Evaluation of Perception and Preference of Milk Consumption Among Elementary School Age Children in Low Income Household

Suci Paramitasari Syahlani[1], Mujtahidah Anggriani Muzzayanah[1]
1 Faculty of Animal Science, Gadjah Mada University
Corresponding email: suci.syahlani@ugm.ac.id

ABSTRACT

This exploratory research was intended to assess (1) perception and preference of children and mother in low-income household in urban and rural area toward drinking milk (2) identify key factors in increasing children milk consumption. The research was conducted in Gadjah Wong urban communities in Umbulharjo Subdistrict, Yogyakarta City and Candibinangun in Pakem Subdistrict, Sleman Regency which were two villages with the highest number of low-income family. Data were collected with questionnaires to measure perceptions and preference of respondents, who are mothers and elementary school-aged children. The results showed that in regard of perception to the milk's health benefit, 96.40% of respondents agreed that the while 3.60% disagreed. Then, 80.10% of children agreed that the consumption of milk could prevent them from being sick while 19.90% disagreed. However only 60.60% of children admitted they like to consume milk as oppose to the other 23.30% that claimed they dislike to consume milk. Children's perception and the level of likeness didn't significantly create an incentive for children to save up their pocket money to buy milk in both urban and rural area. On the other hand, according to the result of Chi-square assessment, mothers' perception in regard to sufficiency of milk consumption was the contributing factor to the frequency of milk consumption for children in urban and rural areas ($p \leq 0{,}001$). Mothers' role in determining children's level amount of milk consumption was significant only in rural area, ($p \leq 0{,}05$). However, mothers' ability to determine the level of children's consumption it is still contingent upon the provision and allocation of cash for household needs. Thus, in low income family not only mother but father should be included as a target audience in milk consumption promoting the program.

Keywords: Milk consumption, Low income family

INTRODUCTION

Food consumption with balance nutrient is a basic need for children, not only for survival but also for developing strong and healthy body as well as intellegence (Thakar and Patil, 1990). Milk is one of food that contains good quality of animal protein for human, therefore it is appropriate if included in daily menu especially for children. In general, milk consumption in Indonesia is still relatively low at 12 liters/capita/year or equivalent to 230cc per capita per week. Ideally, daily milk consumption is 400-600cc that divided into 2-3 times consumption.

Fulfillment of protein intake is influenced by income. For the prosperous family, adequacy of food need has no longer barriers to meet and Schifmann dan Kanuk (2010) explain that mostly family decision maker for food buying is mother or housewife. Other studies show that children preference has affected family food choice (Balcarova et al., 2014; Calloway et al., 2016) However, in low income family who economically are not prosperous

yet, the fulfillment of food need is not an easy task for mothers. There is a possibility a different or shared role pattern of food buying. Food buying behavior itself is identified as a complex phenomenon, the needs and wants are varied and dynamic (Fearne and Bates, 2002). This study is conducted to identify drinking milk perception and preference of elementary aged children and the mothers in low income household in rural and urban areas, Yogyakarta Province and to explore the member family role that potentially affects to children milk consumption.

MATERIALS AND METHODS

This research was conducted by survey design in two sub-districts with the lowest income level in Yogyakarta which is Riverbank Gadjah Wong area, Umbulharjo Sub-district that representative of urban area and Candibinangun Subdsitrict, Sleman District, that representative of rural area in Yogyakarta Province, Indonesia. The questionnaire was developed to measure perception, preference and children milk consumption. Data were collected form respondents that determined by using judgemental sampling method with the criteria that respondents were a mother and the children who were in elementary school-aged. The total number of respondents was 450, 232 from urban and 218 from a rural area. Data were analyzed by using crosstab analysis to identify pattern children milk consumption.

RESULTS AND DISCUSSION

Table 1 shows that most children respondent from rural and urban areas agree that milk maintains a healthy body (96.42%) while only 3.58% not agree. Distribution pattern remains the same in each area, in a rural area 96.60% agree while only 3.40% do not agree and 96.30% agree and only 3.70% do not agree. Most respondents (80.09%) also perceived that drinking milk help to prevent diasese, while 19,91 did not agree. In a rural area, 75,00% agree and 25% do not agree, while in an urban area 85.60% agree and 14.40% do not agree.

