KNOWLEDGE, ATTITUDE AND PRACTICE OF MOTHERS ON EARLY CHILDHOOD DEVELOPMENT IN SLUM AREA OF DHAKA CITY

Md. Ruhullah Siddiqy

Research Officer, Bangladesh Center for Communication Programs (BCCP), Dhaka, BANGLADESH.

¹mruhullahs@gmail.com

ABSTRACT

In the urban slum areas, poverty impact on early childhood development (ECD) and all aspects of life. ECD not only depends on access to food but also influenced by quality of care. Objective of this study is to explore the Knowledge, Attitude and Practice of mothers on early childhood development in slum area of Dhaka city. A cross-sectional slum community based descriptive study was conducted among the slum dwelling 140 mothers who have a youngest child aged less than two years by using systematic random sampling during February to April, 2015. A large number of mothers living in slum area were lacking in knowledge of when basic developmental skills of infants and young children emerge. Most of the respondent <37.9% were between the ages of 26-30 years and about 33% of mothers did not work outside the home. About 70% mothers live in single family and 46% mothers had not formal education. About 30.7% of mothers had average knowledge and very negligible number of mothers had low knowledge (8%) on ECD. More than half of the mothers (53%) had knowledge about exclusive breast feeding and 51% mothers had knowledge about complementary feeding. Mothers' attitude towards ECD 62.9% was moderately favorable and 37.1% mothers had unfavorable attitude. According to the findings it was very much pathetic that none of them any adequate practice of mothers on ECD. More than 75% of mothers were practicing inadequately and 25% of mothers were practicing moderately inadequate on ECD. ECD was found to be associated with mother's education (P < 0.0001) but not with mother's age at birth, mother's occupation, or place of birth. There is a need for health care system interventions, family interventions, and public health education campaigns to promote early childhood development practices, especially in less educated women.

Keywords: Attitude, breastfeeding, knowledge, practice, Slum, Early Childhood Development (ECD).

INTRODUCTION

Early Childhood Development (ECD) is the cornerstone of human development. It is a continuous and individualized process of change in which a child learns to handle ever more complex levels of moving, thinking, speaking, feeling and relating to others. Early Childhood Development (ECD) is a holistic concept that refers to the physical, cognitive, socioemotional, and linguistic development of young children until the time they transition to primary school. [12] Sometimes ECD development does not work properly because of having some factors such as poor health care, malnutrition, abuse, neglect and exploitation; and inadequate care and learning opportunities as well as include some risks. The Sustainable Development Goals now include a specific ECD target (among several other relevant targets for young children) as follows: "By 2030, ensure that all girls and boys have access to quality early childhood development, care, and preprimary education so that they are ready for primary education." Over 200 million children under 5 years of age in low- and middle-income countries – and increasing numbers in OECD countries and emerging economies –

will face inequalities and fail to reach their full developmental potential because they grow up with a broad range of risk factors [13]. Worldwide, maternal under nutrition contributes to 800,000 neonatal deaths annually through small-for-gestational-age births, while stunting, wasting, and micronutrient deficiencies contribute to nearly 3.1 million child deaths annually [14]. Globally, less than 40 per cent of infants are exclusively breastfed and low birth weight is highest in South Asia [13]. In Bangladesh, with a large portion of young children without their adequate physical and mental development, national development is likely to be affected. The majority of the children are deprived of adequate sanitation, information and shelter and a substantial proportion face deprivations in regard to food, health and education.

METHODS

A slum-based cross-sectional study was conducted in an Urban area of Dhaka city. The study sample consisted of 140 poor mothers of children aged less than three years who lived with their family in Badda, Gulshan, Rampura and Mohamadpur Thana where many slums were situated, study site would be purposively selected. Mothers were selected using systematic random sampling. The study was conducted during the period from February 2015 to April 2015. Verbal consent was obtained after the participants had been informed about the study objectives.

Data were collected by using designed well-structured questionnaire completed during face-to- face interviews with the mothers. The Statistical Package for Social Science (SPSS) for Windows (version 17.0) for statistical analysis was used. Seven knowledge related statement were including in questionnaire. For analysis each statement carried out one mark for right answer. The knowledge of the mothers was categorized as follows: Low knowledge (0-50%), Average knowledge (51-75%), and High knowledge (above 76%). The practice of mothers was categorized in to three levels: Inadequate (0-40%), Moderate adequate (41-80%), Adequate (Above 80%).

