

Influence of Asian and Non-Asian Nursing Home Residents' Nutritional Intake Patterns on Pressure Ulcer/Injury Outcomes

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Conclusion: Differences (BMI and dietary intake) exist between Asian and Non-Asian, putting Asian nursing home residents at risk of pressure ulcer/injuries

Introduction

- Pressure ulcer/injury (PrI) are wounds of the skin and deeper soft tissue that occur usually over bony prominences.
- Prevention is a challenge for nursing homes given age-related fragility of the skin.
- Malnutrition and immobility lead to skin fragility and PrI development.
- Nursing home (NH) residents and BMI guidelines related to undernutrition may differ between Asian and non-Asian populations.
- Differences between Asian and non-Asian NH residents need to be described in order to understand overall nutritional risk, dietary intake, and non-nutritional risk factors for PrI prevention.
- In a recent RCT aimed at PrI prevention, 53% of all PrI's were Asians.

Aim

Using TURN (Bergstrom, 2013) study data, we compared Asian and non-Asian Canadian NH residents with respect to 1) overall nutritional risk factors, and 2) non-nutritional risk factors of PrI incidence.

Key Variables

- Dietary Intake variables: presented as daily averages. For ex. each meal was assessed at breakfast, lunch, and dinner, summed and divided by 3, for that day's average, and then summed across the study and divided by 21 days, for the daily average.
- Risk Groups: Four risk groups were created by Asian race (yes/no) and PrI incidence (yes/no)

Methods

DESIGN: Secondary data analysis of a 3-week PrI prevention RCT using 7 Canadian NHs.

Participants: ≥ 65 years, Asian (N = 97), Non-Asian (N = 408) who were at moderate (Braden Scale Score = 13-14) or high (Braden Score = 10-12) risk of PrI development.

Residents were randomized by risk level to a repositioning schedule (2-, 3-, or 4-hours) and monitored. Both short-stay (≤7 days) and long-stay (≥90 days) were included.

Observations and Other Data:

- Skin checks conducted by licensed nurses who were blinded to repositioning schedule.
- Dietary adequacy determined by amount consumed: % meals, # servings and types of protein, liquid supplements, and snacks
- Braden Scale Score and BMI.