Table 1. Number and percentage respondent about drinking milk benefit

Milk Benefit	Yes		No	
	Number (kids)	Percentage (%)	Number (kids)	Percentage (%)
Maintain healthy body	431	96.42	16	3.58
Prevent disease	358	80.09	89	19.91

Table 2 shows that only 60.66% children preferred to drink milk while the rest 39.34% not. This result also explained why milk consumption in Indonesia still relatively low since in low income families that milk is not main food selected as it was a fact also in the United Kingdom that fizzy and sugary drinks are given more often to children in low income families (Nelson et al., 2007). Despite on problem in production side but demand side problems are important to be evaluated. In many countries milk is staple food that is provided in the daily menu since consumers realize that milk is an essential nutrient (Fearne and Bates, 2002).

Table 2. Level of elementary age children preference of drinking milk

The child's pleasure to drink milk	Number (kids)	Percentage (%)
Very Unlikely	15	3.33
Unlikely	90	20.00
Neutral	72	16.00
Like	236	52.44
Very like	37	8.22

The level of children preference of drinking milk does not affect to the behavior of spending pocket money to buy milk in school canteen or local milk traders or stores. Cross tabulation analysis shows that the value of Pearson Chi-square is 6.74 ($p \geq 0.05$) for rural area and 0.847 ($p \geq 0.05$) for an urban area that the different between group also expressed in Figure 1. Children with different levels of drinking milk do not differ in allocate their allowance to buy milk.

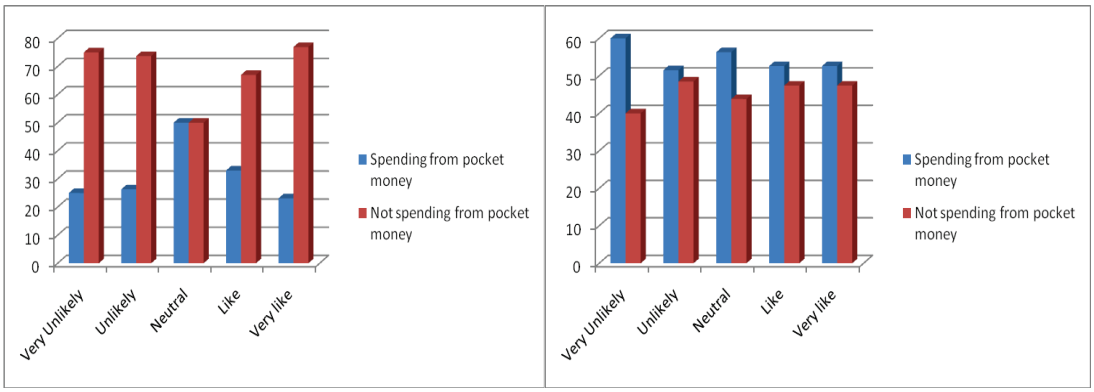

Figure 1. Relationship of children preference to drink milk and willingness to spending pocket money for milk in rural and urban areas

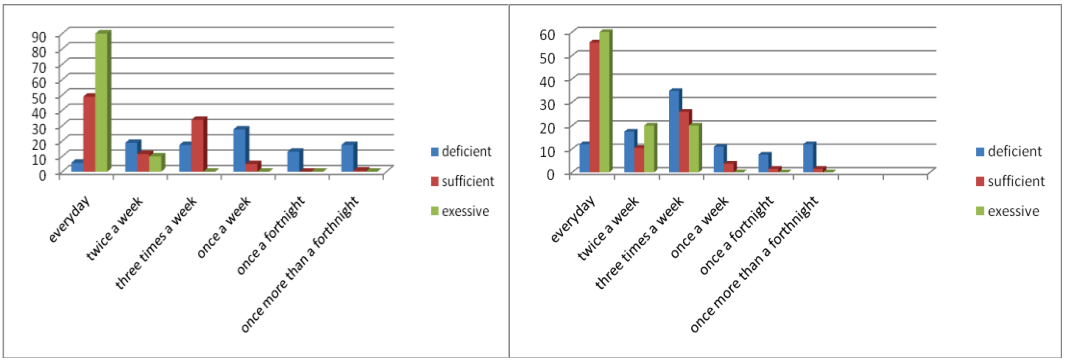

Figure 2. Relationship of mother perception on children milk consumption sufficiency and frequency of milk consumption in rural and urban areas

