

Oral Health Awareness and Actual State of Immigrant Women in Multicultural Families

Seoul-Hee Nam, Jung-Mi Ko, Hyun-Jin Ko, You-Na Kim, Hye-Min Oh, Ji-Yeon Park, Young-Min Lee, Ah-Nyeong Choi and Hye-Young Kim*

Department of Dental Hygiene, Kangwon National University, Samcheok, 25949, Republic of Korea;
miss4228@naver.com, wjdal7374@naver.com, go5213@naver.com, kimyouna5347@naver.com,
zooo6699@naver.com, wldus0568@naver.com, y__min@naver.com, chldksud@naver.com, Khy0606@daum.net

Abstract

Objectives: This study aimed to provide basic data for the improvement and management of the oral health awareness and oral-health-related quality of life of immigrant women in multicultural families. **Methods/Statistical Analysis:** This study targeted a total of 130 immigrant women in multicultural families who participated in the South Korean society adaptation programs at the multicultural family centers. The direct interview methods were used, and a questionnaire translation for each of the subjects' countries of origin was prepared so that the subjects can answer the questionnaires by themselves. The collected data was used the SPSS 19.0 (ver) statistical program. **Findings:** The subject immigrant women in multicultural families in this study were aware of the importance of oral health depending on whether or not they visited a dental clinic after their migration, but even though their migration period was long, as their opportunity to receive education through oral-health-related programs was limited, there were very few persons who received such education. In addition, for the path through which they obtained oral-health-related knowledge, the mass media was the most common. This means that it is difficult for people with economic difficulties to access the oral care institutions in South Korea; thus, the probability that they will obtain unverified related knowledge through the mass media and not through professional education is high. **Improvements/Applications:** Establishment of oral healthcare programs for immigrant women in multicultural families and regional linkage between the multicultural centers and the health centers and dental clinics are urgently needed.

Keywords: Multicultural Families, Migrant Women, Oral Health Behavior, Oral Health Recognition, Quality of Life

1. Introduction

The influx of foreigners residing in South Korea for various purposes, including globalization due to economic development and the Korean Wave culture, has been on a rise of late¹. According to the Korea Immigration Service, the number of foreigners who stayed in South Korea rose from 0.91 million in 2006 to 1.90 million in 2016². In particular, the number of multicultural families in the country has increased due to the influx of foreign workers in the country to address the manpower shortage in the 3D jobs on account of the reduced fertility rate, increased geriatric population, marriage supply-demand imbalance, the changes in the industrial structure, and the

changes in the employment market^{3,4}. The Multicultural Family Support Act defines a "multicultural family" as a family that is formed through the marriage between a Korean and a foreigner, and that therefore consists of a marriage immigrant and his or her spouse as well as their descendants⁵.

According to the foreign resident status data of the Ministry of Security and Public Administration (2015.1), there are 1,741,919 foreign residents currently living in South Korea, who account for 3.4% of the country's total population. Among them, the marriage immigrants number 239,698, including 147,382 marriage immigrants who did not obtain South Korean nationality and 92,316 naturalized persons. Of the marriage immigrants, 232,608

*Author for correspondence

(97%) were females⁶. Moreover, it is estimated that the number of marriage immigrant women will increase to 312,000 in 2020⁷.

Some multicultural immigrant women live a stable life due to their successful marriage, but many of them experience alienation from and conflicts with their families and neighbors because of their maladjustment to the society, including difficulty in communicating, cultural heterogeneity, domestic violence, and difficulty in obtaining citizenship⁸. In addition, most multicultural migrant women fall under the socioeconomically vulnerable class. According to the Nationwide Multicultural Family Survey of the Ministry of Gender Equality and Family (2012), with regard to the average monthly household income of marriage immigrant women in the last year, 31.4% (the largest group) of such households had an average monthly income of 2-3 million won, and 30.9% of such households had an average monthly income of 1-2 million won⁹.

