



Financial and Work Burden, Psychosocial Functioning, and Family Interactions During the COVID-19 Pandemic in Indonesia: Effects on Child Outcomes

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Abstract

The COVID-19 pandemic has profoundly affected all aspects of family life worldwide. This study aimed to examine the effects of several family factors on child outcomes during the pandemic in Indonesia, a country with approximately 260 million people. A range of child maladjustment and child competency variables were examined, along with a set of associated variables, including family income, psychosocial functioning, and family interactions, which were modelled via Structural Equation Modelling to understand the interrelationships between variables associated with child adjustment. Using an online survey, a total of 354 parents with at least one typically developing child between the age of 2 and 10 years participated in this study. Results showed that psychosocial functioning and family interactions appeared as successive mediators between family income, financial and work burden, and child adjustment. This study highlights some key concerns to support children's and families' wellbeing during the pandemic in Indonesia.

Keywords Financial burden · Psychosocial functioning · Family interactions · Child maladjustment · COVID-19 pandemic

Introduction

In March 2020, the World Health Organisation (WHO) declared COVID-19 a pandemic disease. It is profoundly affecting lives around the globe. Social distancing, contact restrictions, school, and economic shutdowns have resulted in changes to the psychosocial environment of countries around the world. The current situation significantly affects families and children's daily lives. Kindergartens and schools have been closed, social contacts have been limited, and out-of-home leisure and recreation activities restricted.

Additionally, parents are asked to support their children with "schooling from home" while at the same time working. External support by other family members and social

support systems have been limited due to health issues. Besides worries and anxieties related to COVID-19, the economic situation has worsened with high and rising levels of unemployment. This situation has put much pressure on children and their families, affecting their wellbeing [1, 2].

A similar situation has occurred in Indonesia. Since the Indonesian government declared COVID-19 a national disaster on March 2, 2020, every facet of society has changed dramatically. Indonesians feel threatened by the virus and feel that the government's late response has made them vulnerable to the pandemic [3, 4]. Indonesia, with a population of approximately 260 million, has not shown a decline in COVID-19 cases. Data released by the national COVID-19 task force in Indonesia indicate dramatically increasing numbers of infection cases with a mortality rate of 5%, and the distribution the cases has increased in all provinces, particularly in areas with high population density such as Jakarta, West Java, or East Java [5]. In other words, there is little indication that this outbreak will end soon in the country.

The Indonesian social-distancing policy to have "working, studying, and praying at home" (3B: Bekerja, Belajar dan Beribadah dari Rumah) has triggered dramatic lifestyle changes for families and individuals across the country. The

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house has become a new centre for all activities of family members, and the conditions might bring changes in families' and children's daily lives. Accordingly, besides focusing on public health, close attention also needs to focus on the effects of the pandemic on family and children's wellbeing.

Child Adjustment During the COVID-19 Pandemic

Previous studies show that major disasters, including the COVID-19 pandemic, are challenging for child well-being [6–8]. The pandemic not only causes infection and illness at the individual and community level, but the virus also disrupts many essential aspects of human life, including family and children's life [8]. This can result in chronic stress, which can cause wear and tear on the body that may disrupt the development and functions of children over time [7, 9]. In addition, children have experienced separation from parents and loss of parents or other family members to disease, greater food insecurity and lack of access to learning activities due to the pandemic [8, 10].

The social restriction policy implemented in the education sector during the pandemic, commonly known as studying from home, has caused additional challenges for children worldwide, including in Indonesia [11, 12]. Although the effects depend on age and the capabilities of the individual child, as well as cultural expectations about the responsibilities or behaviours of children at different ages, challenges in adjusting to day-to-day life, the loss of social and play time or studying together with friends at school, limited opportunities to visit play areas, experiencing firsthand the impact of COVID-19 on parents or their family members (physical, economic, or psychological impacts) and uncertainty of unexpected shocks, are difficult experiences for children. Greater exposure to destruction, loss or illness, displacement or separation from the family due to health issues are linked with acute stress and difficulties in day-to-day functioning among children [7].

A study conducted in China involving 2330 school children has found that children with learning quarantine have shown some signs of emotional distress. Even further research from these observations has shown that 17.2% of children experienced anxiety, and 22.6% reported depressive symptoms [13]. A study conducted in Japan with 1200 children indicated that 24.1% have moderate and 29.3% have severe mental distress [14]. A similar situation has been found in the United States with 7.1% of children age 3–17 years old diagnosed with anxiety, and about 3.2% suffering from depression [15].