However, mother perception of children milk consumption is related to the children drinking milk frequency level both in rural and urban areas as shown in Figure 2 and 3. The correlation is significance as the result of Pearson Chi square is 102.67 ($p \leq 0.01$) for rural area and 55.67 ($p \leq 0.001$) for an urban area. Mothers who perceive that their children have

sufficient milk consumption consistently shown that their children drink milk every day, while those who perceive deficient are also supported that their children rarely drink milk, for example once a week or even once in more than a fortnight. This is also confirmed in the amount of milk consumed by the child in rural area with Pearson Chi-square is 23,81 ($p \leq 0,01$) but not in an urban area with Pearson Chi-square 10.344 ($p \geq 0.05$). The possibility of mother to allocate income for buying milk is influenced by family income with Pearson Chi-square 63.21 ($p \leq 0.01$). Daily milk consumption is achieved in families with minimum food expenditure Rp. 501.000 per month. There was 45.80% household that did not provide milk stock at home, but 45.90% spent 7-14 packs cigarette in a month. Since daily milk intake affects to the probability of children sickness (fever) with Person Chi-Square 10,274 ($p \leq 0.05$) then putting milk as a staple food is considered.

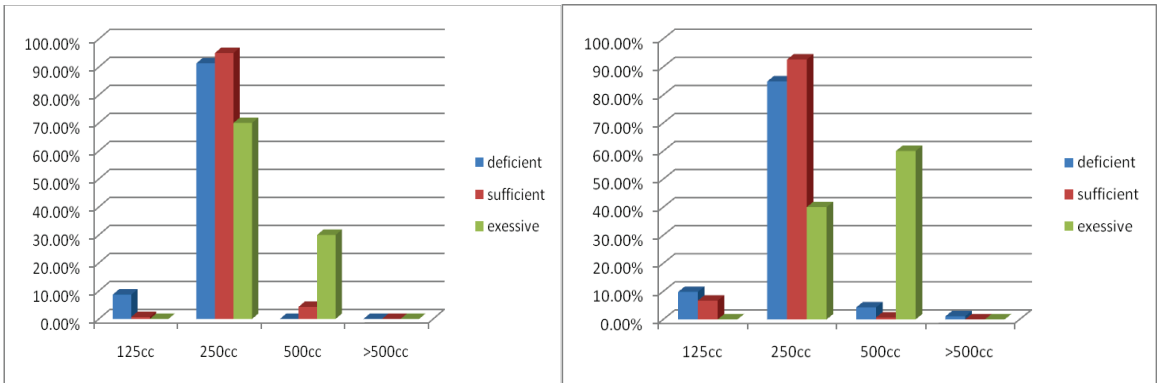

Figure 3. Relationship of mother perception on children milk consumption sufficiency and amount of milk consumed in rural and urban areas

Table 3. Relationship of mother perception on children milk consumption sufficiency and amount of milk consumed in rural and urban areas

	Rural		Urban	
Description	Person Chi-square	Significance	Person Chi-square	Significance
Relationship of mother perception on children milk consumption sufficiency and frequency of milk consumed in rural and urban areas	102.67	0.000	55.70	0.000
Relationship of mother perception on children milk consumption sufficiency and amount of milk consumed	23.83	0.002	10.34	0.242

CONCLUSIONS

Despite being exploratory study, this research has clarified the low milk consumption among children in low income families both in urban and rural areas. Milk is not the most food preferred by children yet. On the other side, mothers do not have full freedom to do their role as a food buying decision maker to put milk as part of stapel diet due to income

limitation and high expenditure cigarettes for the head of families. Therefore, the father should also be considered as an influencial factor.

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