

The Social Determinants of Obesity among Pakistani Women in Hong Kong

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1 Introduction

Pakistani Women in Hong Kong, as a particularly vulnerable South Asian population with distinct cultural and religious needs, face inequitable social and health challenges which prevent them from leading healthy lifestyles and effective obesity management

2 Objectives

- To assess the obesity burden of Pakistani women in Hong Kong
- To identify the major social determinants of their obesity risks

3 Methodology

Design: Cross-sectional study

Subjects: 233 Pakistani women aged 18 or above

Recruitment: Territory-wide health outreach services between June and December 2022

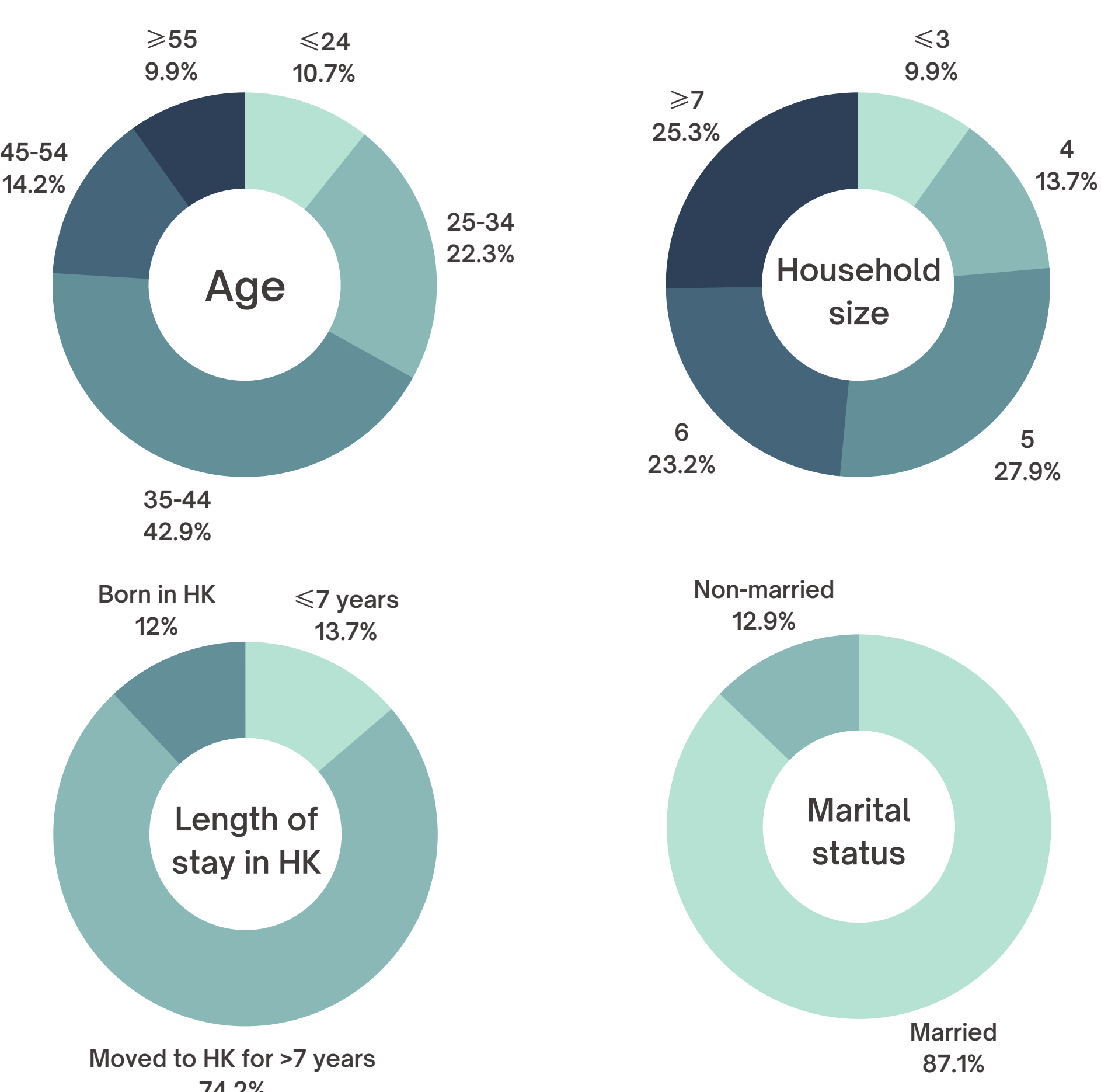
Outcomes: Anthropometric assessment on **body mass index (BMI)** and **waist circumference (WC)**

