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Diarrhea preventive behavior of Myanmar immigrant caregivers with children under five years in Muang District, Samut Sakhon province, Thailand

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ABSTRACT

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This cross sectional descriptive study was conducted to describe the diarrhea preventive behavior and its related factors of Myanmar immigrant caregivers with children under five years in Muang district, Samut Sakhon province, Thailand. The 294 respondents were interviewed by trained interviewers during January, 2010. The Chi-square test and Fisher's exact test were used to identify the relationship between diarrhea preventive behavior and related factors.

The results showed that 67.35% of respondents had a poor level of knowledge about diarrhea, 25.51% had a moderate level of perception, 59.52% had been exposed to a health brochure and 54.42% of respondents practiced a good level of diarrhea preventive behavior. Moreover, there was a relationship between diarrhea preventive behavior and the following variables : type of caregiver (p - value = 0.005), family income per month (p - value < 0.001), ability to speak Thai language (p - value < 0.001), listening to Thai language (p - value < 0.001), the level of diarrhea knowledge (p - value = 0.003), the level of perceptions (p - value < 0.001), expose to media (p - value < 0.001), and advice from persons (p - value = 0.009)

Therefore, the provincial public health office should strengthen primary health care services by providing additional health education programs for caregivers to build on the existing control program of communicable diseases within Myanmar immigrant communities.

Keywords Diarrhea preventive behavior Myanmar immigrant caregiver Children under five years

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พฤติกรรมการป้องกันโรคอุจจาระร่วงของผู้ดูแลเด็กชาวพม่าอพยพ ในการดูแลเด็กอายุต่ำกว่า 5 ปี ในอำเภอเมือง จังหวัดสมุทรสาคร ประเทศไทย

บทคัดย่อ

เว แยน ออง เท บุญยง เกี่ยวการค้า เนตร หงษ์ไกรเลิศ. พฤติกรรมการป้องกันโรคอุจจาระร่วงของผู้ดูแลเด็กชาวพม่าอพยพในการดูแลเด็กอายุต่ำกว่า 5 ปี ในอำเภอเมือง จังหวัดสมุทรสาคร ประเทศไทย. ว.สาธารณสุขและการพัฒนา, 2554; 9(1): 7-18.

การศึกษาแบบตัดขวางเชิงพรรณนาทำการศึกษาเกี่ยวกับพฤติกรรมการป้องกันโรคอุจจาระร่วงและปัจจัยที่เกี่ยวข้องในกลุ่มผู้ดูแลเด็กชาวพม่าอพยพที่ดูแลเด็กอายุต่ำกว่า 5 ปี ในอำเภอเมือง จังหวัดสมุทรสาคร ประเทศไทย เก็บข้อมูลจากกลุ่มตัวอย่าง จำนวน 294 คน ด้วยการสัมภาษณ์โดยบุคลากรที่ผ่านการอบรมในช่วงเดือนมกราคม พ.ศ. 2553 ใช้สถิติการทดสอบไคสแควร์ และการทดสอบฟิสเชอร์ เอกแซค ในการหาความสัมพันธ์ระหว่างพฤติกรรมการป้องกันโรคอุจจาระร่วงกับปัจจัยที่เกี่ยวข้อง

ผลการศึกษาพบว่า ร้อยละ 67.35 ของผู้ตอบแบบสอบถามมีความรู้เกี่ยวกับโรคอุจจาระร่วงในระดับต่ำ ร้อยละ 25.51 มีการรับรู้เกี่ยวกับโรคอุจจาระร่วงในระดับปานกลาง ร้อยละ 59.52 เคยได้รับข้อมูลด้านสุขภาพผ่านแผ่นพับ และร้อยละ 54.42 มีพฤติกรรมการป้องกันโรคอุจจาระร่วงในระดับดี นอกจากนี้ยังพบความสัมพันธ์ระหว่างพฤติกรรมการป้องกันโรคอุจจาระร่วงกับประเภทของผู้ดูแลเด็ก (p-value = 0.005) รายได้ของครอบครัวต่อเดือน (p-value = < 0.001) ความสามารถในการพูดภาษาไทย (p-value = < 0.001) ความสามารถในการฟังภาษาไทย (p-value = 0.000) ระดับความรู้เกี่ยวกับโรคอุจจาระร่วง (p-value = 0.003) ระดับการรับรู้เกี่ยวกับโรคอุจจาระร่วง (p-value = < 0.001) การได้ข้อมูลจากสื่อ (p-value = < 0.001) และคำแนะนำจากบุคคล (p-value = 0.009)