In Europe, a study investigating parents' perceptions about their children's behaviour and emotional changes during the pandemic in Italy and Spain has reported that 86.7% of parents perceive changes in their children [16]. These changes include difficulties in concentration, boredom, irritability,

restlessness, nervousness, loneliness, uneasiness, worries, and behavioural disturbances. In Indonesia, a study found that children were at risk for having emotional and behaviour problems [17]. With limited supports, Indonesian children reported having more suicidal thoughts than Thai and Taiwanese children [18]. These findings show evidence that the pandemic brings significant negative impacts on child outcomes, particularly in child maladjustment and family functioning problems worldwide, including in Indonesia. Studies indicated that lack of support, disaster exposure, and negative coping were particular risk factors for chronic mental health concerns among children who experience mass disasters, such as the pandemic COVID-19 [19].

While multiple studies indicate that many children show problems in their emotions and behaviours during the pandemic, it could also be expected that some children show added competencies. It is noted that children's experiences with challenges or adversity act as an essential aspect to promote the development of a child's capacity and skills to handle stressful experiences [20]. During this pandemic, a child's exposure to multiple challenges may bring essential experiences to learn how to be resilient and to cope with their emotions and behaviours [21]. Research focusing on the impacts of mass disasters on children's well-being has shown that resilience is the most significant protective factor for children's mental health problems from trauma experiences [19]. Children's resilience depends on multiple protective factors within families and communities through learning activities, socialization, and available support services [8, 19]. Numerous studies have indicated that families play a critical role in developing children's resilience and protecting children from trauma following disasters [7, 8, 19]. In addition, learning during quarantine, supported by families may facilitate children to gain better competence through having more time to discover new passions or activities.

The positive and negative changes in child adjustment during the pandemic need to be further explored and possible determinants, including family interactions and psychosocial functioning problems examined. As shown by multiple studies of family interactions [22–24], family factors affect child problems and enhance child competencies. During the pandemic, while the house is a new centre for the family, family factors, specifically family interactions emerge as factors to be examined as potential sources of risk and protection for child outcomes.

Family Interactions During the COVID-19 Pandemic

Family interactions can be disrupted when parents experience adverse situations [25–27], including having psychosocial functioning problems or financial and work burden [28, 29]. During the COVID-19 pandemic, many families have

reported experiencing problems related to the economic crisis [30–32] that have affected family interactions [28].

In Indonesia, the COVID-19 pandemic brings pressure, conflicts, and anxiety within families in a context where many Indonesian families are unable to meet their basic needs due to losing their income and employment. In addition, within the Indonesian cultural context, the majority of the employment is in the farming (28.5%) and service sectors (49.14%) [33], and the majority of Indonesians have no long-term financial savings. In terms of family responsibilities, although women in Indonesia can forge careers, due to patriarchal values, the husband is usually the sole breadwinner while women take care of domestic duties; therefore, shared household responsibilities are not common within the Indonesian cultural context [34]. This risk of poverty due to lack of family income, in many cases, can lead to an increased likelihood of stress, anxiety, insomnia, and conflict among family members that can decrease mental wellbeing [35–37]. Greater levels of family violence, suicide, or child maltreatment have also been documented during the pandemic [38–40]. We recognise that financial and work burdens can escalate when families face more significant pressure and stress, and the order to stay at home can cause stress and anxiety for those who feel at risk [1, 41]. While parents themselves experience a significant crisis associated with decreasing financial resources and lack of institutional supports, family interactions may also be disrupted. Parents are the key protective factors in children's lives, who are responsible for buffering them against adversity, but may themselves feel overwhelmed by the added stresses of their situation [8].

In addition, during the pandemic, all family members, including parents and children, have to cope with the stress of quarantine and social distancing. Parents and children may feel frustrated, bored, depressed, or irritable during stay-at-home orders. Parents have experienced increased pressure to work from home, keep jobs and businesses running, and be responsible for caring for their children and supervision of schooling children at home at the same time. Notably, parents with low income are not only more likely to work in sectors that have been shut down; also, if their previous job remains open, they are less likely to be able to do it from home and so are more likely to struggle to make it compatible with their additional childcare responsibilities at home [30]. These conditions may appear as an explanation for the lack of connections and less positive interactions among family members caused by significant mental health problems due to the pandemic crisis [37] that may associate with greater child maladjustment.

Research has indicated that parental stress and children's psychological problems due to multiple aspects of the pandemic have significant impacts on children's problems through the mediating role of parental stress [42]. Parents

experiencing more stress reported found it challenging to understand their children's needs and to respond positively [43]. Stress among parents is often associated with irritability and difficulties in implementing positive parenting, resulting in a cyclical pattern of negative parent–child interactions and more problematic child behaviour [37, 44]. Parents experiencing more stress may also find it challenging to find more appropriate ways to be responsive and positive to their children; therefore, resulting in a more negative environment for children contributing to more behavioural and emotional problems among children [45].

