

ORIGINAL ARTICLE

Analysis of Interactions and Psychosocial Responses in Children and Parents With Covid-19 During Quarantine / Isolation

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ABSTRACT

Introduction: Covid-19 management efforts for all ages are public health management. Quarantine/isolation was carried out according to the clinical status of people with Covid-19. Various efforts have been made to prevent its spread. One of these activities was quarantine/isolation. Isolation aimed to reduce the risk of transmission by separating sick individuals from those around them, so parents who experienced Covid-19 and were isolated would experience separation from their children and family members. It was important to understand psychosocial interactions and responses during quarantine/isolation to provide an overview of related cases that required a quarantine process.

Materials and methods: This study analyzed interactions and psychosocial responses in children and parents with Covid-19 during quarantine. This type of research was analytic with a cross-sectional approach. Respondents totaled 82 people with a purposive sampling technique. The instruments used were the Parent-Child Interaction Scale Infant - Toddler (Brigance III) and the Preschool Pediatric Symptom Checklist. The analysis used chi-square with a value of $\alpha = 0.05$. **Results:** Hypothesis testing obtained the Pearson Chi-Square value that there was a relationship between children's interactions and psychosocial responses while parents and families were undergoing isolation or quarantine due to Covid-19 (p -value 0.020; $\alpha = 0.05$). This demonstrated the importance of interaction between children and parents during isolation to maintain a positive psychosocial response. **Conclusion:** Interactions between children and parents occurred in harmony with children's psychosocial responses as a form of family function and the ability to adapt the family environment to the health conditions of family members.

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INTRODUCTION

Coronavirus Disease (Covid-19) is an infectious disease of the respiratory system caused by the SARS-CoV-2 virus type. Covid-19 is spreading rapidly, causing global pandemic conditions. The spread of SARS-CoV-2 occurs through droplets (small droplets) of respiratory secretions produced when an infected person breathes, talks, coughs, and sneezes to others around him.

The incidence of Covid-19 in the world until early February 2021 was 105 million cases and 2.31 million deaths. The incidence of Covid-19 in Indonesia is 1,157,837 confirmed cases, 176,291 active cases, and 31,556 deaths. The incidence of Covid-19 in West Java obtained a total of 176,000 cases and 3,971 new cases

in early February 2021, the incidence of new cases is the highest in Indonesia (1)(1).

Transmission of Covid-19 can be experienced by all individuals in various community environments, including the home. Transmission of Covid-19 at home can occur due to exposure of family members who experience Covid-19 to other family members. Family is the closest environment for a child. The family environment is where the child lives and serves as a provider of the child's basic needs, especially the needs for growth and development. If the family environment experiences some change due to Covid-19 disease, it can affect growth and development in children.

The Indonesian Ministry of Health has established the management of public health activities carried out against cases. One of these activities is quarantine/isolation. Isolation is the process of reducing the risk of transmission through efforts to separate sick individuals who are either laboratory-confirmed or have symptoms

of Covid-19 from the wider community. Isolation can be done inside the house or outside the house. Parents who experience Covid-19 and carry out isolation will experience separation from their children and family members. Quarantine in adults generally has negative psychological effects including confusion, anger, and post-traumatic stress (2). Social distance and separation from parents who are experiencing Covid-19 disease can increase loneliness in children and adolescents. Loneliness is the painful emotional experience of a mismatch between actual and desired social (3).

Research conducted on 63 studies of 51,576 respondents found a clear relationship between loneliness and mental health problems in children and adolescents. Loneliness was associated with future mental health problems up to 9 years later. The mental health problem was depression. In addition, mental health problems after isolation and quarantine in children who had experienced isolation or quarantine were five times more likely to require mental health service input and experience higher levels of post-traumatic stress. Social distancing measures are currently in place for children as Covid-19 may cause possible post-traumatic stress. These results are consistent with unpublished preliminary data emerging from China during the Covid-19 pandemic, where children and adolescents aged 3 to 18 years typically exhibited anxiety-manifesting behaviors, including attachment, fear of asking questions about the pandemic, and irritability (4).

Isolation/quarantine measures for Covid-19 victims have been carried out globally, including in Indonesia since the outbreak of the pandemic. Isolation has had a healing effect on Covid-19 patients. Changes in interaction between children and their parents who are in isolation/quarantine occur within the family. The impact on the psychosocial response of children of family members with Covid-19 in Indonesia is unknown. Changes in psychosocial interactions and responses can affect growth and development in children.

The purpose of this study is to analyze the interactions and psychosocial responses in children parents and families of victims of Covid-19 undergoing isolation and quarantine. The condition affects children when their parents have to be isolated, so appropriate health intervention efforts are needed to optimize psychosocial development.

MATERIALS AND METHODS

The research method used is analytical research with a cross-sectional approach. The respondents in this study were parents of people who survived Covid-19 and had children aged 0-36 months, a total of 82 people. Samples are taken using purposive sampling techniques. Parents and adult family members are diagnosed with Covid-19 based on either swab or PCR support screening; 2).