ดังนั้น สำนักงานสาธารณสุขจังหวัดควรสร้างความเข้มแข็งด้านบริการสาธารณสุขมูลฐานประกอบด้วยโปรแกรมสุขศึกษาสำหรับผู้ดูแลเด็ก การควบคุมโรคติดต่อ การสุขาภิบาลสิ่งแวดล้อมที่ดีในชุมชนชาวพม่าอพยพ

คำสำคัญ พฤติกรรมการป้องกันโรคอุจจาระร่วง ผู้ดูแลเด็กชาวพม่าอพยพ เด็กอายุต่ำกว่า 5 ปี

INTRODUCTION

Diarrhea is a global killer and is one of the five leading causes of childhood deaths. About 1.7 million children under five years die because of diarrhea each year worldwide.[1]

In Thailand, diarrhea is an important public health problem. Its incidence among children under five was 4,285.8 per 100,000 in 1986 and 10,140.23 per 100,000 population in 2005. The mortality rates from diarrhea for children under five were 4.59 and 0.40 per 100,000 population of children under five in 1987 and in 2005, respectively. So, the mortality rate for diarrhea is decreasing whilst its incidence is increasing.[2]

Samut Sakhon province is situated in the central region of Thailand and comprises 3 districts, 40 communes, and 288 villages. It is surrounded by Samut Songkhram, Ratchaburi, Nakhon Pathom, and Bangkok. The three districts are Muang Samut Sakhon, Krathum Baen, and Ban Phaeo.[3]

In Muang district, the total population was about 218,000 in 2000. Children under five years comprised 5.8% and numbered about 12,500.[2] In 2006, there were 488 immigrants' children under five years old according to the Samut Sakhon provincial health office data. This represented 2.82% of the total immigrant population. This total population covered immigrants living in the Maha Chai, Tha Chalom and Krokkrak subdistricts of Muang district.

The vast majority (98.5%) of the total immigrant population in these subdistricts was from Myanmar. Therefore, the total Myanmar immigrant population in Maha Chai, Tha Chalom and Krokkrak subdistricts estimated was 17,070 in 2006.

Moreover, according to data from all hospital outpatient departments in Samut Sakhon province, disease of the digestive system including diarrhea was ranked as the second leading cause of morbidity. The hospital reports show that there were 142,844 cases of digestive system disease in 2006 and the morbidity rate was 31.6% of the population.[4]

According to the reported cases of acute diarrhea per 100,000 population, by age-group in Thailand in 2006, children in the 0 - 4 age group had the highest incidence representing 10,610.49 cases per 100,000 population.[5]

For these reasons, this research was intended to investigate and learn more about how Myanmar immigrant caregivers, living in the Muang district of Samut Sakhon province, behave regarding diarrhea and diarrhea prevention.

The aim of the study was to describe the diarrhea preventive behavior, the socio-demographic characteristics, psycho - social factors and cues to action of Myanmar immigrant caregivers in Muang district. Furthermore, the study sought to identify the relationship between these factors, and their diarrhea preventive behavior.

METHODOLOGY

A cross sectional descriptive study was designed during one-month period of the survey. The study population was Myanmar immigrant caregivers who were currently giving care to

Journal of Public Health and Development
Vol. 9 No. 1 January - April 2011

children under five years old and living in Maha Chai, Tha Chalom and Krokkrak subdistricts in the Muang district of Samut Sakhon province, Thailand. The three subdistricts were chosen because of their high percentage of Myanmar immigrants. A study sample was proportionately selected from communities in these three subdistricts. The inclusion criteria for selection included : (1) currently taking care a child or children under five years old; (2) could understand Burmese language; (3) born in Myanmar; (4) currently living in one of subdistricts of the Maha Chai, Tha Chalom or Krokkrak of Muang district, Samut Sakhon province; (5) willing to participate in the research; and (6) aged 20 years and above on the day of interview.

There were 20 communities in Maha Chai, 6 in Tha Chalom and 3 in Krokkrak, making a total 29 communities. The minimum estimated sample size was 266 plus 10% added to allow for incomplete questionnaires. Therefore, the minimum valid sample size was 294.