On the other hand, the pandemic may promote positive interactions among family members. A study indicated that families without financial difficulty reported being able to carry out their work activities from home [30]. These parents reported having space at home to educate their children and to have positive environments and family interactions [30]. During the "stay at home" time, a variety of collaborative family activities, such as eating meals together, playing games, or doing housework together provide the opportunity to support positive family interactions [41], which are expected to impact on reducing child problems and promoting child competencies [36, 46].

A survey conducted in Canada involving 3000 parents found that 49.7% of parents reported experiencing more positive interactions and feeling closer with their children during the pandemic, while 22% of parents perceived to have more conflicts [26]. While the pandemic brings a negative impact on family relationships, it also can promote family interactions that are expected to affect child competencies. However, it is still unknown to what extent psychosocial functioning problems, financial and work burden have effects, positive or negative, on family interactions and, in turn, on child adjustment in Indonesia.

Financial and Work Burden, Psychosocial Functioning Problems, Family Interaction, and Child Adjustment

Prior research has found that children's adjustment in adverse situations is affected by the distress levels experienced by parents [47–49]. The links notably indicated that parental mental health problems increase the risk of emotional and behavioural problems in children [50–52].

The *Family Stress Model* [46] outlines a theoretical process in which economic pressure experienced by parents exacerbates child maladjustment through parental distress, interparental relationship problems, and parenting practice. During the pandemic, family income, financial and work burdens have been reported to affect parental psychosocial functioning problems [29, 53] and successively influence child outcomes. The research found that parental lack of financial capacity combined with their responsibilities in

raising and providing education for their children without institutional support was associated with increasing psychosocial functioning problems [54]. These conditions lead parents to face more difficulties in developing positive interactions and understanding their child's needs in childrearing activities. Stress, anxiety, and psychological problems are often associated with harsh behaviours and difficulties in explaining limits and discipline [26, 28, 55] and reacting in more hostile and aggressive ways [44].

In Indonesia, among families with low income with financial and work burden, specific supports for parenting and home schooling are less accessible for families during the pandemic [56, 57]. Both parents and children individually may also experience greater stress levels due to more daily hassles, such as lack of access to online learning and other additional tasks. Both parents and children may not have the resources to use online consultations or mental well-being support in a safe and confidential environment. The uncertainty about the duration of the COVID-19 pandemic in Indonesia and concerns about family may increase mental health problems. In short, multiple family problems, particularly associated with family income and financial and work burden during the COVID-19 pandemic, may increase child maladjustment among children by having more significant psychosocial functioning problems and fewer positive family interactions.

Current Study

This study aims to develop and examine a model to explain how factors identified in the literature are associated with child maladjustment and child competency during the pandemic. A set of associated variables, including family income, financial and work burden, psychosocial functioning, and family interactions, were modelled to understand

the interrelationships between variables associated with child adjustment.

We hypothesised that psychosocial functioning problems and family interactions act as successive mediators of the relationships between family income, financial and work burden, and child adjustment. Specifically, we predicted that parents with low income would experience higher financial and work burden. These parents would report greater psychosocial functioning problems and have fewer positive interactions within the family, further related to more child maladjustment and fewer child competencies. The hypothesised model is presented in Fig. 1.

Method

Participants

Three hundred and fifty-four Indonesian parents of 2–10-year-old children completed the questionnaires. The majority of participants were mothers who were married and only 2.3% of participants were single mothers. The majority of participants lived on Java Island (i.e. Jabodetabek area, West Java, Central Java, and East Java), and 35.3% of participants lived outside Java Island (Sumatera, Kalimantan, Sulawesi, Bali, Papua, and Nusa Tenggara). On average, participants age was 36.2 years old ($SD = 6.7$). Just over a third of participants reported being able to meet their basic expenses despite relatively high levels of education. Detailed participant demographic information is presented in Table 1.

Procedures

Participants were recruited online through parental online networks, social media (*Instagram, Twitter, Facebook, and*

Fig. 1 Hypothesized model of relationships between various modifiable parent factors during pandemic COVID-19 associated with Child Adjustment

