

Physical Activity in U.S. Asian Indian Women: Comparison of Acculturation Level and Immigrant Status

Nitha Mathew Joseph, PhD, RN



UTHealth™

**The University of Texas
Health Science Center at Houston**

School of Nursing

BACKGROUND/ SIGNIFICANCE

- Asian Indians are one of the largest & fastest growing Asian-American groups in the US (3.19 million)
- Greater risk for morbidity & mortality from cardiovascular disease (CVD) & diabetes
- Lower rates of participation in physical activity
- Acculturation ↑ risks for obesity, diabetes, & CVD
- Acculturation influences physical activity in Asian Indians
 - NO study among Asian Indian Women

SPECIFIC AIM

- To assess the relationships among physical activity, acculturation level, and immigrant status in Asian Indian women across three domains of physical activity (occupational, household, and leisure) & sedentary behavior

METHODS

- Descriptive, cross-sectional design
- Sample size: 261 Asian Indian women (Mean age = 35)
- Study settings : Indian community churches, Hindu temples, Muslim mosques, & Indian cultural organizations in Houston
- International Physical Activity Questionnaire (IPAQ) long form, Modified Suinn-Lew Asian Identity Acculturation scale (M-SL-ASIA), & Physical Functioning -10 scale (PF-10 scale)

DATA ANALYSIS

- Participant categories :
 - low acculturation–immigrant, n = 123 (47%)
 - high acculturation–immigrant, n =41 (16%)
 - high acculturation–nonimmigrant, n =97 (37%)

- Analyses of covariance or Kruskal-Wallis test to compare study variables among acculturation-immigrant groups

Group Differences in Socio-Demographic Variables

Variable	Low Acculturation-Immigrant (n=123)		High Acculturation-Immigrant (n=41)		High Acculturation-Nonimmigrant (n=97)		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i> (2,258)
Age (Years)	38.04	7.60	34.98	9.16	30.38**	6.11	29.34*
Years in the United States	9.74**	5.73	18.29**	8.96	30.41**	6.28	271.88*
	<i>Median</i>	<i>IQR</i>	<i>Median</i>	<i>IQR</i>	<i>Median</i>	<i>IQR</i>	<i>H</i> (2)
Household Income (U.S. dollars)	100000	60000	100000	87500	100000	70000	0.13
Physical Functioning	95**	16	100	10	100	5	17.30*
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>	<i>X</i> ² (<i>df</i>)
Partnered	116	94	33	81	63	65	30.7(2)*
Employed	111	90	31	76	70	72	23.5(4)*
Graduate Degree	32	26	18	44	40	41	6.3(2)*

* = $p < .0001$ (omnibus), ** = $p < .05$ (post-hoc)

Group Differences in Physical Activity & Acculturation

Variable	Low Acculturation-Immigrant (n=123)		High Acculturation-Immigrant (n=41)		High Acculturation-Nonimmigrant (n=97)		
	Median	Mean Rank	Median	Mean rank	Median	Mean rank	H(2)
Total PA	102.63**	152.86	34.70	107.73	38.88	113.11	19.66*
Occupational PA	59.80**	157.41	3.30	113.13	1.65	105.06	30.48*
Household PA	14.00	151.75	9.00**	135.32	0.00**	102.87	24.27*
Leisure PA	0.00**	94.98	6.60	130.94	21.90**	176.71	66.59*
	M	SD	M	SD	M	SD	F(2, 258)
Acculturation Score	2.09**	0.26	2.98**	0.44	3.61**	0.44	472.64*
Sedentary Behavior (Hr/wk)	26.84**	18.86	34.12**	20.65	47.22**	25.05	24.20*

* = $p < .001$ (omnibus),

** = $p \leq .01$ (post-hoc)

CONCLUSION

- **Acculturation:** inversely R/T occupational & total physical activity; positively R/T leisure physical activity & sedentary behavior (poss. confounders: employment/student roles)
- **Statistically significant:** acculturation & physical activity
 - Strong support for various cultural factors playing important role in choice & endorsement of different physical activities
- Understanding cultural differences in physical activity patterns will help nurses develop culturally appropriate counseling & interventions

LIMITATIONS

- Convenience sampling i.e. unequal representation of individuals across a distribution of immigration variables.
- Excluded participants non fluent in English
- IPAQ is a complex self-report measurement, possibly leading to over reporting of physical activity
- Detailed information of occupation not collected during study

FUTURE DIRECTION

- Explore cultural factors that specifically affect different types of physical activity, specifically leisure activities.
- Interventions to increase physical activity R/T long-term efficacy for Asian Indian women
- Identify difference in the health effects between job-related physical activity & leisure physical activity
- Replication of study on a national sample of Asian Indian women

FUNDING

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QUESTIONS?

THANK you!

