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Is Acculturation Always Adverse to Korean Immigrant Health in the U.S.?

분화된 문화적응과 이민자의 건강수준 변화: 미국 내 한국 이민자를 중심으로

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서울대학교 대학원

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라 채 린

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Abstract

Is Acculturation Always Adverse to Korean Immigrant Health in the U.S.?

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Background: This study examined the different health trajectories of Korean immigrant population in the U.S., utilising the concept of segmented assimilation theory.

Methods: California Health Interview Survey (CHIS) Public Use Files 2005 and 2007 were combined and used. Health outcomes and behaviours of two subgroups categorised by educational attainments (high school graduation or less, and college or more) were evaluated adjusting for sex, age, marital status, household income and self-reported English proficiency. The independent variable was the proportion of life time spent in the U.S, and both health behaviours (current smoking status and regular physical activities) and health outcomes (general health status, psychological distress and disability)

were used as dependent variables.

Results: The highly educated immigrants had lower probabilities of being unhealthy and unhealthy behaviours as immigrants stay longer in the U.S. whereas the probabilities in less educated groups tended to increase as the proportion of life spent in the U.S. increases.

Conclusions: The results may be a strong evidence of segmented assimilation that low SES immigrants experience a deteriorating health trajectory while high SES immigrants experience a progressive health trajectory as they are more acculturated to the U.S. society.

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Keywords: Acculturation; Segmented Assimilation; Immigrant Health; Korean Immigrants

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1. INTRODUCTION

1.1 Background

Korean Americans are one of the fastest growing segments of the immigrant population in the U.S. [1]. The number of Korean immigrants in the United States grew 27-fold between 1970 and 2007, from 38,711 to 1.0 million [2]. Furthermore, there are approximately 1.4 million Korean Americans in the United States, and they are projected to increase in the future [3]. The tremendous growth in the number of Korean immigrants to the United States has led to increased interests in their health [4-9]. Despite the demographic trends, Korean immigrants in the United States are relatively invisible in previously published health research literature.

The relative homogeneity of their nation of origin distinguishes Korean Americans from other immigrant groups [5]. Various demographic, cultural and socioeconomic characteristics reveal the unique features of Korean Americans amongst immigrants in the United States. First, Korean immigrants have a relatively short immigration history.

Korean immigration to the United States began in earnest in 1880's, although the majority came after the Immigration Reform Act of 1965 [10, 11]. However, Korean immigrants have achieved economic success within a short period of time and now share acculturation-related problems with other ethnic groups [12]. They are usually located in or near large cities with Korean enclaves and tend to maintain their ethnic identity [10, 11]. Lastly, a high proportion of Korean immigrants (58%) are currently engaged in self-employed small business compared to the more modest self-employment rates of Chinese (18%) and Mexican (9%) immigrant populations [13].

Therefore, it is obvious that Korean immigrants should be considered and studied separately from other immigrant subgroups in order to thoroughly understand salient risk factors or barriers, which influence the health status and health behaviours of this unique and fast growing population.

1.2 Theoretical Framework and Literature Review

1.2.1 Epidemiologic Paradox or Immigrant Health Paradox

There has been robust evidence that low socioeconomic status is a significant risk factor on population health, associated with worse population health and higher mortality rates [30]. Unlike other socioeconomically disadvantaged minority groups, the early researches on immigrant health suggested the existence of an "epidemiologic paradox" or "immigrant health paradox" [31]. They refer to the epidemiological finding that Hispanic and Latino immigrants tend to have better health outcomes than those of their U.S. born white and more acculturated counterparts [32]. The same patterns have also been observed in Asian Americans and immigrants [31].

1.2.2 Hypotheses for Epidemiologic Paradox

Several hypotheses have been suggested to explain epidemiologic paradox – healthy migrant effect, salmon bias and acculturation theory. Potential explanations offered for the epidemiologic paradox focused on the “healthy migrant effect”, which hypothesises that the selection of healthy immigrants into the U.S. is the reason for the paradox [30-33]. Another popular hypothesis is called the “salmon bias”. This claims that many immigrants return to home country after temporary employment, retirement or severe illness, meaning that their deaths occur in their countries of origin, and are not taken into account by mortality reports in the U.S [31, 33]. Both theories above mentioned may be understood as selection bias, the term often used in epidemiology. Besides, acculturation theory has recently been widely used to describe the epidemiologic paradox.

1.2.3 Acculturation Theory

Acculturation has often been considered as an important predictor of health in a number of studies on immigrant health. In order to understand how acculturation changes occur in the United States, the conventional acculturation model (or uni-dimensional model of acculturation) has been prevailing. According to this hypothesis, immigrants who are selectively healthy at the time of immigration tend to adopt health-deteriorating American culture and behaviours as their acculturation proceeds. These changes are thought to be linear and uniform or what has been termed "straight line assimilation" [14-16].