When international marriages or bi-culture families emerged in the 1990s, the newly coined term “multicultural family” started to appear. Multiculturalism then emerged as a culture in South Korea. Although the term “multiculturalism” however, has been used as an official term for 10 years to date, clear policies for promoting the welfare of immigrant women in multicultural families have not yet been developed. As the number of foreign workers and foreigners for international marriage has increased since after 1990, the proportion of multicultural families in the total families in South Korea has become larger, and thus, the South Korean people’s interest in multicultural families has likewise increased. The interest in multicultural families, however, has not been matched by the number of realistic systems for multicultural immigrant women and their families.

In addition, according to¹⁰ oral-health-related education and the medical benefits that are directly linked with appropriate nutritional intake are more vulnerable. The impact of oral health on the systemic health with the sudden change in a person’s eating habits due to immigration and adaptation to another culture is not negligible, but there has been no proper action to address this problem, and the problem is even often accompanied by greater economic burdens, such as the need for tooth extraction due to progression to an oral disease, or the need for prosthetic treatment. To maintain good oral health, investigation of the subjects’ oral health status and identification of their oral health condition, dental-clinic utilization experience, oral hygiene education

experience, and regular check-up are required, but due to their communication problem and economic difficulties, multicultural immigrant women have become largely indifferent to oral health care^{11,12}.

This study focused only on the oral health status of multicultural immigrant women after migration, based on the premise that the multicultural immigrant women must have a favorable oral health status and a high level of oral health awareness so that these could impact their family members. Therefore, this study intended to find ways of improving the oral health of multicultural immigrant women in the future by focusing on their oral health status and awareness after migrating to South Korea. In addition, this study aimed to help improve the quality of life of such women as well as the national oral health through the promotion of the oral health of multicultural family members by providing assistance to them for the improvement of their oral health awareness and management.

2. Materials and Method

2.1 Study Subjects

A survey was conducted targeting immigrant women in multicultural families who were living in Gangwon and Gyeonggi Province in March 2016. The survey was performed after explaining the purpose and details of this study to immigrant women in multicultural families by visiting multicultural centers and their workplaces. The women who were fluent in Korean directly participated in the study, but for the women who were not fluent in Korean, an interview of them was conducted. The total number of subjects was 147, but as the 17 whose questionnaire responses were not complete were excluded from the study, 130 persons were thus finally included in the study.

2.2 Study Method

2.2.1 Survey

A questionnaire was distributed to the study subjects by the investigator’s visit to multicultural support centers in Donghae, Samcheok and Taebaek, a university hospital in Uijeongbu, local children’s centers, and the subjects’ workplaces, such as restaurants. For the survey, inter-

views were conducted. In addition, the questionnaire was translated into the language of each of the subjects' countries of origin so that the subjects could respond to the questionnaire by themselves.

2.2.2 Statistical Analysis

The collected data were analyzed using the SPSS statistical program (ver.19.0). The general characteristics of the immigrant women in multicultural families, their life and dietary habits, their oral hygiene management status, and their oral health awareness and attitude were investigated, and frequency analyses were performed. Additionally, cross-tabulation, correlation analysis, T-test, non-parametric inference, and Chi square test were used for comparison and analysis. The significance level was set to $p < 0.05$.

Table 1. General characteristics (n=130)

Characteristic	Classification	Frequency (%)
Age	15~20	2 (1.5)
	21~25	31 (23.8)
	26~30	27 (20.8)
	31~35	37 (28.5)
	≥36	33 (25.4)
National	China	32 (24.6)
	Vietnam	48 (36.9)
	Cambodia	9 (6.9)
	Philippines	13 (10.0)
	Thailand	7 (5.4)
	Other*	21 (21.6)
South Korea residence period (year)	<1	25 (19.2)
	1~3	33 (25.4)
	3~5	20 (15.4)
	5~10	35 (26.9)
	≥10	17 (13.1)
Present residential area	Donghae	22 (16.9)
	Samcheok	30 (23.1)
	Taebaek	28 (21.5)
	Other**	50 (38.5)
Family life level	Above average	14 (10.8)
	Average	78 (60.0)
	Below average	28 (29.2)

