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Original Article

Child-care and feeding practices of urban middle class working and non-working Indonesian mothers: a qualitative study of the socio-economic and cultural environment

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Abstract

The double-burden problem of malnutrition in many developing countries is occurring against a backdrop of complex changes in the socio-economic and cultural environment. One such change is the increasing rate of female employment, a change that has attracted researchers to explore the possible relationships between maternal employment and child nutritional status. The present study employs a qualitative approach to explore the socio-economic and cultural environments that may influence child-care practices in families of working and non-working mothers with children of different nutritional status and types of domestic caregiver. It was conducted in *Depok*, a satellite city of *Jakarta*, Indonesia, and was designed as a case study involving 26 middle class families. The children were categorized as underweight, normal weight and obese, and caregivers were grouped as family and domestic paid caregivers. Twenty-six mothers and 18 caregivers were interviewed. Data were analysed by the constant comparative approach. The study identified five emerging themes, consisting of reason for working and not working, support for mother and caregivers, decision maker on child food, maternal self-confidence and access to resources. It confirmed that mothers and caregivers need support and adequate resources to perform child-care practices regardless of the child nutritional and maternal working status. Further research is required into how Indonesian mothers across a range of socio-economic strata can have increased options for quality child-care arrangements and support with child feeding. Additionally, this paper discussed the importance of enhanced dissemination of health information addressing both child underweight and obesity problems.

Keywords: child care, child nutrition, feeding practices, maternal employment, urban Indonesia.

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Introduction

The double-burden problem of malnutrition in developing countries has been well documented (Prentice 2006; Tanumihardjo *et al*. 2007). The prevalence of overnutrition is now higher in some low-income countries than in some high-income countries (Popkin 2002, 2003) and rising not only for adults but also children (Martorell 2002; Lobstein *et al*. 2004). Conterminously, these countries are facing a high prevalence of child undernutrition (de Onis & Blossner 2000).

The increasing rate of women's participation in the workforce in all parts of the world (Duffield 2002) has attracted researchers to explore further the possible relationship between maternal employment and child nutritional status, which has resulted in inconclusive findings (Leslie 1988; Lamontagne *et al*. 1998; Kulwa

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et al. 2006; Nakahara et al. 2006). In a review dated back more than two decades, Leslie has concluded that there was no consistent evidence of a negative effect of maternal employment on child undernutrition. Access to and quality of substitute child care, access to food including affordable food prices as well as the health and nutrition knowledge of caregivers were suggested as the mediating factors in the complex relationship between mother employment and child nutrition (Leslie 1988). Accordingly, recent studies from developing countries also found that maternal employment has no adverse effect on a child's health when the child receives adequate care from alternate caregivers (Lamontagne et al. 1998; Kulwa et al. 2006; Pierre-Louis et al. 2007).

Recently, with the alarming rate of child overnutrition, researchers have also turned their attention to the relationship between maternal employment and child obesity. The widespread changes towards consumption of energy-dense diets and sedentary lifestyles have been identified as proximal contributing factors for increased obesity prevalence, but attention has also been placed on possible distal factors including the increasing numbers of dual-earner households with more mothers joining the workforce (Anderson et al. 2003). The researchers argued that the shift in dietary pattern and physical activities may be due, in part, to alternate caregivers offering high-calorie foods, parents providing prepared or fast food, a lack of time to supervise children during snack times and children spending more time indoors in the absence of parents, thereby decreasing their opportunity to engage in physical activities (Anderson et al. 2003; Hawkins et al. 2008). Furthermore, the researchers found that the association between maternal employment and childhood obesity was only evident in affluent families and was only true when the mothers' weekly working hours were long (Anderson et al. 2003; Hawkins et al. 2008; Brown et al. 2010). These findings support the hypothesis that it is not the lack of money that causes the young children to be deprived of healthy food and good physical activities but the lack of time spent in parent-provided child care, which results in increasing food consumption and sedentary activities (Hawkins et al. 2008).

Despite more women entering the workforce, studies have found that women in developed countries continue to have a greater share of household work compared with men, especially in households with children (Shelton 1990; Jacobs & Gerson 2004). Some studies in developing countries have found similar situations (Popkin 1980; Jain & Choudhry 1993). While decreased maternal time for child care has been associated with malnutrition, input from other family members as alternate caregivers can have a compensatory effect (Tucker 1989; Pierre-Louis et al. 2007). This effect works through improvement in the quality and quantity of food intake and through the sharing of domestic tasks in the household (Nakahara et al. 2006). However, researchers have also raised the issue that it was not only working mothers who needed child-care support but also non-working mothers, who may be unable to provide adequate child care due to a high burden of domestic chores (Bianchi 2000; Nakahara et al. 2006).

This present study aims to explore the socio-economic and cultural environments that may influ-

Key messages

- In an Indonesian urban setting, child-care work is increasingly undertaken by young untrained domestic paid caregivers.
- Both working and non-working mothers are at risk of having malnourished children when they receive inadequate child-care support from either family or non-family members.
- This research highlights the need to conduct further studies on the type of support that suits the need of both working and non-working mothers in ensuring adequate child-care practices for their children.
- Policy responses need to address the requirements for an increased choice of quality child-care arrangements for working Indonesian mothers in an urban context as concerns are raised regarding competing time commitments, mothers' workload and availability of quality child-care providers.

ence child-care practices in families of working and non-working mothers who have young children with different nutritional status and different types of domestic caregiver. The study was conducted in Depok, a satellite city of Jakarta, Indonesia, among middle-class families. Indonesia provides an excellent setting for the study, as it is one of the countries facing the double burden of malnutrition as well as an escalating rate of women in paid employment (Statistics Indonesia & Macro International 2008). Moreover, in urban areas of Indonesia, mothers are forced to seek domestic paid caregivers (DPCs) to look after their children while both parents are working. Child-care centres are rarely available, and little help can be expected from extended family members. Thus, this study investigated this specific cultural setting and the improvement in the socio-economic status of households that may result in changes to the support received by mothers. This study has implications for nutrition and child health policy makers and health care workers in urbanized settings in Indonesia in addressing child-care support requirements for both working and non-working mothers.