Parent and adult members of the family who have Covid-19 are in isolation or quarantine. Respondents are scattered all over Cirebon III. The data is collected through surveys using questionnaires. The surveys are distributed directly to respondents face-to-face. The instruments used are Scale Interaction Parent-Child Infant - Toddler (Brigance III) (5) and Checklist Pre-School Pediatric Symptom(6). Total PPSK scores have strong consistency (Primary Care, alpha = 0.88; Referral Clinic, alfa = 0.92; and Replication alpha= 0.86) and reliability values $\alpha = 0.75$. Model 4 factors based on EFA in PPSK also show adequate matches (RMSEA=.054, CFI = 0.977, TLI =.972). Research hypothesis test using Pearson correlation values with a value of $\alpha = 0.05$.

RESULTS

The study was conducted on children and their parents or families of Covid-19 victims who were isolated or quarantined in Region III Cirebon, West Java Province, Indonesia. The results of the univariate analysis were conducted with frequency distribution and descriptive statistics. The data presented consists of the characteristics of parents or adults who survived Covid-19, the location of isolation or quarantine, the length of time spent in isolation, and the area of residence.

Table I shows the characteristics of respondents, Respondents from parents and families who survived Covid-19 as much as 47.6% were fathers. 84.1% were isolated or quarantined for two to four weeks, while 51.2% were from the Cirebon district.

Table I: Characteristic of respondent

Characteristic	Amount (n)	Percentage (%)
A. Families experiencing COVID 19		
1. Father	39	47.6
2. Mother	28	34.1
3. Other Family members	9	11.0
4. Father and Mother	6	7.3
Total	82	100
A. Isolation or quarantine location		
1. At home and still living with other family members	36	43.9
2. In the home environment but living separately from other family members	13	15.9
3. Hospitalized	17	20.7
4. At another family/other person’s house	13	15.9
5. In other places (hotels, dormitories and others)	3	3.7
Total	82	100
B. Length of isolation or quarantine		
1. < 2 weeks	9	11.0
2. 2-4 weeks	69	84.1
3. > 4 weeks	4	4.9
Total	82	100
C. Area of Origin		
1. Ciebon Regency	42	51.2

CONTINUE

Table I: Characteristic of respondent. (CONT.)

Characteristic	Amount (n)	Percentage (%)
C. Area of Origin		
2. Cirebon city	20	24.4
3. Kuningan Regency	14	17.1
4. Brebes Regency	5	6.1
5. Majalengka Regency	1	1.2
Total	82	100

Table II shows the gender analysis of parents or family members who are ill with interactions and psychosocial children. The results show that when the ill is the mother, it causes inappropriate interactions in 54.8% of 42 children and has psycho-social changes in 47.1% of 51 children.

Table II.: Cross Tabulation of Child Interactions and Child Psychosocial Based on Gender While Parents of Covid-19 Survivors Undergo Isolation or Quarantine

Variable	Gender			
	Female		Male	
a. Child interactions	N	%	N	%
In accordance	7	17.5	33	82.5
Not suitable	23	54.8	19	45.2
Total	30	36.6	52	63.4
a. Child psychosocial				
Not disturbed	6	19.4	25	80.6
Disturbed	24	47.1	27	52.5
Total	30	36.6	52	63.4

Table III shows cross-tabulation of Child Psychosocial Interactions and Responses Based on Isolation or Quarantine Location used by families of Covid-19 victims, showing that 69.1% of children's interactions are appropriate for their parents who are undergoing isolation or quarantine at home and living with other family members. Meanwhile, 61.4% of the child's psychosocial responses are also uninterrupted in parents who have undergone isolation and quarantine in the home and continue to live with other members of the family.

Table III: Cross tabulation of Interaction and Psychosocial Responses of Children Based on the Isolation or Quarantine Location Used by Families of Covid-19

Variable	Isolation or Quarantine Location									
	A		B		C		D		E	
	N	%	N	%	N	%	N	%	N	%
Child interactions										
In accordance	29	69.1	3	7.1	6	14.3	2	9.5	0	0
Not suitable	7	17.5	10	25	11	27.5	11	22.5	3	7.5
Total	36	43.9	13	15.9	17	20.7	13	15.9	3	3.7
Child psychosocial										
Not Disturbed	19	61.4	2	6.4	5	16.1	5	16.1	0	9.6
Disturbed	17	33.3	11	21.6	12	23.5	8	15.7	3	5.9
Total	36	43.9	13	15.9	17	20.7	13	15.9	3	3.7

Table IV shows a cross-tabulation of interactions and psychosocial responses of children based on the duration of isolation or quarantine. Families and Parents of Covid-19 Survivors show that the majority of the time between 2 and 4 weeks is quartered at 84.1%. Children's interactions in the range are majority less appropriate at 88% of 42 less suitable children. A total of 67% of 51 children with the disorder are in the time range.