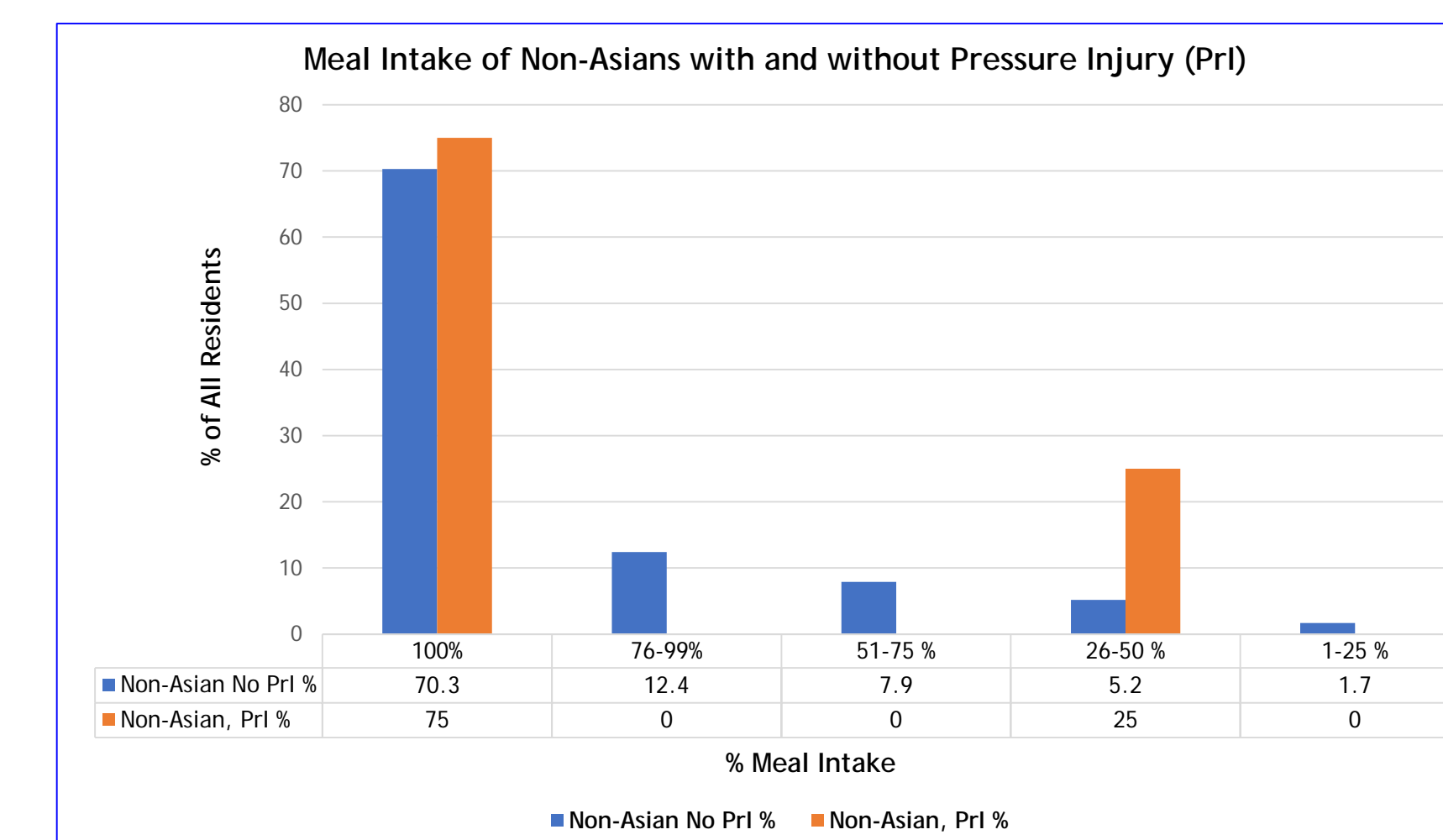
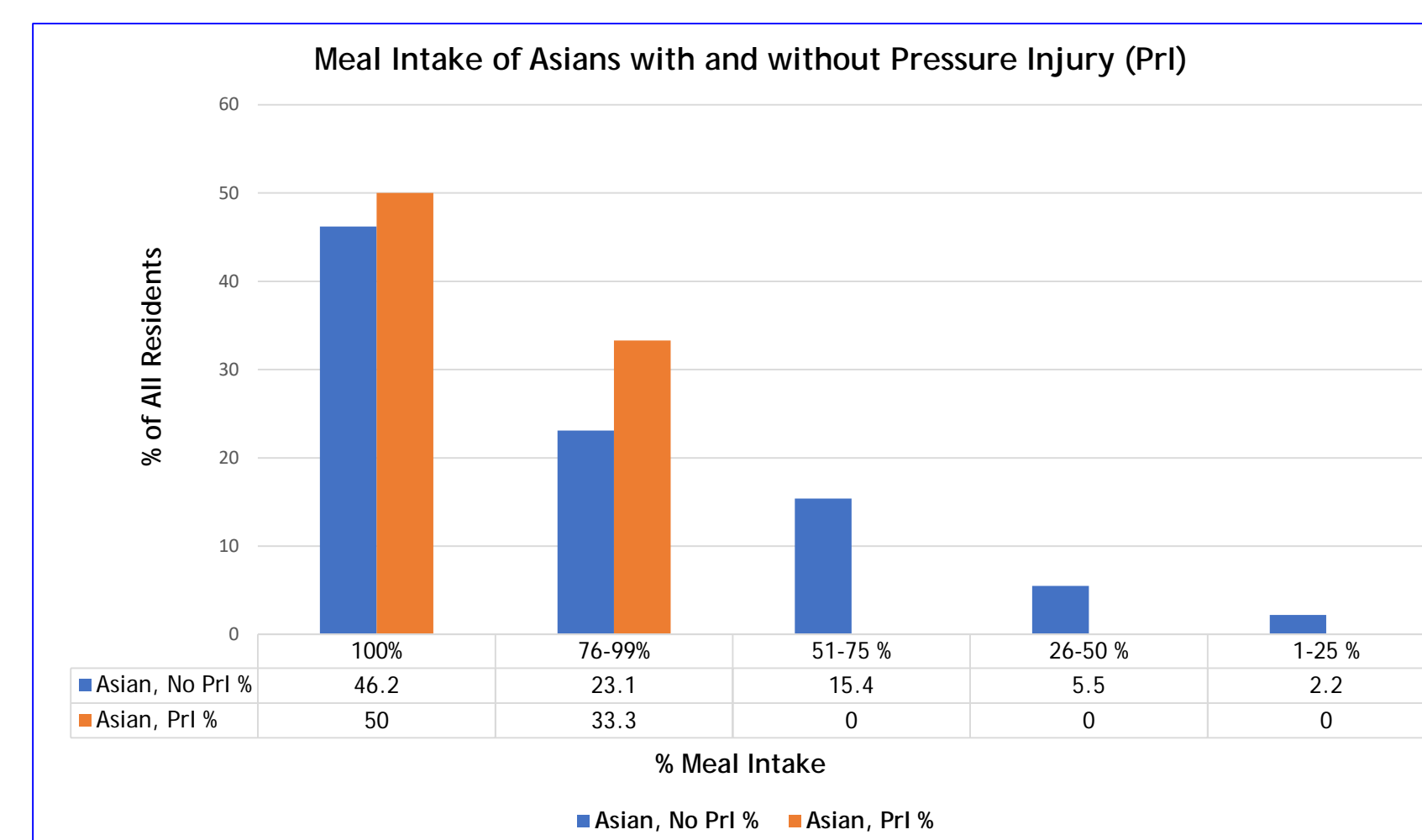
Analyses