Materials and methods

The study was conducted using a case study approach, as defined by Creswell (2007), with nine different groups of cases. The cases were grouped based on the child nutritional status, maternal employment status, and type of caregivers (Table 1). A case study allows researchers to make comparisons between cases, thus providing a complete picture of the situation and increases the validity of the study. The study was conducted at newly established residential housing estates, which attract middle-class families. The residential location was used as a proxy indicator for socio-economic status. Thirteen residential housing estates were visited in the city of Depok. Study participants were recruited from the list of the child

Table 1. The characteristics of study participants

Characteristics	Working mother with DPCs			Working mother with family caregiver			Non-working mother			Total ($n = 26$)
	UW	NW	O	UW	NW	O	UW	NW	O	
	($n = 3$)	($n = 4$)	($n = 3$)	($n = 3$)	($n = 2$)	($n = 3$)	($n = 3$)	($n = 3$)	($n = 2$)	
Sex of child										
Boy	1	2	1	2	1	2	0	1	1	11
Girl	2	2	2	1	1	1	3	2	1	15
Mother's age (year)*	28–36	29–35	29–35	29–39	28–31	29–35	25–31	33–35	30–50	25–50
Mother's education										
High school	0	0	0	0	0	0	0	0	1	1
Undergraduate	3	3	2	3	1	3	3	3	1	22
Postgraduate	0	1	1	0	1	0	0	0	0	3
Total household income (IDR)										
2.5–5 million	2	0	1	1	0	2	2	3	0	11
>5–10 million	1	3	1	1	0	1	1	0	2	10
>10–20 million	0	1	1	1	2	0	0	0	0	5
Family type										
Nuclear	2	3	3	0	0	1	2	1	2	14
Extended family	1	1	0	3	2	2	1	2	0	12
Caregiver's age (year)*	19–46	17–51	13–40	50–55	40–47	40–60	–	–	–	13–60
Caregiver's education										
No school	1	0	1	0	0	0	–	–	–	2
Elementary school	0	2	1	2	0	0	–	–	–	5
High school	2	2	1	0	2	2	–	–	–	9
Undergraduate	0	0	0	1	0	1	–	–	–	2

NW, normal weight; O, obese; UW, underweight; DPCs, domestic paid caregivers; IDR, Indonesian Rupiah. *(Minimum-maximum).

weight monitoring programme in the Integrated Health Post (*Posyandu*) in each housing estate. The *Posyandu* is run by health volunteers, and the main activities are child weighing and growth monitoring programmes. The children chosen were those who met the criteria of 1–3 years of age, normal birthweight, no congenital abnormalities or chronic illnesses and no severe allergies. Those with weight-for-age z-scores (WAZ) below –3 and above +3 were excluded from the study. Parents of those children who met the criteria were approached and provided with an explanation of the study purposes. Those who gave their consent were then asked about their time availability for interviews. Mothers were the main study participants; alternate caregivers were included when they provided their consent to join the study. At the commencement of their enrolment, children were weighed to determine in which group of nutritional status they belonged. Their weights and heights were then converted into WAZ scores using WHO Anthro (World Health Organization 2009). Those whose WAZ were less than –1, between –1 and +2 and above +2 were grouped as underweight (mild and moderate), normal weight and obese, respectively (World Health Organization 1995; Roine *et al*. 2010).

Each mother and caregiver was interviewed two to five times depending on their time availability, with a total of 77 interviews being undertaken. The interview schedule included questions pertaining to daily child-care practices, maternal working characteristics, child-care arrangements and support, type and level of mother's engagement in child-care activities, and support for domestic work. The interviews were audio-recorded and transcribed verbatim by a trained transcriber. The first author (AR) listened to all the tapes after the transcription process and checked the consistency and completeness of the transcripts. Data analysis was conducted with a constant comparison approach (Glaser & Strauss 1967; Glaser 1992; Boeije 2002). All transcripts were read thoroughly, and open coding was applied to each piece of transcript. Emergent categories were coded, and these coded sections of the transcripts were compared. For the group of non-working mothers, the comparisons were carried out initially among mothers within the same group of child nutritional status and then compared with those non-working mothers whose children were of different child nutritional status. For the group of working mothers, first comparisons were made among mothers within the same type of caregiver and child nutritional status, and then the interviews from caregivers were added and the mother and caregiver's transcripts were compared to see whether the caregivers shared similar perspectives. The next comparisons for the group of working mothers were conducted between dyads of mother–caregiver within the group of child nutritional status. Then, dyads of mother–caregiver were compared among those with different type of caregivers. The last comparisons were carried out to compare themes that emerged from each group of working and non-working mothers.

The validity of the study was addressed in two different ways: first by applying the constant comparative method for data analysis, and second by analysing and searching for deviant cases (Silverman 2010). The researchers used deviant case analysis to continuously question the emerging themes. For instance, when a single case showed the family caregiver was not the decision maker in daily child food intake, this particular deviant case was analysed further to understand whether the theme needed to be modified. Deviant cases were also sought for during data collection. For example, when non-working mothers reported a lack of support from their husbands, researchers tried to find a non-working mother who lived within an extended family to see whether such support was available from other family members. Another occasion was when a high level of maternal dependency and low maternal confidence was observed in working mothers who had maternal or paternal grandparents as the caregivers, working mothers with another type of family caregiver were sought in this instance.