RESULTS

Total 140 mothers were included in the study. Out of these mothers, 64 (46%) were illiterate and 69 (49%) completed primary and only 7 (5%) completed secondary education. Majority of mothers 53 (37.9%) were found in the age group of 26-30 years, 34 (24.3%) in the age group of 20-25 years and 32 (22.9%) in 31-35 yrs. About 49% of mothers' family income were 5,000-10,000 and 30% mothers' monthly family income were above 10,000 Taka. Most of the mothers 70 (50%) were housewife and 98 (70%) mothers live in single family and only few mothers 42 (30%) live in joint family.

When knowledge about ECD related was assessed it was observed that majority number of mothers 61.4% had higher knowledge and 31% of mothers had average knowledge and very few numbers 739% of mothers had low knowledge. According to Table-2, more than half of mothers (53%) told from the age of 6 month the child should be fed only breast milk and 33% of mother answered the child should be fed only breast milk from the age of 7 month as well as only 7% mother did not know about it. Majority of mothers 48% said exclusive breast feeding is important for contains vitamins and 27% of mothers said it's important for protect the body from disease. On the other hand, most of the mothers 51% said from the age of 6 months and 36% of mothers answered from the age of 7 months to give the baby complementary food.

Table 1. Socio demographic and economic information (n=140)

Variable	Frequency	Percentage (%)
Age category of mother		
20-25	34	24.3
26-30	53	37.9
31-35	32	22.9
>35	21	15.0
Educational category of mother	-	
Illiterate	64	46
Primary	69	49
Secondary	7	5
Monthly income category of fan	nily	
<5000	29	21
5000-10000	69	49
>10000	42	30
Occupation of mother		
Housewife	70	50
Employed	46	33
Others	24	17
Types of family		
Single family	98	70
Joint family	42	30

Table-2 depicts that more than half of the mothers' 54% had not knowledge about the necessity of immunization within one year of birth. There were multiple responses about the subject where maximum proportion of mother' knowledge was about playing 34% and about 31% similar number of mother's knowledge was regarding rhyming. About 33% of mothers had knowledge on kept their child within eye sight and only 27% of mothers had knowledge on safe playing environment and similarly 22% knew about safe sleeping environment.

Table 2. Distribution of knowledge

Variable	Frequency	Percentage (%)
Knowledge on ECD		
Low (0-50%)	11	7.9
Average (51-75%)	43	30.7
High above (>76%)	86	61.4
Knowledge about Exclusive Breast Feeding		
From 3 months	10	7
From 6 months	74	53
From 7 months	50	33
Don't know	6	7
Importance of Exclusive Breast Feeding		
Protect from disease	38	27
Contains vitamins	67	48
Others	14	10
Don't know	21	15
Knowledge about Complementary Feeding		
From 3 months	8	6
From 6 months	72	51
From 7 months	50	36
Don't know	10	7
Knowledge about nutritious food		
Rice, fish, meat and vegetable	86	61
Mashed cereals	33	23
Any food	15	11
Don't know	10	7
Knowledge about immunizations		
Yes	64	46
No	76	54

Knowledge about		
Psychological Stimulation		
Talking	21	15
Singing	15	11
Rhyming	43	31
Playing	48	34
Others	4	3
Don't know	9	6
Knowledge about safe secured environment for child Keep the child within eye sight	46	33
Ensure safe playing environment	38	27
Ensure child safety during sleep	31	22
Don't know	24	17
Knowledge about Hygiene of the child		
Clean hands with soap	136	97
Clean hands only with water	4	3
Knowledge about prevention of child illness Regular child clinic	0	
attendance	8	6
Good personal hygiene	43	31
Good food hygiene	62	44
Keeping surrounding clean	18	13
Don't know	9	6
Sources of health information		
TV	83	59
Radio	35	25
Poster	4	3
Others	18	13

Table-3 shows that 62.9 % (n=88) mothers were moderately favorable and 37.1% (n=52) mothers had unfavorable attitude. Surprisingly, there were no any mothers who had favorable attitude on ECD.