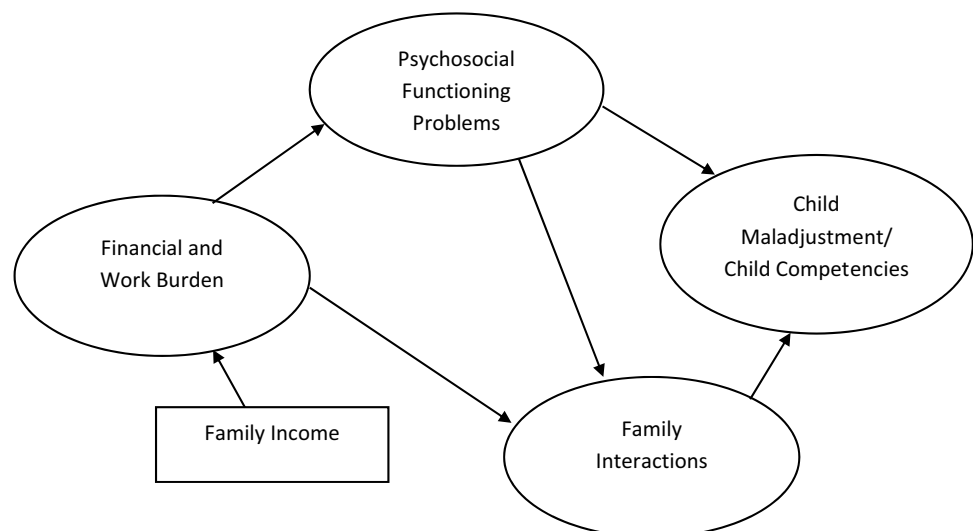


Table 1 Respondents' demographic characteristics

Variables	(N = 354)	
	n	%
Gender		
1. Male	78	22
2. Female	276	78
Marital status		
1. Married	346	97.7
2. Widowed	6	1.7
3. Divorced	2	0.6
Level of education		
1. Primary school or less	3	0.8
2. High school	82	23.1
3. Diploma/undergraduate	195	55.1
4. Post graduate degree	74	20.9
Occupation		
1. Government employee	55	15.5
2. Teacher and academic	122	34.5
3. Private sector	44	12.4
4. Businessman/businesswomen	35	9.9
5. Stay home mother/father	98	27.7
Family income		
1. IDR 0–5 million	235	66.4
2. IDR 5,01–10 million	63	17.8
3. IDR 10–50 million	52	14.7
4. IDR 50 million and up	4	1.1
Unable to meet essential expenses (things like food, the mortgage or rent payment, utility bills, child education or important medical care during the past 12 months)		
1. Yes	138	39.0
2. No	201	56.8
3. Not sure	15	4.2
Left over (Much money left over after paying the essential expenses like food, housing, utilities, child education, and medical care)		
1. Enough and free	56	15.8
2. Enough for essential needs	146	41.2
3. Not enough	152	42.9
Residence		
1. Jabodetabek	44	12.4
2. West Java	73	20.6
3. Central Java	69	19.5
4. East Java	43	12.1
5. Others (Sumatera, Kalimantan, Sulawesi, Bali, Papua, NTT)	125	35.3
Child's gender		
1. Male	150	42.4
2. Female	204	57.6
Child's school type		
1. Public school	103	29.1
2. Private school	251	70.9
	Mean	SD
Participant's age	36.2	7.3
Child's age	6.7	2.1

The Family Background Questionnaire [58]

IDR (Indonesian Rupiah); 1 USD = 14,500 IDR; 1 AUD = 1,100 IDR

WhatsApp groups). Participation in this study was voluntary and anonymous. Interested parents were directed to the study webpage, where they were provided with an information sheet and consent form to complete before starting the survey. The online survey was administered using Qualtrics software from August to November 2020. Ethical approval was obtained via The University of Queensland, Australia.

Measures

The Family Background Questionnaire [58] was administered to collect participant's demographic characteristics, including parent and child age and gender, family composition, marital status, level of education, employment status, and family income. Parents also indicated whether their child has a chronic illness or a physical or developmental disability. Participants in this study were also asked if they currently participate in parenting or therapy programs and we planned to exclude from analyses parents who answered affirmatively to this question, however, zero parents indicated current involvement in any therapy or interventions. Data from parents of a child with a chronic illness or disability were excluded in this study due to different parenting experiences that may affect the analyses.

The Family Well-being Questionnaires during the COVID-19 pandemic (FWQ) is a measure modified from the Families in Australia Survey: The Life during COVID-19 [59]. Modifications were made after obtaining permissions to make the survey more relevant to the Indonesian society context; therefore, questions irrelevant to the Indonesian context (e.g., superannuation, child-care arrangements, the government's allowances, and housework shared activities) were excluded. FWQ consists of 32 items, in three subscales to identify family work and financial burden, psychosocial functioning problems, and family interactions during the pandemic. These include: Financial and Work Burden (15 items; e.g., my workplace is temporarily closed, and I am not getting paid; my family and I have found it challenging to meet our basic expenses (food, house rent, electricity, water, school fee), high scores indicated a high level of financial and work burden experienced by parents during the pandemic. Psychosocial functioning problems consists of nine items measuring psychological problems experienced by parents (e.g., I feel socially isolated; I worry about my own health; I cannot access resources that help me manage my mental health (i.e., therapy, support groups), high scores indicated greater psychological problems experienced by parents due to the pandemic. Family Interactions consists of 8 items (e.g., I have better quality time with my family members; my family members have good interactions) and high scores indicated more positive interactions within family members, particularly parents and children. Each item is rated on a 5-point scale from strongly disagree (1) to

strongly agree (5). Subscale scores were obtained by summing the items. Internal consistency in this study is $\alpha = 0.79$ for Financial and Work Burden, $\alpha = 0.85$ for Psychosocial Functioning Problems, and $\alpha = 0.84$ for Family Interactions.