The study received ethical clearance from the Behavioral and Social Sciences Ethical Review Committee of the University of Queensland, Australia[1] and the Committee of the Medical Research Ethics of the Faculty of Medicine, University of Indonesia, Jakarta.[2]

[1]Number: 2008001087.

[2]Number: 294/PT02.FK/ETIK/2008.

Result

Characteristics of the study participants

All mothers were married and co-resided with their partners ($n = 26$). Mothers' age ranged from 25 to 50 years old (Table 1). All working mothers had at least attained an undergraduate education, while there was one non-working mother who was a high school graduate. Eight mothers were non-working mothers and 18 mothers worked outside the home as private employees ($n = 13$), teachers ($n = 2$), lecturer ($n = 1$), midwife ($n = 1$), and civil employee ($n = 1$). Their total family income ranged from 2.5 million to more than 20 million Indonesian Rupiah[3] (IDR[3]) per month, which was 2–15 times higher than the average income of an Indonesian worker (BPS-Statistics Indonesia 2009). In the households with non-working mothers, there was no family with income of more than 10 million IDR monthly. All alternate caregivers were female ($n = 18$), eight of them were extended family members such as maternal grandmother ($n = 4$), paternal grandmother ($n = 1$), father's sister ($n = 1$) and other female relatives ($n = 2$), and 10 were DPCs. The age of family caregivers ranged from 40 to 60 years old, and their educational background varied from elementary school to university diploma. The age of DPCs ranged from 13 to 51 years old with educational background of no schooling to senior high school. The children in this study consisted of 11 boys and 15 girls.

Emerging themes

The emerging themes presented are the ones that have been compared within and between groups (Table 2). Similarities and differences are not always presented between the nine different case groups; instead, they are presented according to the emerging themes. For instance, the theme of 'Decision maker in child's food and food preparation' is not presented to compare differences and similarities in all nine cases, but it is presented to show differences within the groups of different types of caregivers. In this theme, the differences within these groups occurred because of differences in the family structure and current employment duration of the DPCs.

[3]Around US$270–2150 (average exchange rate in year 2009–2010).

Reason for working and not working: feeling secure

The interview data revealed an interesting difference regarding the reason for choosing not to work between the five cases of mothers of underweight and obese children on the one hand, and the three mothers of normal-weight children in the group of non-working mothers. Four of the five mothers of underweight and obese children were all, at some previous time, working mothers. All of them (including the one who had never worked) shared a hope of once again becoming working mothers. They all said that they felt obliged to stay at home under their current circumstances. This group of mothers shared that they did not want their children to be taken care of by a DPC. In the absence of family members able to act as alternate caregivers, they described that they had no acceptable alternatives for child-care arrangements:

> I do want to go back to work. It seems if I stay at home I don't develop myself, I become forgetful and many more (things). If I work, I'll get something, I get to know things happen outside home compared to when I only stay home with the kids. (Non-working mother of an underweight child, had two children, aged 31)

The above mother also shared that her husband had forbidden her to work, citing the reason of no family caregiver being available to take care of their children. Her husband did not want a DPC as a caregiver and the mother, even though she wanted to go back to work one day, mentioned that she did not want her children to be taken care of by a DPC. Another mother mentioned a similar opinion:

> Sometimes the feeling of wanting to go back to work comes, but when I see her (the child) I feel sorry for her. It's also difficult to find someone to take care of her. I don't trust a maid (DPC), so I take care of her the best I can. No family member to supervise, no one is near, the situation is not possible. (Non-working mother of an underweight child, had two children, aged 30)