Table V shows cross-tabulation results of hypothetical

Table IV: Cross tabulation of Interaction and Psychosocial Responses of Children Based on the Length of Isolation or Quarantine Undergone by Parents and Families of Covid-19

Variable	Length of Isolation or Quarantine					
	< 2 weeks		2-4 weeks		> 4 weeks	
	N	%	N	%	N	%
Child interactions						
In accordance	8	20	32	80	0	0
Not suitable	1	2	37	88	4	10
Total	9	11	69	84.1	4	4.9
Child psychosocial						
Not Disturbed	8	9.9	23	33	0	0
Disturbed	1	100	46	67	4	4.9
Total	9	11	69	84.1	4	4.9

testing on interactions and psychosocial responses of children when parents and families of Covid-19 victims are undergoing isolation or quarantine (N = 82), showing that 51% of children interacted properly and the psycho-social response was disrupted when the parents and their families undergo isolation/quarantines because of Covid-19 was 62.2%. The test hypothesis obtained a Pearson Chi-Square value that there was a relationship between interactions of children and psycho social responses when the parent and family underwent isolation and quarantine due to Covid-19 (value p 0.020; $\alpha = 0.05$). This shows that the interaction of the child is related to his psychosocial, it is supported by an R correlation figure of 66% that indicates that the interaction between the child with the parent affects the child's psychosocial.

DISCUSSION

Table V: Cross tabulation of the Hypothesis Test of Interaction and Psychosocial Responses of Children During the Parents and Families of Covid-19

Variable	Child psychosocial				α	P value
	Not Disturbed		Disturbed			
	N	%	N	%		
Child interactions						
In accordance	29	72.5	11	27.5		
Not suitable	2	5	40	95	0.05	0,020
Total	31	37.8	151	62.2		

The family is the first environment that has a variety of influences on the child. Quarantine interventions and social segregation for victims of Covid-19 are effective

ways to prevent transmission but these experiences can have an impact on the well-being of the community (7). The results of this study show appropriate and positive parent-child interactions when parents/families undergoing isolation or quarantine keep the child's psychosocial uninterrupted. When isolation is done at home with the child, this makes the interaction go well, but when isolating is done separately then the interaction undergoes many changes where interactions are done only through social media(8).

Pandemics appear to have a more negative impact on mothers raising their children(6). Children have low personal resources to cope with many of the changes that the pandemic has brought into their lives (9). The process of isolation as the Covid-19 Pandemic forces families to limit physical contact with the people they love and affects the perception of closeness and affection of some family members(10). Particularly, parents experience increased stress and vulnerability of parents. In addition, children are also affected by pandemics at the psychological, social, and family levels (11).

The study of ecological systems assumes that humans evolve through bidirectional interactions in concentrated ecosystems. Microsystems involve ongoing everyday interactions, including parent-child relationships(5). The perspective of people in the environment takes into account all the influences of pandemics on individuals, interactions, and support, as well as the impact of existing environments such as threats and social separation that lead to psychosocial consequences(12). The communities in the Cirebon III region have traditional family characteristics where they adhere to the type of extended family, which in one family consists of nuclear families, there are servants, and other family members such as grandparents, uncles, and aunts. In this traditional family, children are used to living with other adult family members who meet every day and help nurse them. It affects the psychological abilities of children, so children can easily adapt to different situations. Children have a sense of comfort, calmness, and confidence in interacting with anyone and in any circumstances. Social interaction is necessary and should be done to help children learn cultural values, social norms, or socially accepted behavior(13).

When one or both parents are isolated/quarantined because of Covid-19, there will be a balance of roles of new parents that may differ in father-child relationships and mother relationships. While the involvement of fathers in parental responsibilities and time spent with children increases, mothers continue to spend more time with their children and carry out more parenting responsibilities (14). During Covid-19, social segregation required individuals to be quarantined and isolated from the people they normally live with. Therefore, parents with Covid-19 and their children tend to isolate themselves in their own homes and live together. It is

assumed that there will still be social closeness between family members during the pandemic, the importance of emotional regulation among family members is a must because the emotional state of each family member can affect other family members. Two studies with adults who did not meet the criteria for participation in the study found that the level of concern of family members about the pandemic led to adults' levels of concern about the epidemic(15). Another finding suggests that family members' emotions affect each other during pandemics(16). Parents' fears of pandemics and symptoms of post-traumatic syndrome (PTSD) were associated with fears and PTSD symptoms in their children, and children also revealed that communication from a caretaker during a pandemic can cause anxiety, fear, and confusion (10,17) The application of isolation for parents or adult family members who are sick is not only during pandemic, because some conditions cause isolation. These conditions also interfere with the poses of interaction between the body and the child which can affect the psychosocial development of the child. solution is mostly done in cases with respiratory impairment (18–20).

CONCLUSION

Quarantine interventions and social segregation are effective ways to prevent and manage Covid-19 from surviving parents to their children, family members, and others. Isolation behavior has a strong influence on the interaction between the child and the parent, which affects the psychosocial development of the children.

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