The Child Adjustment and Parent Efficacy Scale (CAPES; [60]) is a measure to assess child wellbeing. This instrument consists of 27 items that form two subscales: Child Maladjustment subscale (e.g., My child yells, shouts or screams; My child seems unhappy or sad) and Child Competency subscale (e.g., My child gets on well with family members; My child can keep busy without constant adult attention). The Child Maladjustment subscale consists of 19 items and the scores ranging from 0–76, which is made up of behavioural maladjustment score (0–64) (e.g., My child whines or complaints; My child hurts me or others (hits, pushes, scratches, bites)) and emotional maladjustment (0–12) (e.g., My child seems unhappy or sad; My child worries)—higher scores indicating greater child behavioural and emotional maladjustment problems. The child Competency subscale consists of eight items, and scores range from 0–32. Child competency refers to the ability of children to adjust to daily activities and express positive behaviours (e.g., My child follows the rules and limits; My child can do age-appropriate tasks by themselves), with a higher score indicating more positive behaviours) [61]. Participants rate each item on a 4-point Likert scale (0 = not true to 3 = true of my child very much). The total score of each subscale was obtained by calculating the total score of the items. The original instrument demonstrated good validity and internal consistency [61] and it has previously been used in studies of parents in Indonesia [62]. In this study, the internal consistencies were good for the Child Maladjustment subscale $\alpha = 0.95$ and the Child Competency subscale $\alpha = 0.85$.

Data Analysis

The data collected were cleaned before analyses, and missing values were dealt with using the impute missing values option. Correlational analyses were initially performed to examine the relationships between demographic characteristics, family financial and work burden, psychosocial functioning, family interactions, child maladjustment (behaviour and emotion), and child competencies.

In evaluating the associations between the constructs and conduct model estimation, *Structural Equation Modeling* (SEM) was conducted using IBM SPSS™ AMOS 27.0. The primary outcome of interest in our model is child maladjustment and child competence. Parent responses on their financial and work burden, psychosocial functioning, and family interactions were used as indicators of latent constructs included in the model. As family income is strongly associated with financial and work burden and psychosocial

functioning problems during the pandemic [54, 63], we added family income to the model.

The hypothesised model was tested using maximum likelihood estimation. Model fit was evaluated using the model $\times 2$ statistic, normed $\times 2$ statistic ($\times 2/df$), and model fit indices, including root mean square error of approximation (RMSEA), 90% confidence interval of RMSEA, comparative fit index (CFI), Tucker-Lewis index (TLI), adjusted goodness-of-fit index (AGFI) and standardised root-mean-square residual (SRMR). For the model to be considered an acceptable fit, recommendations are that $p < 0.05$ for the $\times 2$ test, the value of $\times 2/df$ should be between 1 and 2, RMSEA and SRMR should be < 0.08 , and CFI, TLI, and AGFI should be > 0.90 .

Results

Assumptions and Data Screening

Data were examined to check all assumptions for SEM and to examine the impact of potential outliers. Nine hundred and forty-nine participants had accessed the questionnaire, 493 had not completed any questions so no data is available for them. Of the remaining 456 participants, 29 participants answered the questionnaires related to their child with chronic illness or disabilities and 22 participants had answered a child with age older than 10 years old. Fifty-one participants only provided demographic information and were excluded, leaving 99 with 40% missing data which was imputed. Imputation technique was employed in this study by replacing each missing value with the mean of the

observed values [64]. This resulted in a final sample of 354 participants. The data were screened for univariate outliers and multivariate outliers to meet the criteria for further analyses.

Model Estimation and Evaluation

Descriptive and correlational analyses were performed using IBM SPSS 27.0. For all of the measures, items were reverse coded when necessary so that a high score indicates a high level of the characteristic being assessed.

Bivariate correlations between demographic characteristics, family financial and work burden, psychosocial functioning, positive family interactions, child maladjustment, and child competency are presented in Table 2. The results showed moderate to strong correlations among four demographic variables (i.e., level of education, occupation, and family income) and the Financial and Work Burden subscale. Level of education, occupation, family income, and child gender were associated with Psychosocial Functioning Problems. As predicted, the Financial and Work Burden subscale significantly correlated with Psychosocial Functioning Problems and Child Maladjustment. The Family Interactions subscale was associated with Child Competency and negatively correlated with Child Maladjustment, Psychosocial Functioning Problems, and Financial and Work Burden (Table 2).