Table 2. Summary of themes in each case of working and non-working mothers

Themes	Working mothers						Non-working mothers		
	DPC			Family caregiver					
	UW	NW	O	UW	NW	O	UW	NW	O
	(*n* = 3)	(*n* = 4)	(*n* = 3)	(*n* = 3)	(*n* = 2)	(*n* = 3)	(*n* = 3)	(*n* = 3)	(*n* = 2)
Reasons for working/not working: *feeling secure*									
Had no acceptable alternatives of caregiver/did not want DPC/a family caregiver was not available							✓ (3)		✓ (2)
Mother wanted to stay home/children were best taken care of by their own mothers								✓ (3)	
Motherhood and employment could occur concurrently when appropriate caregiver is available (family or long-standing DPC)/mother felt secure leaving child at home	✓ (2)	✓ (1)		✓ (3)	✓ (2	✓ (3)			
Mother worried about child-care matters but must work to provide additional family income	✓ (1)	✓ (3)	✓ (3)						
Support for mother and caregiver: *tiredness*									
Mother/caregiver did not receive adequate support	✓ (3)			✓ (2)			✓ (3)		
Mother/caregiver received adequate support from the father/mother, other family members, or a housemaid		✓ (4)	✓ (3)	✓ (1)	✓ (2)	✓ (3)		✓ (3)	✓ (2)
Decision maker on child's food and food preparation: *maternal involvement, dependency and trust*									
An extended family member arranged child's menu and cooked child's food/mother and a family member purchased the food together (lived within an extended family)								✓ (2)	
Mother decided and cooked child's food (lived within nuclear family and extended family)						✓ (1)	✓ (3)	✓ (1)	✓ (2)
Family caregiver decided and prepared child's food				✓ (3)	✓ (2)	✓ (2)			
Family with a long-standing DPC: the DPC decided and cooked child's food; mother was involved in providing snacks, milk and fruit, and occasionally shopped for protein-source food	✓ (2)	✓ (1)							
Family with a new DPC: mother decided, purchased and stored child's food in the fridge; mother cooked or supervised caregiver when she cooked	✓ (1)	✓ (3)	✓ (3)						
Maternal self-confidence: I can't cook									
Mother felt that caregiver knew better in child-care matters than herself/'*I can't cook*'				✓ (3)		✓ (2)			
Mother confidently discussed child-care matters/mother tried to manage everything the best she could	✓ (3)	✓ (4)	✓ (3)		✓ (2)	✓ (1)	✓ (3)	✓ (3)	✓ (2)
Access to resources: *street vendors vs. grocery stores*									
Mother shopped at street vendors and occasionally at grocery stores						✓ (1)	✓ (3)	✓ (3)	✓ (2)
Mother had difficulties going to grocery stores on weekdays because of transportation problems							✓ (3)		
Family caregiver shopped for raw food at street vendors/mother provided snacks, milk and sometimes fruit from the grocery stores				✓ (3)	✓ (2)	✓ (2)			
Family with long-standing DPC: the DPC purchased raw food at street vendors on daily basis/mother purchased additional food at grocery stores occasionally	✓ (2)	✓ (1)							
Family with new DPC: mother did food shopping at big traditional market or grocery stores weekly/mother asked the DPC to buy additional perishable vegetables on a daily basis from the street vendors	✓ (1)	✓ (3)	✓ (3)						
Feeding practices: *difficult to feed vs. formula milk*									
Child was described as 'difficult to feed'/mother and caregiver stated that child had unregulated feeding schedule	✓ (3)			✓ (3)			✓ (3)		
Child had unregulated feeding schedule/formula milk and snacks were given to child every time they asked			✓ (3)			✓ (3)			✓ (2)
Feeding time was regulated and the amount of food was controlled by mother or caregiver		✓ (4)			✓ (2)			✓ (3)	
Child was never breastfed due to no secretion of breast milk			✓ (1)			✓ (1)			✓ (1)
Child was partially breastfed (received formula milk from birth)	✓ (1)	✓ (1)	✓ (2)	✓ (2)	✓ (1)	✓ (1)		✓ (3)	
Child was breastfed exclusively for 2 weeks	✓ (1)						✓ (1)		
Child was breastfed exclusively for 3 to less than 6 months	✓ (1)	✓ (2)			✓ (1)				✓ (1)
Child was breastfed exclusively for 6 months		✓ (1)		✓ (1)		✓ (1)	✓ (2)		

Numbers in bracket are the number of participants. NW, normal weight; O, obese; UW, underweight; DPC, domestic paid caregiver.

On the other hand, the three non-working mothers of normal-weight children shared that they wanted to stay home because they said that it was best for children to be taken care of by their own mothers. The researchers concluded that these mothers were proud to be able to raise the children themselves. These mothers mentioned that they did not think other people, even family members, were good enough to be caregivers. Furthermore, they said they wanted to work but in a type of job that allows them to stay at home with their children.

The eight working mothers with family caregivers and three working mothers with long-standing DPCs seemed to have a different concept of motherhood in relation to work and raising a family, which appeared to be related to the availability of caregiver. They stated that motherhood and employment could occur concurrently as long as there is an appropriate caregiver available. They said that they felt secure leaving the children for work.

I believe it is fine for a mother to work when there is a caregiver to trust. I feel secure, I don't have any feelings of wanting to stay at home with her (the child), I rarely call home from work. . . . (A working mother with an obese child, had family caregiver, aged 29)

However, the remaining working mothers in this study ($n = 7$), who had problems finding a caregiver and had recently or frequently changed DPCs, admitted that they are worried about child-care matters but must work to provide additional family income. Thus, they tried to make the child-care arrangement work out by trying to find a new DPC, asking a family member to come temporarily, or asking a neighbour to watch the child.

Support for mother and caregiver: tiredness

The three cases of non-working mothers of underweight children described a situation in which it appears that they did not receive adequate support in terms of domestic work and child-care activities from either the father or other family members (for the woman who lived in an extended family):

I wake up when the sun rises, my husband leaves for work at 7 am, so I still have 2 hours to mop the floor and do the laundry. I feel very tired with all of this, but trying to be happy about it. . . . (Non-working mother of two children, lived within a nuclear family, aged 30)

No, we don't really do it together, sometimes everyone is so busy and nobody takes care of the house, so I do what I can do, most of the time only for my daughter, sweeping and mopping the floor so that the house is clean for her. But if I don't have time, am sick or not feeling well, I don't clean the house either. . . . (Non-working mother of one child, lived within an extended family, aged 25)

Similar conditions were experienced by the three cases of DPCs, and two out of the three cases of family caregivers of underweight children of working mothers. They shared their experience that they were deprived of support during the day and must manage child-care tasks and domestic work. Two grandmothers expressed their weariness about child-care tasks and one of them said as below:

Nobody replaces me. Sometimes I feel very sleepy during the day because I can't sleep at night and do my prayer. Then in the afternoon at 1 pm I feel very very sleepy but I must hold him (the baby) . . . That's why I don't do my laundry every day, if I do, it is too much. . . . (Grandmother, took care of three children, aged 50)

Two out of three family caregivers received help from a housemaid, one of them did not complain about her tasks, and the other (a grandmother) described how the assistance from the housemaid did not seem to be adequate:

I started to get exhausted and I don't think it is right. I am very tired, I cook for 9 people in the house, so I told my maid, please replace me (as a caregiver) and be nice to him (the child). . . . (Grandmother, took care of one child and received help from a housemaid, aged 55)

Conversely, the five cases of non-working mothers and the five family caregivers of normal-weight and obese children seemed to receive adequate support from the father, other family members or a housemaid. One of the non-working mothers who lived within an extended family and seemed to receive a lot of help in child-care and domestic work from her extended family members even stated that she did not expect the father to help more and considered him

busy enough with his work at his office. The seven cases of DPCs of normal-weight and obese children stated that they received help from the child's parents or other family members occasionally. Furthermore, three of the four cases of DPCs of normal-weight children said that mothers had asked them to focus only on child-care matters during the day and do housework later during spare time.