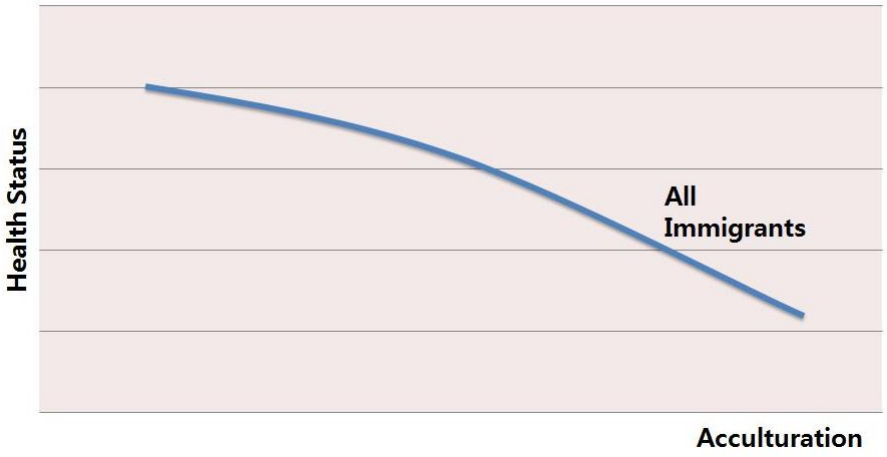

Figure 1. Uni-dimensional Acculturation

However, it has been often questioned that all immigrants should experience the same process to adapt to a dominant culture. Whilst the uni-dimensional model might have worked for early groups of immigrants to the United States, this does not appear to be the case for recent migrants in the U.S. [14]. In addition, this theoretical framework is constructed at the grand level to predict macro processes and general patterns of social mobility; it thus lacks explanatory power on how to deal with the varied and disparate outcome of a given process or pattern for diverse ethnic groups and their members who display diverse socioeconomic characteristics themselves [17].

Thereafter, a concept of segmented assimilation has been introduced [17, 18]. According to this concept, it is argued that assimilation is dependent on a number of factors including social characteristics of immigrants (e.g. race, nationality, socioeconomic status (SES) and time/age at immigration), which together contribute to a non-linear, non-unidirectional assimilation outcome [17-19]. Instead, assimilation may result in a number of other possible outcomes where people and individuals may be assimilated into different segments of the society [14].

One of the segmented assimilation theory often used is the one proposed by Portes and Zhou (1993). Their segmented assimilation theory offers a theoretical framework for understanding the process by which the immigrants become incorporated into the system of stratification in the host society and the different outcomes of this process (Zhou, 1997). This theory posits three possible pathways. One of them replicated the time honoured portrayal of growing acculturation and parallel integration into the white middle-class; a second leads straights into the opposite direction to permanent poverty and assimilation into the underclass; still a third associates rapid economic advancement with deliberate preservation of the immigrant community's values and tight solidarity (Portes & Zhou, 1993).

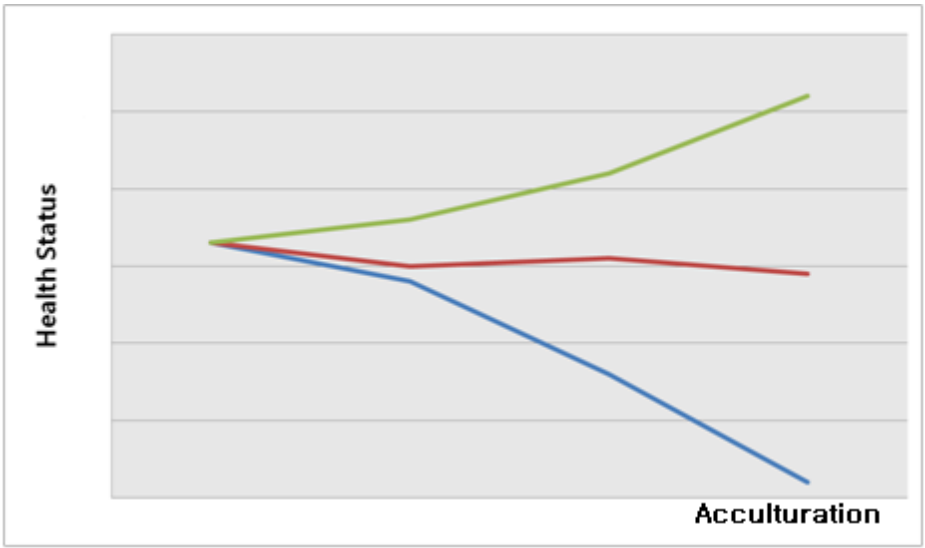

Figure 2. Segmented Assimilation Theory on Health

Most studies of the assimilation process focus on socioeconomic outcomes, however, several health outcomes also exhibit patterns that are at odds with the conventional uni-dimensional model [20-22]. Despite the strength of the evidence demonstrating the existence of the epidemiological paradox, the segmented assimilation processes underlying initial socioeconomic differences in health outcomes and behaviours remain poorly understood. Nonetheless, there is a growing interest in ascertaining the mechanisms through which assimilation influences health outcomes and behaviours [23]. To do so, it requires empirical study of how the health trajectories differ across socioeconomic status of immigrants at the time of arrival in the United States.