The composition of the sample group was proportionate to the number of communities in these three subdistricts. Thus, the 202 respondents were selected from Maha Chi subdistrict, 62 from Tha Chalom subdistrict, and 30 from the Krokkrak subdistrict by simple random sampling.

The research instrument used for data collection was a structured questionnaire.

This questionnaire consisted of five parts as follows :

Part 1. Socio - demographic characteristics : This part included questions concerning age, sex, marital status, education, employment status, family income per month, and Thai language fluency.

Part 2. Knowledge about diarrhea disease :

This part included questions asking about caregivers' knowledge of certain diarrheal diseases, and their transmission, prevention and simple treatment. The levels of knowledge were classified into three levels (good, moderate, poor) according to Benjamin Bloom's criteria.

Part 3. Perception of diarrhea disease :

This part included respondents' opinions and perceptions about susceptibility, severity, benefits and barriers relating to diarrheal prevention. The levels of perception were classified into three levels (high, moderate, low) based on the cut off points using Best's group rating criteria.[12]

Part 4. Cues to action :

This part involved experiences which prompted the respondents to practice diarrhea preventive behavior, for instance, media exposure, and advice from persons.

Part 5. Diarrhea preventive behavior :

Diarrhea preventive behavior was measured by the total score of diarrhea preventive behavior of each respondent. The total scores and median were calculated and employed as the cut off point. Respondents were then considered to have good or poor preventive behavior according to above or below the median.

The result of KR 20 for the knowledge part of the questionnaire was 0.89 and of Cronbach's Alpha for the perception part of the questionnaire was 0.96. The questionnaire was then

properly improved before being used for data collection.

Data collection was done by face to face interviews with each of the respondents using the Burmese version of the questionnaire. The interviewers were Myanmar immigrants living in Samut Sakhon province. They could all speak, read and write Burmese language and had been properly trained for this study. Only eligible respondents who matched the inclusion criteria for this research were interviewed and the research procedure had been approved by the Mahidol University Institutional Review Board (MU-IRB) regarding ethics in human research.

The collected data were analyzed by using Minitab software. The distribution of preventive behavior, socio demographic characteristics, levels of knowledge, perceptions and cues to action was summarized using descriptive statistics. Chi-square test and Fisher's exact test were used for the analysis of the relationship between the independent variables and dependent variable at significant level 0.05.

RESULTS

The distribution of the level of diarrhea preventive behavior of Myanmar immigrant caregivers is shown in Table 1. Of the total respondents, 160 (54.42%) had good diarrhea preventive behavior, whereas 134 (45.58%) had poor diarrhea preventive behavior.

Table 2 shows that 53.66% who could not read Thai language or could read Thai language poorly practiced good diarrhea preventive behavior. Likewise, 53.47% who could not write Thai language or could write Thai language poorly practiced good diarrhea preventive behavior.

With regard to employment status, there was no relationship between employment status and diarrhea preventive behavior. The following factors were also not statistically significant associated with diarrhea preventive behavior: age, gender, marital status, education level and fluency of reading and writing Thai.

Monthly family income, speaking Thai language, listening Thai language suggests and diarrhea preventive behavior all had significant with diarrhea preventive behavior. ($P < 0.001$). Table 2 shows that 85.71% of the respondents who could read Thai fairly and fluently, had a good level of diarrhea preventive behavior. In addition, it is interesting that about one third of the respondents, who could listen to and speak Thai fairly and fluently, had a good level of diarrhea preventive practice.

Similarly Table 3 shows that just over the half of the respondents with a moderate or poor level of knowledge about diarrhea had good diarrhea preventive behavior. However, only a quarter of the respondents with moderate level of perceptions. In contrast, exactly half of the respondents with low perceptions practiced good diarrhea preventive behavior.

Table 4 shows that there is a relationship between media exposure and diarrhea preventive behavior (P - value < 0.001). Table 4 shows that nearly 60% of respondents who had a good level of diarrhea preventive behavior gained health information from brochures. Interestingly,

Journal of Public Health and Development
Vol. 9 No. 1 January - April 2011

the respondents with a good level of diarrhea preventive behavior received advice from their neighbors. It also shows that 58.73% of all respondents who received advice from relatives practiced good diarrhea preventive behavior. One third of the respondents (33.33 %) who received advice from friends practiced good diarrhea preventive behavior.