Decision maker on child's food and food preparation: maternal involvement, dependency and trust

In the group of non-working mothers in this study, the differences on the person who prepared child's food were apparent between those who lived within nuclear and extended family. Two of the three non-working mothers who lived within an extended family mentioned that extended family members arranged the child's menu most of the time and cooked the child's food on a daily basis. But, in terms of shopping for food, the mother said that she did it together with the extended family members; thus, it seemed that there was still a sense of maternal involvement in this group in terms of deciding on the composition of their child's meal. The five non-working mothers who lived within a nuclear family said that they were the ones who decided upon and cooked the child's food. However, one exception was observed for a family of an underweight child who lived within an extended family. Because all other family members had activities outside home, the mother mentioned that she was the one who decided and cooked the child's food. In this latter family, maternal involvement in almost all aspects of child care was very noticeable.

Seven of the eight working mothers with family caregivers in this study mentioned that, whether they lived within a nuclear or extended family, it was the caregivers who decided and prepared the child's daily food most of the time. They said that they trusted the caregivers and it seemed that they stayed uninvolved in deciding what the child should eat as their main meal on daily basis. These mothers shared that they shopped for milk, fruit and snacks occasionally, sometimes by request of the caregiver. In this group, a high level of maternal dependency on the child's caregiver was observed. One deviant case was found in a family of an obese child who lived within a nuclear family. The caregiver was the grandmother who did not stay in the same house, but came every day to take care of the child. The grandmother said that she was not responsible for any domestic work or for the child's menu. However, maternal dependency on the caregiver was also observed. For instance, the mother stated that she would call the grandmother and ask her to come in during the weekends if the mother had any difficulties in handling the child.

In the group of working mothers with DPCs, it appeared that the differences in terms of maternal involvement and level of supervision depended on whether their DPC was long standing or new. Three mothers who had a long-standing DPC said that they trusted the DPC and let her make the decision about the child's main meal and cook the food on a daily basis. These mothers shared that the long-standing DPCs were also the ones who shopped for food on a daily basis, most of the time at the street vendor who sells raw food around their housing areas. However, both mothers and the DPCs mentioned that mothers were still involved in providing snacks, milk and fruit, and occasionally shopping for protein-source food at a grocery store. Mothers said that they trusted that the caregivers would carry out the task appropriately as they had worked for them for a long time, and thus close supervision was no longer necessary. The seven mothers who hired a relatively new (working duration less than 2 years) DPC said that they made almost all of the decisions concerning their child's food. Mothers said that they shopped for food weekly and stored vegetables and protein-source foods in the fridge. The mothers also shared how they arranged the daily menu for the child and supervised the caregiver when she cooked or the mother did the cooking herself in the morning before leaving for work.

Maternal self-confidence: I can't cook

The five out of six working mothers of underweight and obese children who had family caregivers

expressed feelings that appeared to indicate low confidence in child-care matters especially with regard to food preparation. They stated that the caregivers knew better than them, and they trusted that the caregivers would give good food to their children.

I trust the food to my mother-in-law, I am sure she can manage that, so I am rarely involved in determining the menu. *And* I don't like cooking and I can't cook, my cooking won't be as good as hers. (Working mother of an underweight child, had one child, aged 29)

Well, it's his (the child) aunty who knows more about his daily food. (Working mother of an underweight child, had two children, aged 39)

She (the grandmother who is the caregiver) is a health volunteer, she really knows about food for kids. . . . I can't cook. (Working mother of an obese child, had one child, aged 29)

A similar expression was used by a mother in the above group in relation to health care. She exclaimed that she did not know anything about the child's immunization and let the caregiver (grandmother) to take care everything. She said:

Yes, she got the immunization at the Posyandu. I don't know anything about that, I am really blank, that shot for a baby at 3 months what's that? I really don't know. It's her grandmother (who does it), I don't even know immunization, how many months should it be done, I am really blank (Working mother of an obese child, had one child, aged 29)

The rest of the mothers in this study did not mention any similar feelings as those described above. The two working mothers of normal-weight children who also had family caregivers said that they had a high level of trust in the caregiver, but during the interview, they discussed food and health matters confidently with the researcher and shared how they tried to find information on child health and food. Similarly, the 8 non-working mothers and the 10 working mothers who had DPCs said that they tried to manage everything the best they could and eagerly discussed any questions on their child's food and health during the interviews.

One deviant case was identified in a working mother of an overnourished child who had a family caregiver. The mother was observed to have a high self-efficacy in regard to food preparation. The caregiver appeared to stay uninvolved in child food matters and the mother said that she prepared and made decisions regarding all her child's food intake

Access to resources: street vendor vs. grocery stores

All non-working mothers in this study shared that they carried out their daily food shopping at the street vendors who travel around the housing areas selling raw foods. They also went to big traditional markets or grocery stores occasionally to purchase protein-source food, snack, fruits and milk. However, if they could not do that, they said they would have to rely on whatever was available at the street vendors. The three non-working mothers who had underweight children in this study shared their concern on the feasibility of shopping for food out of their housing areas during working days because of transportation problems. They said that they had to get public transport or ride a motorbike and leave the children at home unattended. Because it was not possible to leave the children at home alone, they preferred to purchase food at the street vendors. Other non-working mothers did not share any concern on the means of transportation as according to them, they could leave the child home with other family members or take them on public transport.