Procedures

In analysing the models, all the latent constructs (composite scale scores) were modelled as reflective latent variables,

Table 2 Bivariate correlations between demographic characteristics, family financial and work burden, family functioning, family interactions, child maladjustment, and child competency (N=354)

Variables	1	2	3	4	5	6	7	8	9	10	11	12
Parent age (1)	1											
Parent gender (2)	-.10	1										
Child age (3)	.35**	-.05	1									
Child gender (4)	-.02	.08	.11*	1								
Level of education (5)	.13*	-.13*	.02	.01	1							
Occupation (6)	.17**	.11*	-.10	-.06	-.43**	1						
Family income (7)	-.09	-.16**	.08	-.04	.48**	-.05	1					
Financial and work burden ^a (8)	-.06	.03	-.06	-.08	-.23**	.21**	-.29**	1				
Family functioning problems (9)	-.05	.08	-.09	-.11*	-.14**	.14*	-.11*	.55**	1			
Family interactions ^a (10)	.06	-.01	.04	.02	.11*	-.11*	.11*	-.13*	-.17**	1		
Child maladjustment ^b (11)	-.10	.13*	-.13*	-.08	-.12*	.07	-.13*	.41**	.51**	-.31**	1	
Child competency (12)	.09	.04	.06	.06	.11*	-.03	.08	-.14**	-.08	.33**	-.27**	1

*Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed)

^aThe *Family Well-being Questionnaires during the COVID-19 pandemic* [59]

^bThe Child Adjustment and Parent Efficacy Scale (CAPES) [60]

i.e., changes in latent constructs were assumed to reflect changes in manifest variables. Our hypothesised models are described in Fig. 1. Model fit was evaluated by considering data from several fit indices to ensure that fit was evaluated fairly and without the temptation to select only the fit indices that provided the best interpretation for the model.

Model 1 acceptably fitted the data, $\chi^2(1372)=3.21$, $p < 0.05$, CFI=0.91, RMSEA=0.07; SRMR=0.06. Similarly, model 2 acceptably fitted the data, $\chi^2(896)=3.40$, $p < 0.05$, CFI=0.90; RMSEA=0.07; SRMR=0.07. The two models showed an acceptable fit to the data and are presented in Figs. 2 and 3. Parental psychosocial functioning problems and family interactions were mediators of the relationships between family income, financial and work burden, and child adjustment. As expected, families with low income experienced more significant problems in finances and work ($r = -0.26$, $p < 0.01$). Although these parents did not have

fewer family interactions, they reported more significant psychosocial functioning problems ($R = 0.40$, $p < 0.001$). This was associated with more child maladjustment ($r = 0.66$, $p < 0.001$) but not related with child competency. As predicted, parental psychosocial functioning problems were linked with family interactions ($r = -0.18$, $p < 0.01$), which then predicted child maladjustment ($r = -0.28$, $p < 0.01$) and child competency ($r = 0.19$, $p < 0.01$).

Discussion

The present study aimed to examine a model to explain how family income, financial and work burden, psychosocial functioning, and family interactions, linked to child maladjustment and child competency during the COVID-19 pandemic in Indonesia. As predicted, Indonesian families with

Fig. 2 Results for the structural equation model of relationships between various modifiable parent factors during pandemic COVID-19 associated with child maladjustment. To simplify the presentation, latent variable indicators and error terms are not shown. Standardized parameter estimates are presented; *p 0.05; **p 0.01; ***p 0.001