1.3 Objectives

Accordingly, the purpose of this study is to empirically examine the different health trajectories of Korean immigrant population, utilising the concept of segmented assimilation theory. Hypotheses are (1) Korean immigrants whose SES were low at the time of immigration show a deteriorating health trajectory as they are acculturated to the U.S. society, and (2) Korean immigrants whose SES were high at the time of immigration show a progressive or at least non-deteriorating health trajectory as their acculturation process proceeds.

To test the two hypotheses, our analysis focuses on the impact of educational attainment of Korean immigrants at the time of arrival and on the implications of those differences for their health outcomes and behaviours as the duration of stay in the U.S. increases. It has been known that a fundamental determinant of the assimilation pathway taken by an immigrant group is the level of resources available to its members at the time of immigration [14, 17], and educational attainment is one of the most important resources which may influence the immigrant health.

2. METHOD

2.1 Data

This study used data from California Health Interview Survey (CHIS). Detailed information about the sampling methodology, imputation methods for missing data, cultural adaptation and translation of the survey are available (www.chis.ucla.edu) [24].

We combined CHIS Public Use Files 2005 (n=551) and 2007 (n=582) together to increase the sample size of Korean immigrant populations. The sample for these analyses was restricted to Korean immigrant adults aged 25 or older who reported their ethnicity as Korean. The sample is weighted to account for the complex sample design and to be representative of California's population in terms of age, sex, race and ethnicity and rural-urban residence [24].

2.2. Measures

2.2.1 Health Outcomes and Behaviours

We used proportion of life spent in the United States as a proxy measure of acculturation. Proportion of life spent in the United States was categorised into four groups (0-20%, 21-40%, 41-60% and 61-99%). Participants who spent their entire lifetime (100%) in the United States were excluded since this population was not our interest in this study.

General health status was assessed by asking respondents, 'Would you say that in general your health is excellent, very good, good, fair or poor?' We combined responses of excellent, very good and good together as 'good' health and fair and poor together as 'poor' health. Both CHIS 2005 and 2007 included Kessler 6 (k6) scale, a well known qualifier of non-specific psychological distress. A K6 score of 8 or more was considered moderate to very high risk [26]. Thus, it was dichotomised into people at 'no risk' and at 'moderate or higher risk'. Disability status due to physical, mental or emotional condition was assessed six health domains for respondents (adapted from American Community Survey, those who were 65 or over who had difficulty working at a job were excluded). It was coded into 'disabled' and 'not disabled'.

Health behaviours were assessed by two variables: regular physical activity and current smoking status. Regular physical activities were measured by the alternative responses (yes or no) for the following question, 'During the last 7days, did you do any moderate physical activities in your free time for at least 10 minutes?' Current smoking status was coded into current smoker or not current smoker.

2.2.2 Demographics

Survey items also consisted of demographic characteristics including age, sex, marital status, educational attainment, household income, English language proficiency and proportion of life spent in the United States. Age was recorded into four categories (25-39, 40-54, 55-64 and 65+). Current marital status was recorded into 'currently married' or 'currently not married'. Household income was recorded into four categories (1^{st} to 4^{th} quartiles; 0-18,000, 18,000-40,000, 40,000-80,000 and 80,000 or more respectively). English language proficiency was recorded into three categories (speak only English, very well/well and not well/not at all). Immigrant's socioeconomic status (SES) at the time of immigration was measured by the educational attainment. Educational attainment was dichotomised into two subgroups – high school graduation or less (less educated group), and college or more (highly educated group).

2.3 Statistical Analysis

All analyses were performed using SAS 9.2 to account for CHIS complex sampling design and to obtain proper variance estimations. SAS syntax provided by the UCLA Center for Health Policy Research was used to take into accounts its unique weighting and estimation of variance schemes (www.chis.ucla.edu/methods). Logistic regression was conducted to investigate the probabilities of being unhealthy (poor general health status, psychological distress and disability) and of unhealthy behaviours (regular activity and smoking status) adjusted for sex, age, marital status, poverty level and language proficiency.