The seven out of eight family caregivers in this study said that they also did the daily raw food shopping at the street vendors. According to them, they were the decision maker for the child's daily main meals; they cooked based on what was available at the street vendors. The foods were not as complete as they would be if they were able to go to the larger markets. Mothers in this group provided snacks, milk and sometimes fruit from the grocery stores.

The seven working mothers who had new DPCs shared that they did their food shopping at the big traditional markets and grocery stores weekly. They stored the foods in the fridge and asked the DPC to buy additional perishable vegetables on a daily basis from the street vendors. These mothers said that food provided to the children was based on what was available in the fridge and additional food bought by the

caregivers from the street vendors. By doing this, it appeared that mothers tried to ensure that the kind of food that she perceived as good food was available every day for her children. The three mothers who had a long-standing DPC said that they let the caregivers buy most of the food at the street vendors on daily basis, and mothers purchased additional food at the grocery stores occasionally.

Feeding practices: difficult to feed vs. formula milk

The most obvious theme related to child-care practices that emerged from the interviews was feeding practices. A clear pattern was observed about feeding practices performed by mothers and caregivers in the different groups of child nutritional status in this study. In Indonesia, based on the first author's observations, it was common for young children to have their meal separately from their parents' meal time. One non-working mother mentioned that her daughter sometimes joined the family dinner when her father returned from work, but she would not have her meal because she had had it earlier. Working parents in this study returned home from work quite late because of commuting time, and thus dinner was served quite late in the evening.

All nine mothers and caregivers of underweight children in this study described their children as 'difficult to feed', and according to the mothers and caregivers, these children had unregulated feeding schedules. One of the non-working mothers with an underweight child expressed her difficulty in feeding her child:

> Now I just follow when she wants to eat. . . . I don't know how to regulate her meal times. (Non-working mother of an underweight child, with one child, aged 25)

Another non-working mother shared that she had difficulties fitting the child's feeding time in with other activities that she must do, with the result that feeding activities sometimes were performed in hurry.

> She has breakfast at 8 am or 8.30 am, after that time it will be difficult. If I need to go somewhere I have to feed her first, so it's really difficult if I don't wake up early. (Non-working mother of an underweight child, with two children, aged 30)

It appeared that the caregivers of underweight children tried to manage their domestic tasks and feeding schedule. For instance, a caregiver who had to take care of more than one child during the day and, according to her, did not receive any support from other family members, usually fed two children from one plate. Time limitation and lack of support may have prevented these mothers and caregivers from performing responsive feeding practices in order for the child to have an adequate amount of food.

Similarly, the eight obese children in this study also appeared to have an unregulated feeding schedule. But based on what mothers and caregivers shared about the child's consumption of formula milk and snacks, the unregulated feeding schedule in this group was suggested as not being the result of lack of time and support, but due to overuse of formula milk and snacks given to the children. Formula milk was given by bottle to all children in this study, and 21 children had received it since they were less than 6 months old. UNICEF Indonesia (UNICEF Indonesia 2006) suggested that the overuse of infant and follow-up formula milk in Indonesia was because of aggressive marketing activities of formula milk companies and the freely available follow-up formula milk in the Indonesian market.

Twenty-three out of the 26 children in this study were breastfed, and four of them were still breastfed during the study period. Three (all were obese children) had never been breastfed, which according to the mothers was due to no secretion of breast milk. Eleven of the breastfed children (eight were children of working mothers) were partially breastfed because they had received formula milk since they were born. The reasons for giving formula milk from birth varied within the study participants. The reasons given included mothers thinking that her breast milk was inadequate, mothers wanting to make children get used to the taste of formula milk in preparation for when they returned to work, babies being given formula milk at the hospital by hospital staff so mothers continued to use it, and one mother who had a heart problem and was under medication was advised by her physician not to breastfeed her baby. Two underweight children (one working, one non-working mother) were breastfed exclusively for only

2 weeks. For the working mother, her reasons for stopping breastfeeding exclusively after 2 weeks were that her baby cried all the time and she said that breastfeeding meant she did not have time to do domestic work The non-working mother's reason was that she thought her baby was not getting enough milk so she gave formula milk to increase her baby's weight. Five children (four being working mothers' children) were breastfed exclusively for 3–5.5 months. There were only five (three were of working mothers) who were breastfed exclusively for 6 months. Among the five mothers who stopped breastfeeding exclusively before 6 months (four were presently working mothers and one was a non-working mother at the time of the interview who was in paid employment when her child was younger) mentioned that the reason was that they had to go back to work.

Thus, among the 18 children of working mothers in this study, three children were breastfed exclusively for 6 months and 15 children received formula milk either from birth, at 2 weeks of age or when the mother returned to work. Caregivers would feed children formula milk when mothers were at work. Family caregivers and DPCs mentioned that they would provide formula milk anytime the children asked for it. In the group of three obese children with family caregivers, mothers said that they just provided the milk and snacks and let the caregivers decide when to give the milk. In the group of three obese children with DPCs, mothers said that they tried to ensure that the children were adequately fed by asking the caregivers to give formula milk whenever the children asked for it. In the group of two obese children of non-working mothers, the mothers said that they gave milk to their children every time the children asked. In one case, where the mother had been in paid employment when her child was younger, she said formula milk had been given regularly when she went to work, and she said had had difficulty changing this habit. The other mother stated that she could not resist the child's requests for formula milk. This latter mother shared that her child could finish a 900-g box of milk powder in 2 days.