Table 3. Distribution of Mother Based on Attitude Towards ECD

Variable	Frequency	Percentage (%)	
Unfavorable (0-39%)	52	37.1	
Moderately favorable (40-69%)	88	62.9	Mean=39.64 SD=17.90
Favorable (>70%)	0	0	

Table-4shows that 42% of mothers were fully agree that talking, singing with child play an important role in different learning abilities of a child and 41 % mother agree on this and only 17% of mothers had undecided about this question. A 75% mother were fully agree and only 2 % disagree for giving additional food is essential for child's physical and mental growth. A great majority of the mothers 66% said fully agree about keep safe environment for the development of a child and only one percent was undecided. On the other hand, 37% were agree on clean hygiene to prevent diseases in children but 2% mothers were undecided about this statement.

Table 4. Distribution of Mother Based on Attitude Towards ECD Related to Positive Items

Sl. No	Statement	Fully Agree (%)	Agree (%)	Disagree (%)	Undecided (%)	Fully Disagree (%)
1.	Talking, singings, rhyming with child play an important role in different learning abilities of a child	42	41	17	-	-
2.	Give additional food is essential for child's physical and mental growth	75	23	2	-	-
3.	It is necessary to keep safe environment for the development of a child	66	25	8	1	-
4.	Clean and hygiene to prevent diseases in children	6	37	5	2	-

According to the findings of the Table-5, 50% of mothers were agree, 45% fully agree and only 2% of mothers undecided when a child is rude, she should be beaten and otherwise she will not grow to be a human. About 42% mothers were fully agreed and only 1 % fully disagrees and 7% were agree about difficult to prevent child illness.

Table 5. Distribution of Mother Based on Attitude Towards ECD Related to Negative Items

Sl.No	Statement	Fully Agree (%)	Agree (%)	Disagree (%)	Undecided (%)	Fully Disagree (%)
1.	When a child is rude, mother should be beaten, otherwise child will not grow to be a human	45	50	3	2	-
2.	It is difficult to prevent child illness	42	40	9	7	1

According to the findings of the Table-6, it was very much pathetic that there were no any adequate practices of mothers on ECD. More than 75% of mothers were practicing inadequately and 25% of mothers were practicing moderately inadequate on ECD. According to observation 70% of mothers gave additional food, 65% allow to perform those activities she like and only 13% played with the child without toys as well as a large number of mothers 99% had practice to cleaned hand with soap.

Table 6. Practice on ECD

Variable	Frequency	Percentage (%)
Distribution of mother based on Pr	actice on ECD	
Inadequate (0-40%)	105	75
Moderate adequate (41-80%)	35	25
Adequate (>80%)	0	0
]	Mean=30 and SD=17.32	
Distribution of mother based on Pr	actice on ECD regarding	observation
Given additional food to the child besides breast feeding	98	70
To allow a child performing those activities likes most	91	65
Mothers have played with the child without toys	11	13
Cleaned hand with soap before feeding the child and after washing stools	139	99
To ensure safe environment around the child	34	24
Mother's preventive activities for child illness	21	15

It was observed from the Table-7 that highest number of mother 53 (100%) were inadequate practice where age groups were 26-30 ages and 31 (94.1%) were moderate adequate in ECD practice where age group were 20-25 ages. The relationship between age groups of mothers with practices was positive and statistically significant (p=<0.001). Highest number of mother 69 (100%) having inadequate practice was found in the primary education and on the contrary highest number of mother 35 (54.7%) illiterate but practice was moderate adequate. The relationship between education of mothers with practices was positive and statistically significant (p=<0.001). The highest number of mother 57 (82.6%) were inadequate practice where family income were 5000-10000 and 23 (79.3%) were moderate adequate in ECD practice where family income were <5000 Taka. The relationship between family income of mothers with practices was positive and statistically significant (p=<0.001).

It was observed from the Table-7 that highest number of mother 51 (59.3%) having high knowledge but practices were inadequate and 35 (25.0%) were moderate adequate. 43 (100%) mothers have average knowledge but practice were inadequate. The relationship between knowledge of mothers with practices was positive and statistically significant (p=<0.001). The attitude of mothers were 53 (60.2%) were moderately favorable and 52 (100%) were unfavorable where ECD practice of mothers were inadequate. So the relationship between attitude of mothers with practices was positive and statistically significant (p=<0.001).