3. RESULTS

3.1 Demographic Characteristics of Participants

Table 1 presents weighted percentage distributions of all independent variables for three groups (aggregate and two subgroups). Some differences between the two populations were found in several variables. The proportion of female was significantly higher (n=262, 68.32%) than that of male (n=98, 31.68%) in 'high school graduation or less' group. It is obvious that high proportion of older people (65 or older, 24.71%) was in 'high school graduation or less' group whilst only 8.5% of the same age group was included in 'college or more' group. Household income showed a significant difference between the two subgroups since educational attainment is a significant predictor of income (While 39.66% of respondents were included in 1st percentile of household income in 'high school graduation or less' group, only 12.58% were in 'college or more' group). Current marital status and proportion of life spent in the U.S. were almost equal between the two subgroups.

Table 1. Socio-demographic Characteristics of Sample

	Korean Americans					
	Total		High school graduationor less		College or more	
	N	%	N	%	N	%
Sex						
Male	408	41.68	98	31.68	310	46.25
Female	725	58.32	262	68.32	463	53.75
Age						
25-39	265	33.2	37	16.19	228	40.96
40-54	381	37.49	91	36.68	290	37.86
44-64	170	15.69	65	22.43	105	12.61
65+	317	13.62	167	24.71	150	8.56
Marital Status						
Currently not married	269	24.37	143	30.67	126	21.49
Currently married	864	75.63	217	69.33	647	78.51
Household Income						
1st percentile	299	21.07	180	39.66	119	12.58
2nd percentile	256	21.42	91	28.11	165	18.37
3rd percentile	305	30.23	56	20.76	249	34.56
4th percentile	273	27.28	33	11.47	240	34.5
Proportion of life spent in the U.S.						
0-20%	264	23.28	68	22.01	196	23.86
21-40%	369	26.77	159	34.96	210	23.03
41-60%	351	31.79	113	32.17	238	31.61
61-99%	149	18.17	20	10.87	129	21.5
English Proficiency						
Not well/not at all	675	53.59	296	76.97	379	42.91
Very well/well	384	37.37	52	18.52	332	45.98
Speak only English	74	9.04	12	4.51	62	11.11
Unweighted N	1133		360		773	

Descriptive results of acculturation variable for both groups are also presented in Table 1. Lifetime spent in the U.S. is almost evenly distributed across three categories (0-20, 21-40 and 41-60%), but only 10.87% and 21.5% respondents in each group reported to live in the U.S. 61% or more in their lifetime. In both subgroups, only a few Koreans (4.51%) reported ‘speak only English’ whereas very high proportion (76.97%) of respondents in ‘high school graduation or less’ group consisted of ‘not well/not at all’ category.

3.2 Characteristics of participants with health outcomes and behaviours

Table 2 provides unweighted frequency and weighted probabilities of each dependent variable adjusted for age. From the table, people belong to the less educated group seem to have inferior health outcomes compared to those in highly educated group. Furthermore, highly educated immigrants appeared to enjoy more favourable health behaviours than less educated immigrants regarding smoking and regular activity.

Table 2. Unweighted Frequency and Weighted Probabilities of Dependent Variables (Age Standardised)

	Korean Americans					
	Total		High school graduation or less		College or more	
	N	%	N	%	N	%
Disability						
Disabled	285	22.35	136	28.46	149	19.79
Psychological Distress						
Moderate or Higher Risk	226	20.67	97	30.60	129	15.50
General Health Status						
Poor Health	364	28.05	189	43.04	175	20.39
Smoking Status						
Currently Smoking	155	17.16	56	25.81	99	14.01
Regular Activity						
Moderate Physical Activity	934	83.05	288	78.13	646	86.17
Unweighted N	1133		360		773	

3.3 Acculturation and Health Outcomes

Table 3 presents the adjusted coefficients for health outcomes. In the aggregate Korean immigrant group, the coefficients of three health outcomes tend to increase as the longer life in the United States compared to relatively new immigrants (0-20%). The results appeared to support the conventional acculturation theory. However, the coefficients in the subgroups categorized by the educational attainment (high school graduation or less, and college or more) showed notably opposite patterns. The probabilities of being unhealthy in the highly educated immigrants move downwards as acculturation process proceeds whereas the probabilities in less educated group tend to increase as the longer life in the U.S.