Conversely in the group of normal-weight children in this study, researchers concluded that feeding was regulated and the amount of food was carefully controlled by mothers and caregivers. The mothers mentioned that they intentionally control the amount of food for two different reasons: worried that their children might not receive adequate amount of foods or concerned that their children might eat too much food. It seemed that both had resulted in a regulated feeding schedule in groups of working and non-working mothers in this study. In the group of three normal-weight children of non-working mothers, mothers were observed to perform responsive feeding practices. They also mentioned that they tried to encourage the child to eat more when they thought the child had not eaten enough, and that they paid attention to what the child likes and dislikes. They shared that they controlled the amount of snacks and food consumed by the children daily. In the group of two normal-weight children of working mothers with family caregivers, the caregivers stated that it was them who regulated the feeding schedule and controlled the amount of food. It appeared that family caregivers performed responsive feeding practices and had adequate time to feed the child because of the support they received for other tasks. While in the group of four normal-weight children of working mothers with DPCs, especially those with new DPCs, mothers shared how they developed a feeding schedule and supervised the child's meals from work. One mother described how she had applied a rigid feeding schedule for her new DPC to follow and developed a monthly menu to ensure her child received a variety of food.

Discussion

This study suggests that each type of family experienced a range of problems in their efforts to provide good child care and proper feeding practices for their children regardless of maternal employment status. Non-working mothers in this study expressed concerns about a lack of support in performing child care and domestic tasks and some of them felt obliged to stay at home. Working mothers in this study who had access to family caregivers (an increasingly uncommon arrangement in urban households because of demographic changes) showed an increased lack of confidence in performing child care and good food

practices and had a high level of dependency on the caregivers. On the other hand, working mothers with DPCs in this study were observed to exert close supervision and vigilance in certain cases and sometimes struggled to find an appropriate caregiver.

Mothers of underweight and obese children in this study shared several similar problems. In the group of non-working mothers, all felt obliged to stay home, yet would have preferred to have income-earning activities. Working mothers of underweight and obese children who had family caregivers were found to have low confidence in terms of food preparation, and they stated that their children had unregulated feeding schedules, even though the reasons for this may be different.

The results suggest that among the families who participated in the study, child-care responsibility was observed to be borne by women, be it the mother or the caregiver. The role of fathers in this study was limited, and the duty of child care and domestic tasks were mostly borne by mothers and female caregivers. In this study, even though income earned by fathers was spent on the child's food, the type of food consumed by children was decided by mothers or caregivers. This finding is similar to what has been found by previous researchers in developed and developing countries (Shelton 1990; Jain & Choudhry 1993; Hardill 2002; Jacobs & Gerson 2004). These studies showed that women still carry the greater share of the domestic work, including child care and food preparation compared with men. The fact that almost no mother expressed an expectation of increasing the father's role in child care and domestic tasks showed that the current work distribution between men and women within the households was well accepted by the mothers. This finding reflects a common norm adhered to by Indonesian mothers and findings from the literature in developed countries (Hardill 2002; Baxter *et al.* 2009) that domestic tasks in wealthier households are outsourced, for example, by the employment of a domestic paid worker, rather than the workload being shared with fathers.

The suggestion from a previous study which identified that non-working mothers also needed support in performing child care and domestic tasks (Nakahara *et al.* 2006) was supported by this study. The inadequacy of support received by non-working mothers of underweight children in this study may cause a lower performance in child care compared with mothers of normal-weight and obese children. The lack of support for child care and domestic work were also experienced by the non-maternal caregivers of underweight children. Although it was beyond the scope of this study to infer a causal relationship between the inadequacy of support for caregivers and child-care practices and nutritional status of the children, such relationships have been well documented in other research (McGuire & Popkin 1989; Bianchi 2000; Nakahara *et al.* 2006).

Furthermore, non-working mothers of underweight and obese children in this study perceived their role of homemaker as an obligation, which occurred because of limitation in child-care arrangements available to them. In contrast to the non-working mothers of normal-weight children, who put a high value on their role as mothers in providing good care to their children, these mothers had a preference for participation in income-earning activities outside their homes. The level of education of mother and family wealth did not seem to influence mothers' perception of their role as homemakers, as all non-working mothers who participated in this study had similar educational attainment and family income. This perceived unfavourable condition may influence their mental health and induce stress, which in turn may affect their performance of child-care duties. The relationship between maternal mental health and employment preference has been of interest to researchers for at least half a century (Yarrow *et al.* 1962) and was also explored in a study that compared the mental health of mothers across several employment statuses (Hock & DeMeis 1990). This latter study found that mothers who desired to be employed but remained at home as homemakers experienced a higher level of depressive symptoms and had conflicting beliefs about maternal roles.