Table 7. Association of Socio-Economic Status, Knowledge and Attitude with Practice of Mother about ECD

	Pi	Total		
Age -	Inadequate F (%)	Moderate Adequate F (%)	F (%)	
20.25	2	32	34	
20-25	(5.9%)	(94.1%)	(100.0 %)	
26.20	53	0	53	
26-30	(100.0%)	(.0%)	(100.0 %)	
21.25	32	0	32	
31-35	(100.0%)	(.0%)	(100.0 %)	
× 25	18	3	21	
>35	(85.7%)	(3.0%)	(100.0 %)	
Total	105	35	140	
Total	(75.0%)	(25.0%)	(100.0 %)	
ignificant	Chi-square Value=116.246, df=3, P=.000			
	Pi	Total		
Education	Inadequate F (%)	Moderate Adequate F (%)	F (%)	
T11244 -	29	35	64	
Illiterate	(45.3%)	(54.7%)	(100.0%)	
D	69	0	69	
Primary	(100.0%)	(.0%)	(100.0%)	
lacan damı	7	0	7	
Secondary	(100.0%)	(.0%)	(100.0%)	
Total	105	35	140	
i Otai	(75.0%)	(25.0%)	(100.0%)	
ignificant	Chi-square Value=55.417, df=2, P=.000			

	Pi	Total	
Family Income —	Inadequate F (%)	Moderate Adequate F (%)	F (%)
<5000	6	23	29
<3000	(20.7%)	(79.3%)	(100.0%)
5000-10000	57	12	69
3000-10000	(82.6%)	(17.4%)	(100.0%)
> 10000	42	0	42
>10000	(100.0%)	(.0%)	(100.0%)
T-4-1	105	35	140
Total	(75.0%)	(25.0%)	(100.0%)
Significant	Chi-sc	quare Value=61.751, df=2, P=.	000
	Pi	ractice	Total
Knowledge	Inadequate	Moderate Adequate	F (%)
	F (%)	F (%)	
-	11	0	11
Low	(100.0%)	(.0%)	(100.0%)
	43	0	43
Average	(100.0%)	(.0%)	(100.0%)
*** 1	51	35	86
High	(59.3%)	(40.7%)	(100.0%)
	105	35	140
Total	(75.0%)	(25.0%)	(100.0%)
Significant	Chi-so	quare Value=29.302, df=2, P=.	000
	Pi	ractice	Total
Attitude	Inadequate	Moderate Adequate	F (%)
	F (%)	F (%)	
	52	0	52
Unfavorable	(100.0%)	(.0%)	(100.0%)
Moderately	53	35	88
Favorable	(60.2%)	(39.8%)	(100.0%)
1 avorable	105	35	140
Total	(75.0%)	(25.0%)	(100.0%)
Significant	Chi-square Value=27.576, df=1, P=.000		

DISCUSSION

Out of 140 mothers, 64 (46%) were illiterate and 76 (54%) were literate. 49% of mothers' family income were 5,000-10,000 and 30% mothers' monthly family income were above 10,000 Taka. More than half of the mothers had two children (52%) and 47% of mothers did not work outside the home. 70% of mothers live in single family and only few mothers live in joint family.

A knowledge, Attitude and Practice (KAP) survey carried out in 2001 highlighted the need for an ECD project in Bangladesh. This indicated that most caregivers do not know enough about importance of nurturing and age appropriate early learning in early child development, according to 12 guiding principles identified for ECD in Bangladesh. [11] But in this study a large number of mothers living in slum area were lacking in knowledge of when basic development skills of infants and young children emerge and when they should begin to provide simple opportunities that support child development and child rearing. Majority

numbers of mothers had higher knowledge (61%) and 30.7% of mothers had average knowledge and very few number of mothers had low knowledge (8%) on ECD.