Table 3. Adjusted Coefficients in Logistic Analysis of Health Outcomes

	Health Outcomes								
	Poor General Health Status			Psychological Distress			Disability		
	Total	High school or less	College or more	Total	High school or less	College or more	Total	High school or less	College or more
Sex									
[Male]	0	0	0	0	0	0	0	0	0
Female	0.387	**0.635***	0.101	0.311	0.119	0.137	**0.765*****	**0.909****	**0.643***
Age									
[25-39]	0	0	0	0	0	0	0	0	0
40-54	**0.769***	0.427	0.445	**0.868****	**1.809***	0.395	**1.275*****	**1.368****	**1.081****
55-64	**1.078****	0.811	**1.083***	0.196	0.718	0.238	**1.127****	**1.164†**	**1.060†**
65+	**1.221*****	**1.149†**	**1.363*****	0.093	1.149	-0.3	**2.081*****	**1.766****	**2.433*****
Current Marital Status									
[Unmarried]	0	0	0	0	0	0	0	0	0
Married	**-0.796****	**-0.862***	**-0.814***	0.142	-0.378	0.69	-0.389	**-0.823***	-0.233
Household Income									
[1st quartile]	0	0	0	0	0	0	0	0	0
2nd quartile	-0.066	0.394	0.208	**-0.674†**	-0.203	-0.439	-0.418	-0.063	-0.516
3rd quartile	**-0.951****	-0.334	-0.594	**-1.248*****	-0.583	**-0.945†**	**-0.915****	-0.988	-0.639
4th quartile	**-1.125*****	**-1.407***	-0.561	**-1.590*****	**-2.186†**	**-1.136***	**-1.093****	**-1.467***	-0.835
Proportion of life spent in US									
[1-20%]	0	0	0	0	0	0	0	0	0
21-40%	0.227	0.46	0.045	0.25	0.404	0.204	0.087	0.091	0.02
41-60%	-0.258	**0.991***	**-1.148****	-0.095	0.697	-0.484	-0.014	0.085	-0.102
61-99%	0.352	**4.276*****	-0.823	0.236	**3.569*****	**-1.263****	**1.292****	**3.124*****	**0.851†**
English Proficiency									
[Not well/not at all]	0	0	0	0	0	0	0	0	0
Very well/well	**-0.71***	**-1.27***	-0.512	-0.33	-1.247	-0.212	-0.07	-0.357	-0.132
Speak only English	-0.98	**-3.593***	-0.363	-0.007	0.398	0.361	-0.731	-0.889	-0.857
Unweighted N	1133	360	773	1133	360	773	1133	360	773

†$p<.10$; *$p<.05$; **$p<.01$;***$p<.001$

3.4 Acculturation and Health Behaviours

Table 4 presents the adjusted the probabilities of health behaviours – regular physical activity and current smoking status. The results showed similar patterns to the health outcomes. The coefficients of doing regular physical activity in aggregate group presented that immigrants are less likely to do physical activity as they live longer in the U.S. However, it is exceptionally clear that less educated group tend to exercise less as they are more acculturated whereas highly educated people do more as the duration of stay in the U.S. increases (Figure 3).