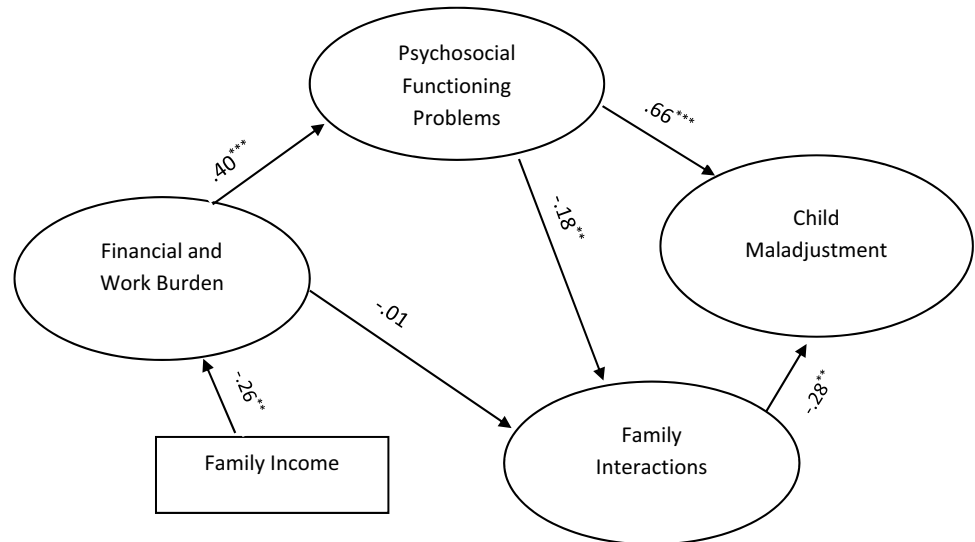
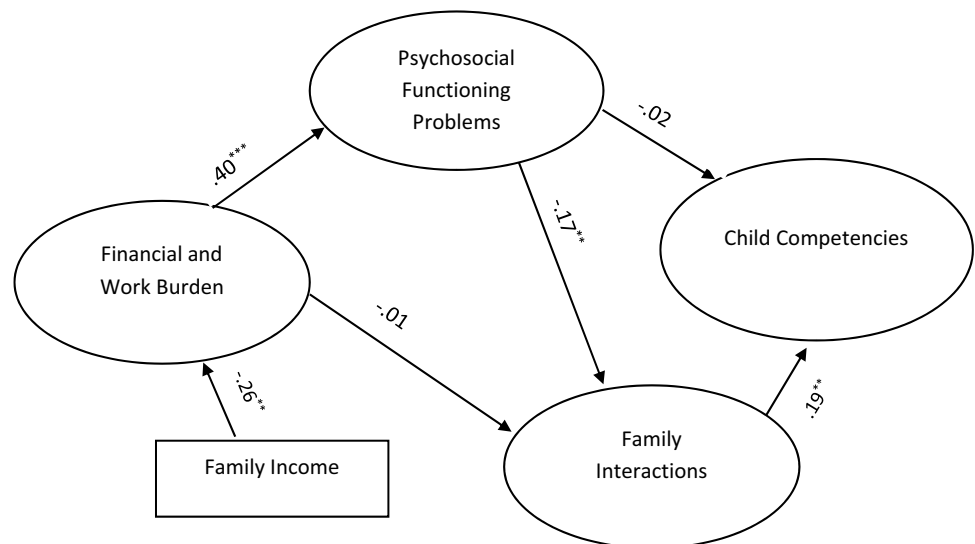


Fig. 3 Final model of relationships between various modifiable parent factors during pandemic COVID-19 associated with child competency. To simplify the presentation, latent variable indicators and error terms are not shown. Standardized parameter estimates are presented; *p 0.05; **p 0.01; ***p 0.001



low income reported experiencing financial and work burden during the COVID-19 pandemic. This finding is supported by Indonesian data [65], indicating that approximately 3.05 million employees have lost more than 80 per cent of their family income due to unemployment during the pandemic. In addition, as the majority of Indonesian society work in farming and service sectors with limited savings and financial security, we anticipated that families in Indonesia with low income would experience greater difficulty in financial and work. Many families, particularly those with low financial capacity, probably never expected to experience these significant cuts during this pandemic.

As was anticipated, we found that the Indonesian families with low income exposed to financial and work burden during the COVID-19 pandemic experienced more psychosocial functioning problems. The results support the role of family income and financial difficulties as significant factors related to mental health problems [28, 29, 53, 66]. The challenges associated with financial pressure economic recessions due to COVID-19 have implications for many caregivers. The pressure associated with immediate unemployment, income decline, financial insecurity, unmanageable debts, confinement-related stress due to pandemic (e.g., crowding, changes to the structure, and routine) [36, 54], as well as responsibility in caregiving with limited access to specific resources [12, 56, 57], is believed to be an acute threat to family wellbeing. In relation to the situation within the Indonesian cultural context, family well-being may be affected by the great financial pressure from single breadwinners and limited distribution of responsibilities in caregiving within the family due to patriarchal values.

We predicted that parental psychosocial functioning problems would link to child adjustment. In line with the hypothesis, findings indicated that Indonesian parents with psychosocial functioning problems reported greater child maladjustment. This result supported the numerous previous studies that found strong associations between parental mental health (e.g., stress, depression, anxiety mood) and poor child outcomes from infancy through to adolescence [47, 48, 67].

As hypothesised, Indonesian parents who reported psychosocial functioning problems also reported having fewer positive family interactions, which were associated with greater child problems and fewer child competencies. This is in line with previous findings that parental mental health problems resulting from the COVID-19 pandemic could affect daily caregiving activities to be less positive [28], which in turn can result in significant problems (e.g., aggressive, conduct problems, emotional and behavioural problems) among children [44, 53].