*Russia, Japan, Mongolia, Indonesia, Laos, Uzbekistan, Kazakhstan, Taiwan, Nepal

**Gyeonggi-do

3. Results and Discussion

3.1 General Characteristics

With regard to the ages of the subject multicultural immigrant women in this study, as presented in Table 1, 1.5% were 15-20 years old, 23.8% were 21-25 years old, 20.8% were 26-30 years old, 28.5% were 31-35 years old, and 25.4% were older than 36 years. Thus, the highest percentage of study subjects consisted of those in their 30s. In terms of nationality, 36.9% were Vietnamese, the largest group. As for the length of stay in South Korea, 26.9%, the largest group, have been in the country for 5-10 years, followed by those who have been in the country for 1-3 years (25.4%), less than one year (19.2%), 3-5 years (15.4%), and more than 10 years (13.1%). As for the current areas of residence of the subject multicultural immigrant women, 35.5% were residing in Gyeonggi Province, the largest group, and within Gangwon Province, 23.1% were residing in Samcheok, 21.5% in Taebaek, and 16.9% in Donghae. In terms of the family life level of the subject multicultural immigrant women, 60% had an average level, the largest group, followed by an average-below average level (15.4%), a below average level (13.8%), an average-above average level (10.0%), and an above average level (0.8%).

3.2 Difference in the Perception of the Importance of Oral Health Depending on the Experience of Dental Visits after Migration

The difference in the perception of the importance of oral health depending on the experience of dental visits after migration was investigated. As presented in Table 2, the t value was -3.267 and the significance level was 0.001. Thus, there was a difference depending on the experience of dental visits. Furthermore, in the investigation of the need for dental treatment, 50.8% answered "Yes" and 49.2% answered "No," showing that many immigrant women are negligent of their oral health care. The immigrants showed a tendency to underestimate their oral health care ability, however, and they are less concerned about the value of healthy teeth and even of taking care of their natural teeth, which is compounded by the fact that limited medical services are provided for them^{12,13}. Moreover, in terms of the subjective oral health status³, 78.9% of the immigrant women in multicultural fami-

Table 2. Oral health significance difference in the presence or absence of dental visits after migration

	After migrating to South Korea whether with hospital admission	Frequency (%)	Mean±SD	p
Oral health importance	Yes	85 (65.4)	1.46±0.85	0.001*
	No	45(34.6)	2.04±1.20	

t-test (*p<0.05)

lies answered “good,” and 78.4% answered “good” in this study.

3.3 Subjective oral condition and experience of avoidance of a person due to oral problems

As presented in Table 3, the subjective oral condition was correlated with avoidance of a person due to oral problems, showing a .0402 significance level. This means that the subjects who had a greater experience of not wanting to meet other people due to oral problems also had a negative subjective oral condition.

Table 3. Adults avoided due to the subjective experience of oral health and oral problems

	Subjective oral condition	Personal experience of evasion due to oral problems
Oral subjective state	1	.0402**
Personal experience of evasion due to oral problems	.0402**	1

Pearson correlation coefficient (**p>0.05)

3.4 Difference in the presence of brushing education depending on the migration period

The results of the cross-tabulation to determine the difference in the presence of brushing education depending on the migration period are presented in Table 4. Among the 30% of the subjects who answered that they received brushing education after their migration, 10% have been in South Korea for 5-10 years, the largest group; 6.2%,

for more than 10 years; 5.4%, for 1-3 years; 4.6%, for 3-5 years; and 3.8%, for less than one year. On the other hand, among the 70% of the subjects who answered that they did not receive brushing education after their migration, 20% have been in South Korea for 1-3 years, the largest group; 16.9%, for 5-10 years; 15.4%, for less than one year; 10.8%, for 3-5 years; and 6.9%, for more than 10 years. These results, however, were not statistically significant (p>0.05).