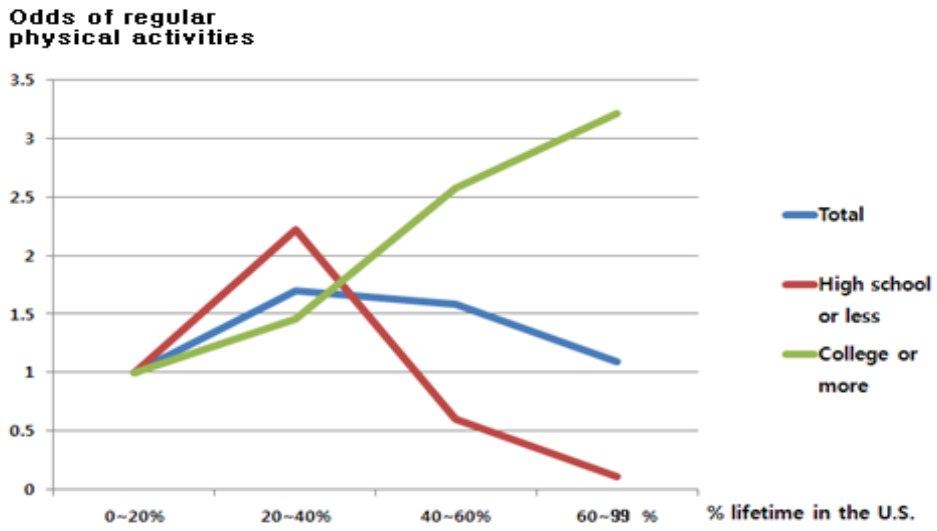

Figure 3. Different trajectories of regular physical activities

Table 4. Adjusted Coefficients in Logistic Analysis of Health Behaviours

	Health Behaviours					
	Regular Activities			Current Smoking		
	Total	High school or less	College or more	Total	High school or less	College or more
Sex						
[Male]	0	0	0	0	0	0
Female	-0.182	-0.459	0.141	**-1.536*** **	**-2.377*** **	**-1.498***
Age						
[25-39]	0	0	0	0	0	0
40-54	-0.158	-0.663	0.417	0.376	0.195	0.04
55-64	0.168	-0.657	**0.915***	-0.596	-0.879	**-1.342***
65+	**0.614†**	-0.121	0.829	**-1.716*** **	**-2.448** **	**-1.183†**
Current Marital Status						
[Unmarried]	0	0	0	0	0	0
Married	-0.071	0.47	**-0.808†**	-0.466	**-1.145***	-0.379
Household Income						
[1st quartile]	0	0	0	0	0	0
2nd quartile	0.223	0.04	**-0.832†**	-0.601	**-1.749***	**1.287***
3rd quartile	0.541	-0.018	-0.47	**-1.020†**	-0.787	0.525
4th quartile	0.342	0.449	-0.763	**-1.444** **	**-1.454***	0.015
Proportion of life spent in the U.S.						
[1-20%]	0	0	0	0	0	0
21-40%	**0.529†**	**0.798†**	0.378	-0.312	-0.549	-0.087
41-60%	0.458	-0.517	**0.948***	0.217	0.297	0.173
61-99%	0.09	**-2.192***	**1.169***	0.963	**3.359** **	0.208
English Proficiency						
[Not well/not at all]	0	0	0	0	0	0
Very well/well	-0.079	-0.013	-0.049	-0.241	**-1.397***	0.05
Speak only English	0.179	0.915	-0.452	-0.202	-1.245	0.289
Unweighted N	1133	360	773	1133	360	773

†p<. 10; *p <.05; **p <.01;***p <.001

For current smoking status, the probabilities of being a current smoker in all three groups were increasing as the longer lifetime in the U.S. Whilst the number of current smokers dramatically increases and statistically significant in the less educated group (0, -0.549, 0.297 and 3.359 respectively) as they live longer in the U.S., yet the coefficient in highly educated group was not statistically significant.

On the whole, the coefficients in the sub groups categorized by the educational attainment (high school graduation or less, and college or more) show different health trajectories. The highly educated immigrants have lower probabilities of being unhealthy and unhealthy behaviours as immigrants stay longer in the U.S. whereas the coefficients in less educated groups tend to increase as the proportion of life spent in the U.S. increases.

English proficiency does not show statistically significant results which may imply that using English proficiency is inappropriate to measure Korean immigrants' health status.

3.5 Comparison to the Rest of Asian Populations

The same analyses have been done for the rest of the population to see if the patterns are similar or unique for Koreans. The probabilities of dependent variables after age standardisation in the rest of Asian populations were similar to those of Koreans (Table 5). Nevertheless, the results of the logistic analysis for the rest of the population were quite different. Almost none of the probabilities of acculturation showed significant results, which may imply the patterns are unique for Korean immigrants in the U.S. (Table 6).

Table 5. Unweighted Frequency and Weighted Probabilities of Dependent Variables (Age Standardised)

	Other Asian Americans					
	Total		High school graduation or less		College or more	
	N	%	N	%	N	%
Disability						
Disabled	285	22.35	136	34.01	149	23.54
Psychological Distress						
Moderate or Higher Risk	226	20.67	97	15.94	129	12.20
General Health Status						
Poor Health	364	28.05	189	39.71	175	17.51
Smoking Status						
Currently Smoking	155	17.16	56	12.69	99	9.30
Regular Activity						
Moderate Physical Activity	934	83.05	288	77.96	646	87.84
Unweighted N	5209		1385		3824	

Table 6. Logistic Analysis of Health Outcomes and Behaviours for Other Asians

	Health Outcomes									Health Behaviours					
	Poor general health Status			Psychological Distress			Disability			Regular Activities			Current Smoking		
	Total	High school or less	College or more	Total	High school or less	College or more	Total	High school or less	College or more	Total	High school or less	College or more	Total	High school or less	College or more
Sex															
[Male]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Female	0.141	0.208	0.037	0.033	0.028	0.034	0.276**	-0.003	0.438	0.052	0.002	0.131	-2.226***	-3.155***	-1.858***
Age															
[25-39]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40-54	0.348**	0.265	0.318†	0.025	0.194	-0.121	0.447**	0.395	0.419	0.269†	0.387	0.277†	0.158	0.184	0.139
55-64	1.059***	0.777**	1.204***	0.086	-0.353	0.379	0.955***	0.835*	0.961	0.648***	0.846*	0.572*	-0.462†	-0.508	-0.358
65+	1.093***	0.672**	1.372***	-0.603**	-1.035**	-0.316	1.414***	1.181***	1.505	0.303	0.392	0.39	-1.472***	-1.205**	-1.85**
Current Marital Status															
[Unmarried]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Married	-0.161	-0.241	-0.122	-0.711*	-0.561*	-0.809***	-0.44***	-0.613***	-0.3	0.216	0.516*	0.04	-0.497**	0.009	-0.759**
Household Income															
[1st quartile]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2nd quartile	-0.516**	-0.739***	-0.221	-0.022	0.002	-0.178	-0.27†	-0.109	-0.557	-0.032	0.047	-0.34	-0.142	-0.366	0.024
3rd quartile	-0.859***	-0.621**	-0.778***	-0.259	-0.013	-0.449*	-0.261	0.263	-0.654	-0.212	-0.102	-0.563†	-0.466*	-0.198	-0.502
4th quartile	-1.25***	-0.904*	-1.057***	-0.558**	-0.199	-0.66*	-0.582***	-0.121	-0.9	0.007	-0.189	-0.333	-0.878***	-1.017*	-0.71*
Proportion of life spent in U.S.															
[1-20%]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21-40%	0.086	-0.071	0.157	0.106	0.065	0.136	0.047	0.291	-0.156	-0.131	0.139	-0.263	-0.161	0.156	-0.325
41-60%	0.039	-0.126	0.035	-0.089	-0.161	-0.088	-0.068	-0.03	-0.117	-0.404*	-0.193	-0.437†	-0.09	0.108	-0.172
61-99%	-0.049	-0.739*	0.175	-0.104	-0.769†	0.055	0.041	0.407	-0.08	-0.059	0.331	-0.198	0.187	0.043	0.14
English Proficiency															
[Not well/not at all]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Very well/well	-1.076***	-1.059***	-0.723***	-0.167	0.001	-0.339	-0.606***	-0.988***	-0.305	0.728***	0.605*	0.53*	-0.458*	0.01	-0.864**
Speak only English	-1.119***	-0.648	-0.939***	0.057	0.367	-0.154	-0.578**	-0.783	-0.315	0.771**	-0.512	0.973**	-0.354	0.802	-0.907*
Unweighted N	5209	1385	3824	5209	1385	3824	5209	1385	3824	5209	1385	3824	5209	1385	3824