Table 1 Number and percentage of respondents related to diarrhea preventive behavior

Level of Diarrhea Preventive Behavior	Number	Percentage
Good	160	54.42
Poor	134	45.58
Median = 37 , Min = 23 , Max = 39 , Q.D = 3		

Score: Good (≥ 37), Poor (< 37)

Table 2 Relationship between socio - demographic characteristics and diarrhea preventive behavior

Socio - Demographic Characteristics	The level of diarrhea preventive behavior				χ^2 (df)	p - value
	Good		Poor			
	n	%	n	%		
Age						
20 - 29	82	51.57	77	48.43	1.553	0.460
30 - 39	70	56.9	53	43.09	(2)	
40 - 49	8	66.67	4	33.33		
Gender						
Male	38	56.72	29	43.28	0.184	0.668
Female	122	53.74	105	46.26	(1)	
Marital Status						
Married and Widowed	154	53.66	133	46.34	2.831	0.131[F]
Divorced/Separated and Never Married	6	85.71	1	14.29	(1)	

Table 2 Relationship between socio - demographic characteristics and diarrhea preventive behavior (cont.)

Socio - Demographic Characteristics	The level of diarrhea preventive behavior				χ^2 (df)	p - value
	Good		Poor			
	n	%	n	%		
Type of Caregivers						
Mother	115	57.50	85	42.50	15.028	0.005*
Father	32	65.31	17	34.69	(4)	
Grandparents	4	26.67	11	73.33		
Relatives	3	27.27	8	72.73		
Others	6	31.58	13	68.42		
Education						
No formal education and lower than high school	114	55.08	115	44.92	0.344 (1)	0.603[F]
High School and above	19	50.00	19	50.00		
Employment Status						
Employed	138	55.20	112	44.80	0.408	0.523
Unemployed	22	50.00	22	50.00	(1)	
Family income per month						
below 5,000 baht	17	26.15	48	73.85	35.902	<.001*
5,000 - 10,000 baht	113	58.25	81	41.75	(2)	
above 10,000 baht	30	85.71	5	14.29		
Thai Language fluency						
Reading						
None and weak	154	53.66	133	46.34	2.831	0.131[F]
Fair and fluent	6	85.71	1	14.29	(1)	
Writing						
None and weak	154	53.47	134	46.53	5.130	0.333[F]
Fair and fluent	6	100	0	0.00	(1)	
Listening						
None	12	30.00	28	70.00	30.793	<.001*
Weak	75	47.47	83	52.53	(3)	
Fair	63	75.90	20	24.10		
Fluent	10	76.92	3	23.08		

Journal of Public Health and Development
Vol. 9 No. 1 January - April 2011

Table 2 Relationship between socio - demographic characteristics and diarrhea preventive behavior (cont.)

Socio - Demographic Characteristics	The level of diarrhea preventive behavior				χ^2 (df)	p - value
	Good		Poor			
	n	%	n	%		
Speaking						
None	11	57.89	8	42.11	26.080	<.001*
Weak	70	41.92	97	58.08	(3)	
Fair	62	72.09	24	27.91		
Fluent	17	77.27	5	22.73		

[F] Fisher exact test

* p - value < 0.01

Table 3 Relationship between psycho - social factors and diarrhea preventive behavior of respondents

Psycho-Social Factors Characteristics	Level of diarrhea preventive behavior				χ^2 (df)	p - value
	Good		Poor			
	n	%	n	%		
Level of Knowledge of Diarrhea						
Good	7	33.33	14	66.67	11.417	0.003*
Moderate	52	69.33	23	30.67	(2)	
Poor	101	51.01	97	48.99		
Level of Perceptions						
High	32	28.32	81	71.68	54.311	<.001*
Moderate	118	26.71	43	26.71	(2)	
Low	10	50.00	10	50.00		

* p - value < 0.01

Table 4 Relationship between cues to action and the level of diarrhea preventive behavior of respondents

Cues to Action	Diarrhea preventive behavior				χ^2 (df)	p - value
	Good		Poor			
	n	%	n	%		
Media						
TV	25	32.89	51	67.11	21.381	<.001*
Brochure	104	59.43	71	40.57	(2)	
Others	31	72.09	12	27.91		
Advice from Persons						
Thai Health Professionals	27	46.55	31	53.45	15.317	0.009*
Myanmar volunteers	42	47.73	46	52.27	(5)	
Relatives	37	58.73	26	41.27		
Neighbors	33	68.75	15	31.25		
Friends	6	33.33	12	66.67		
Others	15	78.95	4	21.05		