One of the main contributions of this study was to link parental psychosocial functioning problems to child outcomes. All were modelled in a framework of the impacts of

the pandemic on families and children's wellbeing. Results indicated that the relationship between parental psychosocial functioning problems and child outcomes is complex and not always based on direct effects [68] consistent with the *Family Stress Model*. While high levels of psychosocial functioning problems were shown to have a direct effect on child maladjustment, low levels of psychosocial functioning problems were not associated with child competencies. The indirect effect of psychosocial functioning problems and child competencies was via the interrelations with family interactions.

On the other hand, when parents' resilience in the adversity was associated with greater positive family interactions, this positive interaction emerged as a protective factor for children was associated with greater child competencies. Extensive studies have shown that positive interactions even in challenging environments were significantly associated with low child maladjustment and better child competencies (see [21, 37, 46, 69]) as found in this study. The ability of the parents to enjoy and appreciate the experience of the parent-child connections during the COVID-19 pandemic may result in less negative consequences on parental psychosocial functioning, and importantly, these have positive implications for child outcomes, specifically on reducing the risks of child maladjustment and increasing child competencies.

As discussed earlier, the COVID-19 health crisis and the resulting social and economic pressure have interacted with child and family wellbeing in Indonesia. As research into the current impacts and longer-term consequences of the pandemic gather pace, an emphasis on the heterogeneity of observed variables could be helpful to support the findings of the study. This research has focused on child and family wellbeing in Indonesia; many other factors could be incorporated into future research to enable a more nuanced understanding of the pandemic stage, life stage, disability and health status, household composition, marital relationships, ethnicity, and social support settings. The current study employed a limited sample size and employed a self-report questionnaire from a single informant that may result in a lack of generalisability and be subject to social desirability biases; large sample sizes with participants from more diverse demographic characteristics from Indonesian society and more objective symptoms measures should be considered in the future to provide more comprehensive and nationally representative findings. The present study involved parents of a child with a wide age range, with differing needs; future studies may include small age ranges of children to indicate how children at different stages of development are affected. For example, while all children would be exposed to increased parental stress, older children may also experience greater difficulties due to reduced peer interactions. In addition, this study mainly focuses on parent factors that influence child adjustment, although the

reciprocal relationship is also important to consider, with child behaviour, adjustment and wellbeing affecting parents. Finally, future research investigating the reciprocal relationships between parent and child factors during the pandemic is needed.

The findings of this study have implications for the development of policy and legislation concerning child and family wellbeing in Indonesia. It is clear that to reduce the impact of financial and work burden on family and child wellbeing; it is necessary for the Indonesian government to take account of the additional unpaid care burden placed on children and families with low income during the COVID-19 pandemic. Providing "the pandemic aids" which include providing food packages by local government, "pandemic allowance" for low-income families by the Ministry of Social Affairs, "electricity waiver" by the *National Electricity Company*, and salary waiver for low-income employees by the Ministry of Manpower [70] may help families with a significant financial crisis in dealing with the current situation. Besides, given that the pandemic has affected families and children's mental health, this could be an opportunity for systemic changes that enable mental-care work to be valued and accounted for assisting families and children.

Implementing structured parenting programs that promote positive parenting strategies may reduce child maladjustment and promote child competency by improving family interactions and decreasing psychosocial functioning problems. Such parenting programs are effective in prevention and management of a range of child problems, to improve the capacity of parents, and to reduce parental depression and stress in parenting [71, 72].

In addition, as a positive parent–child relationship through family interactions emerged as a key factor in supporting child adjustment during the pandemic, helping families to have good quality interactions and communication may ultimately facilitate better child mental health [see. 73–76]. Thus, interventions focusing on fostering relationships and communication could be effective to improve the parent–child relationship and promote child adjustment and to support families in Indonesia during and after the pandemic.

Summary

The present study conducted in Indonesia aimed to examine the effects of family factors on child outcomes during the pandemic. A total of 354 parents with at least one typically developing child between 2 and 10 years completed an online survey. Participants were administered self-report questionnaires to measure a set of associated family variables, including family income, psychosocial functioning, and family interactions, and variables associated with child

maladjustment and child competencies. Results showed that psychosocial functioning and family interactions emerged as mediators between family income, financial and work burden, and child adjustment. Indonesia families with low income and financial and work burden were much more likely to report psychosocial functioning difficulties—parents with psychosocial functioning problems perceived fewer positive family interactions and more child maladjustment during the pandemic. Hence, differences in family functioning in response to the pandemic have implications for maladjustment and competencies in children. These findings must be taken into account when designing interventions to support child and family wellbeing during the pandemic in Indonesia.

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Declarations

Conflict of interest The authors declare that all of us have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Research Involving Human Participants and/or Animals This study has been approved by the Research Ethic Committee of The University of Queensland, Australia.

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