4. DISCUSSION

The purpose of this study was to examine the different health trajectories of Korean immigrant population in the United States, utilising the concept of segmented assimilation theory empirically with data from the representative of California's population. Overall, the results reported above may be a strong evidence of segmented assimilation that low educated immigrants experience a deteriorating health trajectory while highly educated immigrants experience a progressive health trajectory as they are more acculturated to the U.S. society.

Amongst the numerous findings mentioned above, two are worthy of further discussion. First, how educational attainment at the time of immigration influences on segmented health trajectories amongst Korean immigrants? Here is the plausible explanation of the relationship between the education attainment and the segmented health trajectories. The level of resources available to immigrants at the time of arrival fundamentally determines their assimilation pathways [14, 23]. Clearly, it is critical to distinguish between highly educated immigrants who come to the U.S. for professional job opportunities, and immigrants with little education and technical skills who come seeking manual labour [23].

The human and financial capital possessed by the former groups allows them to integrate quickly into middle or high class society since they have the skills to obtain high-level professional and technical jobs, and the funds to move directly into middle or high class suburban neighbourhoods [17]. Hence, it can be inferred that highly educated Korean immigrants at immigration may settle in middle or high class society, and maintain or adopt its healthy behaviours. It is evident that upward acculturation is associated with several healthy behaviours, such as greater exercise and leisure-time physical activity [27]. Consequently, they may experience a progressive or non-deteriorating health trajectory as the longer life in the U.S. In contrast, groups with less education and fewer financial resources start at the bottom of the occupational hierarchy [23]. There, the immigrants come into direct daily contact with the poor rather than with the middle class; there are also apt to encounter members of native minorities and other immigrants rather than members of the dominant majority [17]. These Korean immigrants may be exposed to different risk factors or may adopt unhealthy behaviours that result in downward shifts in health outcomes as they stay longer in the U.S.

Our findings also suggest that English proficiency does not have much of an effect on health outcomes or behaviours of this population. We used self-rated English proficiency as one of the controlling variables. It appeared that English proficiency may not be suitable to measure Korean immigrant's acculturation since almost none of the results were significant in the analysis. Studies often used the self-rated English proficiency measure brings in a subjective self-assessment potentially adding measurement problems [28]. In addition, there is no standard way of categorizing this indicator as a measure for acculturation. Some studies place a breakpoint between very well and not well whilst others between well and not well [28]. Moreover, it can also be concluded that English proficiency may not be an appropriate measure of the level of acculturation amongst Korean immigrants. Many high SES Korean immigrants open their own entrepreneur and go on to become successful regardless of their English language skills. According to the New York Times [29], 4.5 million income-earning adults who were heads of households spoke English 'not well' or 'not at all,' in the United States in 2010; of those, about 35,500 had household incomes of more than $200,000 a year [3]. Thus, English proficiency is not always parallel to the level of acculturation amongst Korean immigrants in the U.S.

5. LIMITATIONS

Despite the uniqueness of this study, it is not free from limitations involving measurement issues in the following sense. The foremost limitation is that it was not possible to disentangle the time order of educational attainment and immigration to the U.S. due to the cross-sectional nature of the datasets employed. Although we assumed that educational attainment occurred prior to migration to the U.S., we do not have sound evidence on the time sequence of the events. Lastly, findings for Korean immigrants in this study cannot be generalised to the entire Korean immigrants in the U.S. although results provide notable implication. Our research clearly suggests that more public health policy attention should be paid to socioeconomically disadvantaged (or low educated) Korean immigrants from a segmented assimilation theory.