* p - value < 0.01

DISCUSSION

Overall, slightly over half of the respondents (54.42%) had a good level of preventive behavior. Of the five indicators of diarrhea preventive behavior, three (safely disposing of feces, protesting food, and cleaning food containers) showed good level of practice. However, there is some room for further improvement, especially providing safe drinking water to the child and washing hands with soap. The results of the study is consistent with the findings of other previous studies in Thailand which have found that 37.91% of caregivers in rural and of Ratchaburi province had good diarrhea preventive behavior.[6]

Among the socio-demographic variables - type of caregivers, family income, Thai language listening, and Thai language speaking - the findings, with the exception of age, gender, marital status, education, employment status, Thai language reading, and Thai language writing, showed significant relationships between these variables and diarrhea preventive behavior.

The significance of type of caregivers influencing diarrhea preventive behavior can also be seen by the finding that mother was the highest good diarrhea preventive behavior group (see

Journal of Public Health and Development
Vol. 9 No. 1 January - April 2011

Table 2). This finding tend to be supported by other studies, in which a direct relationship was found between type of caregivers and the practice of diarrhea preventive behavior.

The significant contribution of family income to variation with diarrhea preventive behavior might indicate the chance of the study population to practice diarrhea preventive behavior depending on their individual family income. The results relating to family income and diarrhea preventive behavior are congruent with the findings of other previous studies which have found that families with higher income, had higher rates of good diarrheal preventive behavior than those with poor families income status.[7,9,10]

In reference to the variables both of Thai language listening and Thai language speaking and its affect on diarrhea preventive behavior, the findings showed that the level of good diarrhea preventive behavior was markedly increased with increasing abilities of listening and speaking of Thai language.

Psycho-social factors in this study included knowledge and perceptions of individuals which affect their willingness to take voluntary action with regard to diarrhea preventive behavior. The results of the Chi square test of these variables suggest that both knowledge and perception showed significant relationships with diarrhea preventive behavior. These results support the findings of previous studies. For examples Anna C. Gorter (1998), have pointed out that school had a positive influence on general hygiene behavior.[9]

In addition, the study conducted by A.K. Sood and Umesh Kapil (1990) revealed that caregiver knowledge about diarrhea is a possible determinant of caregiver preventive behavior.[11]

In relation to perception, it appear to play an important role in affecting diarrhea preventive behavior. This may have been due to the fact that acute diarrheal disease has been endemic disease within the study's geographic areas and people were much fear and worry. This finding tend to be supported by other studies, in which a direct relationship was found between perception level and diarrhea preventive behavior.[10]

Cues to action were examined in two dimensions : media exposure and advice from persons. The results of the Chi square test suggest that media exposure and advice from persons showed significant relationship with diarrhea preventive behavior. This finding tend to support other previous studies. For example, the study conducted by Sood A.K. and Kapil U. (1990) revealed that caregiver preventive behavior was found to be directly associated with media exposure and advice from persons.[11]

RECOMMENDATIONS

Recommendation for implementation

1. Because Thai language ability was an important factor of good practices, Thai language fluency should be promoted within the Myanmar immigrant community so that its members can understand and assess health information in Thai and Thai health care services.

2. Certain specific strategies for convincing community members to adopt and maintain diarrhea preventive behaviors should be involved in designing diarrhea preventive programs.

3. The health care program should start from the individual level, such as providing good knowledge about diarrhea home management by caregivers, and progress to the community level and national level preventive measures. The promotion and preventive programs should be specific to Myanmar immigrants as most of them may have language barriers.

Recommendation for future research

1. Future research should be carried out about the impact of language difficulties on health.

2. For future research, qualitative research should explore the beliefs, culture and social concerns of Myanmar immigrants concerning diarrhea and its prevention. Future research should be concentrated on actual observation of caregivers' practices regarding diarrhea prevention and relied entirely upon self reported behavior.

3. Specific research with specific caregiver categories such as mothers should also be conducted so as to draw the specific preventive strategies for diarrhea prevention among young children.

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Journal of Public Health and Development
Vol. 9 No. 1 January - April 2011

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