- Descriptive statistics are reported as frequencies and percentages for categorical variables and as means for continuous variables.
- Tests of differences across groups included chi-square tests for categorical variables and analyses of variance (ANOVA) with Duncan's post hoc Multiple Range Test (MRT) for differences in means of continuous variables.

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Results



Moisture Risk Factors for both Asian and Non-Asian with and without PrI (n=505).

Moisture Risk Factor	Non-Asian, No PrI (n=404, 80%)		Non-Asian, PrI (n=4, 0.8%)		Asian, No PrI (n=91, 18%)		Asian, PrI (n=6, 1.2%)		P Value	Test
	Mean	# (%)	Mean	# (%)	Mean	# (%)	Mean	# (%)		
Baths/Week	2.9 A		2.7 A		2.0 A		2.2 A		0.006	Duncan lines ^a
Mode of Bathing									<.001	Chi ²
Tub bath		35 (8.7)		0 (0)		54 (59.3)		5 (83.3)		
Shower		180(44.6)		3 (75.0)		23 (25.3)		0 (0)		
Bed bath		176(43.6)		1 (25.0)		13 (14.3)		1 (16.7)		
Unknown		13 (3.2)		0 (0)		1 (1.1)		0 (0)		
Avg # Wet Briefs/Day	3.84 BC		3.56 C		4.72AB		5.13 A		<.001	Duncan lines ^a

^a Where composite ANOVA is significant to 5% level of significance, any two means having a common letter are not significantly different at the 5% level of significance.



Conclusions

- Asian and non-Asian NH residents appear to differ in body mass and the patterns of amount and type of dietary intake and their sequelae.
- Future research should focus on refining nutritional risk factors that inform assessment and planning for best clinical practices aimed at protecting NH residents' skin integrity across racial subpopulations.