This study reveals that highest number of mother 51 (59.3%) having high knowledge but practices were inadequate and 35 (25.0%) were moderate adequate. Another study shows that nearly 80% of the mothers were aware that the time of initiation of breastfeeding should be within ½ hour after labor and 87.6% of the participants knew that colostrums feeding is very nutrient for baby, but these figures were much higher than those reported by Chaudhary et al. [19] who found that only 10% and 25% of mothers knew they had to start breastfeeding within $\frac{1}{2}$ - 1 hour after birth and knew the benefits of colostrums, and this difference could be explained by valuable effort of health professionals who provide advice and support to mothers during antenatal care visits.[19] Another study in Bangladesh, majority of mothers (59%) were found in high weaning knowledge category followed by 37 percent poor weaning knowledge category and 4 percent medium weaning knowledge category. [4] Another study in India it was observed that majority of the subject (62%) knew that weaning should be initiated by 4-6 months of age but only 35% mother initiated it by age of 6 month. Only 18% knew about the harmful effects of delayed weaning and 81% mothers preferred liquid foods for weaning and a statistically significant difference was found among illiterates and literates $(x^2=44.747, p<0.05)$. Many (85%) agreed that baby should take solid food by one year of age. [5]

Mother' attitude towards ECD 62.9 % mothers were moderately favorable and 37.1% mothers had unfavorable attitude. Surprisingly, there were no any mothers who had favorable attitude on ECD. Another study in India as regards weaning, majority (92.5%) of the mothers defined weaning as breastfeeding cessation. Most of the mothers (94.8%) agreed that breastfeeding protect child from infection, 96.1% agreed that it is the healthiest for infant, 76.5% agreed that breast milk lead to loss of figure. Exclusive breast-feeding was found to be associated with mother's education (P < 0.0001) but not with mothers age at birth, mother's occupation, or place of birth. [3] In this study, the attitude of mothers were 53 (60.2%) were moderately favorable and 52 (100%) were unfavorable where ECD practice of mothers were inadequate. The relationship of knowledge and attitude of mothers with practices were positive and statistically significant (p=<0.001).

According to the findings it was very much pathetic that no any adequate practice of mothers on ECD and more than 75% of mothers were practicing inadequately and 25% of mothers were practicing moderately inadequate on ECD. It was observed from the Table-7 that highest number of mother 53 (100%) were inadequate practice where age groups were 26-30 ages. Highest number of mother 69 (100%) having inadequate practice was found in the primary education. In another study finding is that a significant relation between maternal education and exclusive breastfeeding was detected. This was in coherence with Webb et al. [26] who examined the associations between maternal academic skills and indicators for the initiation of exclusive breastfeeding and timely introduction of complementary foods; mothers in highest category of academic skills had greater odds of initiating exclusive breastfeeding.[26]The highest number of mother 57 (82.6%) were inadequate practice where family income were 5000-10000 Taka. The relationship of age, education and family income groups of mothers with practices were positive and statistically significant (p=<0.001). Several studies over the world have shown that breastfeeding is the universal practice. It seems that mothers don't even consider alternative to this.[15,16,17] In the present study also, all the mothers knew that breastfeeding is the best nutritional source for baby. Another study showed that 83.7% of the mothers initiated breastfeeding immediately after delivery, which

was much higher than only 20.9% of mothers start breastfeeding within 1 hour after delivery.[23]

CONCLUSION AND RECOMMENDATIONS

Based on the findings of the present study, it was concluded that slum mothers were high knowledge on ECD, Exclusive Breast Feeding time, Complementary Feeding, about the advantages of breastfeeding for child but most of the mothers were less knowledge about immunizations. Mother attitude towards ECD was moderately favorable but most of the mother had inadequate practice on ECD. However, this might be due to a low level of education. These portions of mothers need to be educated and motivated, promote capacity building workshops, enhance community based ECD programs in slum and also Government & NGOs should promote practice level of mothers.