6. CONCLUSIONS

It is strongly recommended that additional studies should be followed to investigate diverse variables including other social characteristics of immigrants associated with segmented assimilation to immigrant health. Longitudinal and prospective study designs would be beneficial in further exploring the segmented assimilation on immigration health. Analysis of Korean immigrants used here is a case example of a segmented assimilation. Great clarity about the relationship between acculturation and health would come from studies that permit the comparisons of health outcomes and behaviours in different populations – not only Asian and Hispanic populations, but also their subgroups.

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국문초록

분화된 문화적응과 이민자의 건강수준 변화: 미국 내 한국 이민자를 중심으로

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연구배경: 이민자 건강을 연구하는 데 있어 대부분 기존의 동화이론 (uni-dimensional acculturation theory)이 사용되어져 왔다. 이는 이민자들은 이주 당시 현지인들에 비해 건강수준이 높은 편이나, 시간이 지날수록 미국의 문화에 적응하면서 건강수준이 점차 낮아져 결국에는 현지인과 비슷하게 된다는 것이다. 그러나 최근 들어 이 이론이 다양화된 최근 이민자들의 특성을 반영하지 못한다는 비판을 받아왔다. 따라서 새롭게 분화된 동화이론(segmented assimilation theory)이 등장하였다. 이 이론에 따르면, 이민자들은 인종, 문화, 사회경제적 수준이 다양하기 때문에 이에 따라 이민자들은 각기 다른 문화에 동화된다. 하지만, 이 이론을 경험적인 자료를 이용하여 문화적응 정도에 따른 건강수준의 변화를 관찰한 연구는 아직까지 없는 실정이다. 따라서 본 연구는 분화된 동화이론이 미국에 거주하는 한인들의 건강수준의 변화를 설명할 수 있는지 관찰하고자 하였다. 연구 가설은 다음과 같다. 1) 이민 당시의 교육수준이 낮은 경우 (고졸 이하), 거주기간이 길어질수록 건강수준이 악화될 것이다. 2) 이민 당시의 교육수준이 높은 경우 (대학 재학 이상), 거주기간이 길어질수록 건강수준이 오히려 좋아지거나 최소한 처음의 건강 수준을 계속 유지할 것이다.

연구방법: 본 연구에서는 미국 UCLA대학에서 주관하여 2년에 한 번씩 캘리포니아 주민들을 대상으로 조사하는 대표적인 건강데이터 중의 하나인 California Health Interview Survey (CHIS)를 사용하였다. 샘플 수 확보를 위해, CHIS Public Use Files 2005 and 2007 데이터를 합하여 총 대상자는 1133명이었다. 이를 교육수준에 따라 다시 두 개의 집단으로 나누어 (고졸이하=360명, 대학이상=773명) 이변량 로지스틱 회귀분석을 실시하였다. 독립변수인 문화적응 정도는 전체 생존 기간 중 미국에서의 거주기간을 %로 계산한 변수를 사용하여 각각 0~20, 20~40, 40~60, 60% 이상으로 나누었다. 종속변수는 총 다섯 개를 사용하여 건강수준(주관적 건강, 신체적 건강, 정신적 건강)뿐만 아니라, 건강행동 (운동여부 및 흡연여부)의 변화를 비교・분석하였다. 연령, 성별, 혼인여부, 가구소득 및 주관적 영어능력을 통제 변수로 사용하였다.

연구결과: 높은 수준의 교육을 받은 집단은 거주 기간이 길수록 불건강행동과 불건강수준이 전반적으로 낮아지는 것으로 나타났다. 반면에, 교육 수준이 낮은 집단에서는 시간이 지날수록 모두 증가하는 경향을 보였다. 이러한 경향은 통계적으로도 유의하였으며, 위의 결과를 통해 연구 가설에 대한 증거를 확보하였다.

결론: 본 연구의 결과는 낮은 사회경제적 수준의 이민자는 문화적응이 될수록 건강수준이 낮아지나, 사회경제적 수준이 높을 경우 문화에 적응할수록 건강이 더 좋아질 수도 있다는 분화된 문화적응 이론의 증거가 될 수 있다. 앞으로도 미국에 거주하는 한국인 이민자뿐만 아니라, 다른 라틴계나 아시안계 국가 이민자를 대상으로 같은 분석을 실시해 이러한 현상이 한국인 이민자들의 고유한 특성인지, 다른 이민자들에게서도 나타나는 공통적인 현상인지를 규명해야 할 필요가 있다.

주요어: 동화이론; 분화된 문화적응; 이민자 건강; 한국인 이민자; 재미교포

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