings of discrimination
232 related to COVID-19 in the past two months.” Unlike the discussion on the work-related risk
233 factors in men, the infection-related risk factors are not always explained by gender roles. In
234 Northern European countries, women showed a higher prevalence of anxiety and depression
235 symptoms due to the COVID-19 pandemic (Savolainen et al., 2021; Johansson et al., 2013).
236 Importantly, infection-related factors are gradually reduced with the abatement of the pandemic.
237 The telework system introduced during the pandemic will likely continue in many companies.
238 Globally, as there was no precedent for the sudden increase in time at home for men, it is
239 difficult to speculate how long the estimated risk factors due to men’s familial dissatisfaction
240 will continue in countries with strong gender roles.

241

242 This study had some limitations. First, we found that self-reported physical child abuse was
243 likely to occur in the household where the offender and someone were infected within a year,
244 with a high odds ratio similar to “history of child abuse.” However, we could not identify who
245 the someone is, and a particular combination might influence the relationship with child abuse.
246 For example, while the combination of infected offender and child might indicate a simple
247 mechanism of child abuse, the combination of infected offender and spouse might indicate a
248 complex mechanism of child abuse regarding childcare, partly explained by the strength of
249 gender roles. Second, we could not determine whether the offenders were biological parents or
250 parents-in-law because there was no definition of parents in JACSIS. It has been reported that

251 parents-in-law abuse children more than biological parents, and different types of abuse are
252 observed (Turner et al., 2013; Daly & Wilson, 1994; Baba et al., 2020). Third, we excluded the
253 participants who answered “not sure” or “not want to answer” to the question about child
254 physical abuse. These were approximately 10% of the analyzed participants, and we could not
255 identify whether they were offenders or non-offenders.

256

257 **Conclusion**

258 Physical child abuse was very likely to be reported in the “COVID-19 infected, both themselves
259 and household members, within a year” households. The risk factors specific to male offenders
260 were related to the change of work situations, such as “work from home 4-7 days/week” and
261 “decreased work.” The risk factors specific to female offenders were primarily related to fear of
262 infection, consistent with previous studies on other pandemics. Our results suggest that in Japan,
263 men are likely to be dissatisfied with their families because of their inability to adapt to work-
264 related changes due to the pandemic. In contrast, women are likely to be dissatisfied with their
265 families due to their strong fear of infection and the uncooperative attitudes of their husbands or
266 children toward infection prevention. Among developed countries, Japan has strong gender roles,
267 and it is necessary to observe whether the trends in this study are also observed in countries with
268 strong gender roles. When emergencies such as pandemics keep people at home or change past
269 lifestyles, domestic discord might be more prevalent in countries with strong stereotyped gender
270 roles. This mechanism that leads to domestic discord should be observed and better understood to
271 reduce such issues in future crises from the perspect of closing the gender gap.

272

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275 for English language editing.

276

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Figure 1

Flowchart of the analyzed participants selection.