REFERENCES

- [1] UNICEF. (2006). Programming Experiences in EARLY CHILD DEVELOPMENT (1st Ed.). USA: UNISEF.
- [2] Nelson, C. A. (1997). Bloom fe child development and neuroscience. *Child Development*, 68, 970-87
- [3] Eman, S., Mohammed, E., Ghazawy, R., & Eptesam, E. H. (2014). Knowledge, attitude, and practices of breastfeeding and weaning among mothers of children up to 2 years old in a rural area in el-Minia governorate, Egypt. Journal of Family Medicine and Primary Care, 3(2), 136-140.
- [4] Khan, M. A. S., Hossain, M. M., Banik, A. K. (2007). Factors influencing the weaning knowledge of mothers of under 5 children: A hospital based study. *ORION Medical Journal*, 28, 487-489
- [5] Mohd, S., & Firdous, R. (2013). Knowledge, attitude and practices (KAP) of mothers regarding weaning in rural areas of Karimnagar, Andhra Pradesh, India. *MRIMS Journal of Health Sciences*, 1 (2).
- [6] Walker, S. P., Wachs, T. D., Grantham-McGregor, S. et al. (2011). Inequality in early child: Risk and protective factors for early child development. *The Lancet*, *378* (9799), 1325-1338.
- [7] Roy, S. K., Groot, S., Shafique, S., & Afroz, A. (2002). Perception of mothers and use of breast milk substitutes in Dhaka, Bangladesh. *J health popul nutr*, 20 (3), 264-270.
- [8] National Nutrition Monitoring Bureau. (1979-2006). NNMB Report. Hyderabad: National Institute of Nurition.
- [9] WHO. (2000). Collaborative study team on the role of breastfeeding on the prevention of infant mortality. *Lancet*, *355*, 451–5.
- [10] Jones, G., Stekete, R. W., Black, R. E., Bhutta, Z. A. (2003). Bellagio child survival study group: How many child deaths can we prevent this year? *Lancet*, *362*, 65–71.
- [11] Landsdown, R.G., Goldstein, H., Shah, P.M. et al. (1996). Culturally appropriate measures for monitoring child development at family community level: A WHO collaborative study. *Bulletin of the World Health Organization*, 283-290.

- [12] World Bank. (2016). *Early Child Development*. Available from URL:http://documents.worldbank.org/curated/en/714321468194946196/Early-childhood-development-a-review-of-the-global-evidence.
- [13] UNICEF. (2014). Global databases based on MICS, DHS and other nationally representative surveys 2008-2012, with the exception of India.
- [14] Bhutta, Z., Jai, K. D., Rizvi, A., Gaffey, M. F. et al. (2013). Evidence based interventions for improvement of maternal and child nutrition: What can be done and at what cost? *The Lancet*, 382 (9890), 452–77.
- [15] Ghosh, S. (1997). A practical guide. Delhi: Jaypee Brothers Medical Publishers.
- [16] Saka, A. G., Musayeva, E. M., Ceylan, A., Koeturk, T. (2005). Breast feeding pattern, belief and attitude among Kurdish mothers in Diyarbakir Turky. *Acta Pediatr*, 1303–9.
- [17] Khasawneta, M., Khadu, Y., Amarin, Z., & Alkafeste, A. (2006). Knowledge, attitude and practices of breastfeeding in the North Jordan. *Int Breast Feed J.*, 23,1–17.
- [18] Mohamed, S. A., Mohamed, A. G., Mohamed, E. M., & Khalek, E. M. (2012). Knowledge and practices of working mother about breastfeeding and weaning in Assiut city, Egypt. *Life Sci J.*, *9*, 803–8.
- [19] Chaudhary, R. N., Shah, T., Raja, S. (2011). Knowledge and practice of mothers regarding breast feeding: A hospital based study. *Knowl Pract Breast Feed*, 9, 194–200.
- [20] Walker, R. B., Conn, J. A., Davies, M. J., & Moore, V. M. (2006). Mothers' views on feeding infants around the time of weaning. *Public Health Nutr.*, 9, 707–13.
- [21] Kishore, K. (2008). Knowledge, attitude and practices of weaning among mothers in Gulbarga (MD thesis). Karnataka: Department of Pediatrics, MR Medical College, Ranjiv Gandhi University of Health Sciences.
- [22] Woldegebriel, A. (2002). Mothers' knowledge and belief on breast feeding. *Ethiop Med J.*, 40, 365–74.
- [23] Bhardwaj, S. L., Rathore, M. S., & Paliwal, A. (2012). A study of breast feeding and neonatal care practices in some ethnic communities in Periurban slums at Jaipur, Rajasthan. *Anthropologist*, 14, 459–65.
- [24] Yeggamal, C., & Chitra, K. (2005). Nutritional state of infants of employed and unemployed mothers. *Indian J Nutr Diet*, 42, 47.
- [25] Al-Shoshan, A. A. (2007). Factors affecting mother's choices and decisions related to breast feeding practices and weaning habits. *Pak J Nutr*, 6, 318–22.
- [26] Webb, A. L., Sellen, D. W, Ramakrishnan, U., & Martorell, R. (2009). Maternal years of schooling but not academic skills is independently associated with infant-feeding practices in a cohort of rural Guatemalan women. *J Hum Lact*, 25, 297–306.