3.5 Difference in the Awareness of Dental Care Need Depending on the General Characteristics

As presented in Table 5, with regard to the length of stay in South Korea, 24% of the subjects who have been in South Korea for less than one year, 48.4% of those who have been in the country for 1-3 years, 75% of those who have been in the country for 3-5 years, 62.8% who have been in the country for 5-10 years, and 41.1% of those who have been in the country for more than 10 years answered that dental care was necessary. The longer the length of stay of the subject group in South Korea was, the higher the proportion of the subjects who answered that dental care was necessary. The difference was statistically significant (p<0.05). With regard to the standard of living, 35.7% answered “upper”; 52.5%, “medium”; and 52.6%, “lower.” The response rates of “medium” and “lower” were high, but the difference was not statistically significant (p=0.323). In terms of the age, 50% of the 15- to 20-year-old subjects, 32.2% of the 21- to 25-year-old subjects, 44.4% of the 26- to 30-year-old subjects, 62.1% of the 31- to 35-year-old subjects, and 45.4% of the subjects older than 36 years answered that dental care was necessary. The difference was not statistically significant (p=0.096).

Table 4. Cross-training analysis of the presence or absence of brushing after migration along the migration period

Characteristic	Division	Two-week duration (years)					All	p
		<1	1~3	3~5	5~10	10≤		
Brushing education after migration	Have	5 (3.8)	7 (5.4)	6 (4.6)	13 (10.0)	8 (6.2)	39 (30.0)	.236
	None	20 (15.4)	26 (20.0)	14 (10.8)	22 (16.9)	9 (6.9)	91 (70.0)	

Table 5. Perception of the need for dental care by general characteristic

Characteristic	Division	Frequency (%)	Perception of dental care need		p
			Necessary (%)	Unnecessary (%)	
Residency (year)	<1	25 (19.2)	6 (24.0)	19 (76.0)	0.006*
	1~3	33 (25.5)	16 (48.4)	17 (51.6)	
	3~5	20 (15.4)	15 (75.0)	5 (25.0)	
	5~10	35 (26.9)	22 (62.8)	13 (37.2)	
	10≤	17 (13.0)	7 (41.1)	10 (58.9)	
Standard of living	Higher	14 (10.8)	5 (35.7)	9 (64.3)	0.323
	Medium	78 (60.0)	41 (52.5)	37 (47.5)	
	Lower	38 (29.2)	20 (52.6)	18 (47.4)	
Age (three)	15~20	2 (1.5)	1 (50.0)	1 (50.0)	0.096
	21~25	31 (23.9)	10 (32.2)	21 (67.8)	
	26~30	27 (20.8)	12 (44.4)	15 (55.6)	
	31~35	37 (28.5)	23 (62.1)	14 (37.9)	
	36≤	33 (25.3)	15 (45.4)	18 (54.6)	

Chi square test (*p<0.05)

Table 6. Experience of not receiving dental care by general characteristic

Characteristic	Division	Frequency (%)	Experience		p
			Yes (%)	No (%)	
Residency (year)	<1	25 (19.2)	10 (40.0)	15 (60.0)	0.026*
	1~3	33 (25.5)	15 (45.4)	18 (54.6)	
	3~5	20 (15.4)	14 (70.0)	6 (30.0)	
	5~10	35 (26.9)	13 (37.1)	22 (62.9)	
	10≤	17 (13.0)	3 (17.6)	14 (82.4)	
Standard of living	Higher	14 (10.8)	3 (21.4)	11 (78.6)	0.098
	Medium	78 (60.0)	30 (38.4)	48 (61.6)	
	Lower	38 (29.2)	22 (57.8)	16 (42.2)	
Age (three)	15~20	2 (1.5)	1 (50.0)	1 (50.0)	0.540
	21~25	31 (23.9)	16 (51.6)	15 (48.3)	
	26~30	27 (20.8)	8 (29.6)	19 (70.4)	
	31~35	37 (28.5)	15 (40.5)	22 (59.5)	
	36≤	33 (25.3)	15 (45.4)	18 (54.6)	