A different situation was experienced by working mothers with family caregivers in this study. Although they enjoyed having a trustworthy person to assist them with child-care matters, those with underweight or obese children felt less capable of performing child

care compared with the caregivers. The lack of confidence felt by mothers is in accordance with the self-efficacy theory identified by Bandura (Bandura 1982; Bandura & Locke 2003). This theory focuses on the belief in one's own ability to perform certain tasks despite the difficulties. Bandura suggested that people with low self-efficacy will give up prematurely when the condition is not favourable, and low self-efficacy is associated with failure experiences. Low maternal self-efficacy has been associated with maternal perception of infant difficulties (Teti & Gelfand 1991) and found among non-doers of certain positive feeding practices (Dearden *et al*. 2002). Although no causal relationship can be suggested by this study, the fact that low self-efficacy was not observed among mothers of normal-weight children in this study suggests that maternal self-efficacy may play a role in a mother's ability to provide adequate child care to her child. The most obvious aspect of how maternal self-efficacy may be implicated in everyday practices observed in this study was the mother's ability to make decisions on the child's food and health care. As working mothers in this study may have better access and resources to purchase various healthy foods compared with the caregivers, children of mothers with higher self-efficacy may enjoy a better variety of nutritious foods. Further investigation into child dietary intake in this group may suggest the possible mechanism (or mechanisms) of the relationship.

Another possible explanation of how higher maternal self-efficacy in making decisions and providing healthy food and health care may benefit the children in this group is the fact that having a family caregiver does not guarantee a higher quality of care practices compared with a non-family caregiver. The characteristics of family caregivers in this study in terms of age, educational level, knowledge of child food and health needs, access to information, beliefs and cultural norms may influence care provided to the children. These characteristics, as part of the 'resources of care', have been found to be associated with the quality of care (Guldan *et al*. 1993; Engle & Menon 1999). Caregivers' level of education, which can be used as a proxy for knowledge, was lower than that of mothers, yet education has been identified to have a positive association with appropriate feeding and health care (Armar-Klemesu *et al*. 2000; Liaqat *et al*. 2007). Thus, maternal involvement in the child's care in this group may increase the quality of care received by the children.

Similar reasons may underlie the close supervision of DPCs conducted by several mothers in the group of working mothers. The DPCs who participated in this study had lower educational levels compared with the mothers, and some of them were very young. The results showed that mothers had low trust in the caregivers' capabilities, because the mothers were unfamiliar with the caregivers and because of the mothers' judgement of the DPC's capability in performing child care. The level of trust increased when the DPC had worked with the mother for a certain period of time, with the DPCs gradually gaining authority to do things unsupervised. Maternal supervision in this sense is seen as a positive act of a mother to ensure that the child receives adequate quality care. However, on weekdays mothers in this group must carry a dual load, fulfilling their workplace responsibility as well as supervising the care of their children.

The findings from other studies that suggested that overweight children may consume high-calorie food due to lack of parental involvement and long maternal working hours (Hawkins *et al*. 2008; Brown *et al*. 2010) may also be true for the group of obese children of working mothers in this study. In this group, formula milk and snacks were always provided by mothers to ensure that the caregivers did not run out of food when the children asked for it. However, mothers did not supervise the quantity of food provided, which led to excess amounts of food, for instance formula milk, being given to the children.

This study provides an insight into problems faced by mothers in families with different types of caregivers. However, the voices of fathers were unexplored in this study as fathers were not included as study participants. This study also has other limitations, as recruitment of participants was restricted to those whose name appeared on the *Posyandu's* list, thus excluding mothers and children who never attended the *Posyandu* for child weighing. Mothers or caregiv-

ers who bring the children regularly to *Posyandu* for child weighing may represent a group of parents and caregivers who are aware of child growth monitoring and are more concerned with the growth of their children.

The findings suggest that regardless of maternal employment status, children may have different nutritional status dependent upon the quality of care they receive. Further research needs to be conducted with regard to specific care practices that may be influenced by the factors identified in this study. For instance, observations on responsive feeding practices need to be conducted to see how feeding care was performed by mothers and caregivers among these groups of children. Further investigation also needs to be conducted to measure the nutritional knowledge of mothers and caregivers in each group in regard to child growth. Health professionals and health volunteers in the *Posyandu* may be involved in order to increase the knowledge of mothers and caregivers and to enhance the *Posyandu* activities in disseminating health information not only in regard to underweight as their current concern but also addressing the problem of child obesity. Lastly, a joint effort from community, health professionals, private sectors and government needs to be initiated to help mothers have more options regarding child-care arrangements such as establishing child-care centres for children of working mothers and conducting a standardized training to increase the capability of DPCs in performing child care.

Conclusion

This present study has explored experiences and problems regarding child-care practices of working and non-working mothers with different types of caregiver and child nutritional status. The result suggests that each group of mothers who participated in this study experienced problems in their effort of performing child-care practices regardless of their working status. Young children may suffer from malnutrition, becoming either underweight or obese, regardless of whether or not mothers are in paid employment, because many other factors influence the care provided to the children.

This study suggests that both working and non-working mothers need adequate support and resources to perform adequate care for their children. Further research on what type of support would suit each type of mother and how mothers can have more alternatives with respect to child-care arrangement is necessary. For instance, means of enhancing the dissemination of health information addressing both child underweight and obesity problems to mothers and caregivers are important. Further research to assess the population patterns and the extent of the experiences and problems described in this study is also required. The research reported in this paper highlights the need for nutrition policy in countries undergoing rapid nutrition transitions and urbanization to address the changing socio-cultural and economic settings in which nutrition problems occur. Nutrition and child health policy responses are needed to address the requirements for an increased choice of quality child-care arrangements for Indonesian mothers in the urban context. Such responses are needed to support not only working urban mothers, where particular concerns have been raised regarding competing time commitments, mothers' workload and availability of quality child-care providers, but also all urban mothers who are faced with limited and relatively unskilled child-care support.

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Conflicts of interest

The authors declare that they have no conflicts of interest.

Contributions

AR and LS were involved in designing the research. AR was responsible for conducting data collection, led the analysis, interpretation, and writing the manuscript. LS and MW were involved in the interpretation of the data and reviewing the manuscript.

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