Chi square test (*p<0.05)

3.6 Difference in the Experience of Not Receiving Dental Care Depending on the General Characteristics

As presented in Table 6, 40% of the subjects who have been in South Korea for less than one year, 45.4% of those who have been in the country for 1-3 years, 70% of those who have been in the country for 3-5 years, 37.1% of those who have been in the country for 5-10 years, and 17.6% of those who have been in the country for more than 10 years answered that they could not receive dental care when it was necessary. The difference was statistically significant ($p < 0.05$). With regard to the standard of living, 21.4% of the subjects with a “higher” standard of living, 38.4% of those with a “medium” standard of living, and 57.8% of those with a “lower” standard of living answered that they had such experience. The lower the subject group’s standard of living was, the higher the proportion of subjects who answered that they could not receive dental care, but there was no statistically significant difference ($p = 0.098$). As for the age, 50% of the 15- to 20-year-old subjects, 51.6% of the 21- to 25-year-old subjects, 29.6% of the 26- to 30-year-old subjects, 40.5% of the 31- to 35-year-old subjects, and 45.4% of the subjects older than 36 years answered that they could not receive dental care. The distributions depending on the age group were similar ($p = 0.540$).

3.7 Experience of Dental Education after Migration

As presented in Table 7, with regard to the experience of dental education depending on the length of stay in South Korea, 20% of the subjects with a less-than-1-year stay, 21.2% of those with a 1- to 3-year stay, 30% of those with a 3- to 5-year stay, 37.2% of those with a 5- to 10-year stay, and 47.1% of those with a more-than-10-year stay answered that they received dental education. There was no statistically significant difference, but in general, the longer the length of stay in South Korea was, the higher the dental care experience ($p = 0.230$). With regard to the standard of living, 14.3% of the subjects with a “higher” standard of living, 25.7% of those with a “medium” standard of living, and 44.7% of those with a “lower” standard of living had experience of dental education, and the difference was statistically significant ($p < 0.05$). As for the age, 0% of the 15- to 20-year-old subjects, 16.1% of the 21- to 25-year-old subjects, 48.2% of the 26- to 30-year-

old subjects, 35.1% of the 31- to 35-year-old subjects, and 30.3% of the subjects older than 36 years had experience of dental education, but the difference was not statistically significant ($p = 0.227$).

Furthermore, this study’s results on the perception of the importance of oral health of immigrant women in multicultural families are as follows: “very important,” 61.5%; “important,” 20.8%; “average,” 9.2%; “not important,” 6.9%; and “very unimportant,” 1.5%. The study results showed that many of the subjects thought that oral health is very important, but 50% of the subjects were using oral hygiene accessories, which was lower than expected. Additionally, the “dental education experience rate,” including brushing education, was 30.0%, which was more than twofold lower than the “South Koreans” education experience rate” (68.0%). Moreover, the higher the perceived importance of oral health was, the higher the perceived “need for an oral health center” (77.7%). Therefore, various and extensive dental health education programs are required for multicultural immigrant women after migration.

3.8 Presence of the Experience of Not Receiving Dental Care Depending on the Standard of Living

As presented in Table 8, there was a statistically significant difference in the presence of the experience of not receiving dental care depending on the standard of living (higher, medium, lower) ($p < 0.05$). This result provides a basis for the theory that the standard of living affects the experience of not receiving dental care.

In the subjective oral health condition, 47.5% of the subjects had “experience of not receiving dental care when it was necessary”³. In this study, with regard to the item “impossible to visit a dental clinic” 42.3% answered “Yes” and 57.7% answered “No” Among the subjects who answered “Yes” 24.6% answered that they could not visit a dental clinic due to the “cost burden because they do not have insurance,” 8.5% due to “fear of dental treatment,” 4.6% due to “lack of time” and 4.6% due to “communication burden”. This shows that the proportion of immigrant women in multicultural families who could not visit a dental clinic due to “economic burden” was the highest. According to¹⁴ multicultural immigrant women have difficulty receiving dental care because they do not know how to obtain medical insurance. In the case of employed multicultural immigrant women, according to

Table 7. Dental education after migration

Characteristic	Division	Frequency (%)	Educational experience		p
			Yes (%)	No (%)	
Residency (year)	<1	25 (19.2)	5 (20.0)	20 (80.0)	0.230
	1~3	33 (25.5)	7 (21.2)	26 (78.8)	
	3~5	20 (15.4)	6 (30.0)	14 (70.0)	
	5~10	35 (26.9)	13 (37.2)	22 (62.8)	
	10≤	17 (13.0)	8 (47.1)	9 (52.9)	
Standard of living	Higher	14 (10.8)	2 (14.3)	12 (85.7)	0.033*
	Medium	78 (60.0)	20 (25.7)	58 (74.3)	
	Lower	38 (29.2)	17 (44.7)	21 (55.3)	
Age (three)	15~20	2 (1.5)	0 (0.0)	2 (100.0)	0.227
	21~25	31 (23.9)	5 (16.1)	26 (83.9)	
	26~30	27 (20.8)	13 (48.2)	24 (51.8)	
	31~35	37 (28.5)	13 (35.1)	24 (64.9)	
	36≤	33 (25.3)	10 (30.3)	23 (69.7)	

Chi square test (*p<0.05)

Table 8. Experience of not receiving dental care in accordance with the standard of living

	Standard of living	Frequency	Average ranking	Test Statistic ^{a,b}
No experience of receiving dental care	Higher	14	79.07	6.704
	Medium	78	68.00	2
	Lower	38	55.37	.035*
	All	130		

Kruskal's Wallis test, non-parametric inference (*p<0.05)

Table 9. Experience of not receiving dental care in accordance with the standard of living

	Standard of living	Frequency	Significance level=0.05 for the subset	
			1(A)	2(B)
One-way ANOVA Duncan ^{a,b}	Lower	38	1.42	
	Medium	78	1.62	1.62
	Upper	14		1.79
	p		.144	.200

the National Health Insurance Act amended in July 2015, foreigners who have a job are eligible for the workplace health insurance, and to be covered by the national health insurance, a separate application must be submitted. Most multicultural immigrant women are working at a small company, and the employers do not apply for their health insurance due to economic burden, or do not know the existence of such regulation.

As the international marriage rate has rapidly increased of late in the South Korean society, multicultural communities have emerged. Accordingly, major social problems related to multicultural immigrant women and their families have emerged. Most of their problems are caused by their economic vulnerability, and as economic vulnerability is directly linked with health vulnerability, improvement of oral health care needs to be emphasized

as a part of the comprehensive public health program for such women¹⁵.

3.9 Experience of not receiving dental care depending on the standard of living

As presented in Table 9, for post-hoc analysis after ANOVA analysis, the Duncan test was conducted. As a result, the subjects with a “medium” standard of living did not show a statistically significant difference from the other groups, but there was a difference between those with a “lower” standard of living and those with a “higher” standard of living, and the mean number of those with a “lower” standard of living was smaller. That is, the two groups, A and B, had a distinct difference between them. Therefore, there was a statistically significant difference in terms of the experience of not receiving dental care depending on the standard of living.

4. Conclusion

In summary, the subjects were aware of the importance of oral health depending on whether or not they visited a dental clinic after migration. Even though their migration period was long, however, as their opportunity to receive education through oral-health-related programs was limited, very few subjects received education. In addition, for the path through which they obtained oral-health-related knowledge, the mass media was the most common. This means that people with economic difficulties cannot directly visit a dental clinic; thus, they obtain unverified knowledge through the mass media and not through professional education.

Therefore, the expansion of the opportunities for people with economic difficulties to receive professional education is urgently needed. It is believed that this study can serve as a basis for the development of education programs that can cultivate the recipient's interest in, and can motivate them to pursue, improvement of their oral health awareness and oral health care practice.

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