Predictors: Survey data on **demographic** (i.e., age, household size, length of stay in Hong Kong, marital status), **socioeconomic** (i.e., education level, economic activity status, CSSA status), **lifestyle** (i.e., diet, physical activity), and **psychological** factors (i.e., stress and depression)

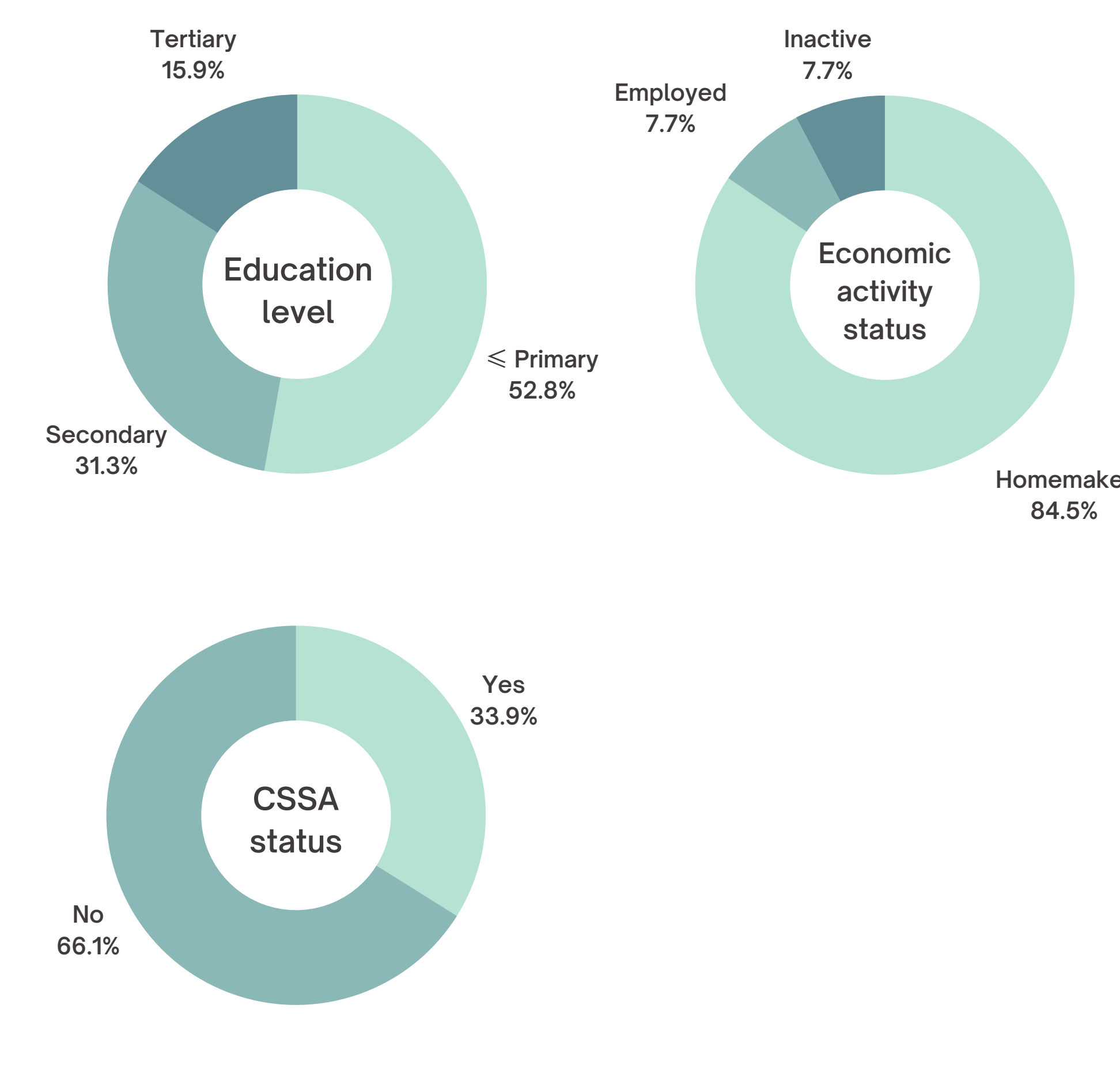
Analysis: **Multivariable linear regressions** were used to assess the independent risk and protective factors on BMI and WC

4 Results

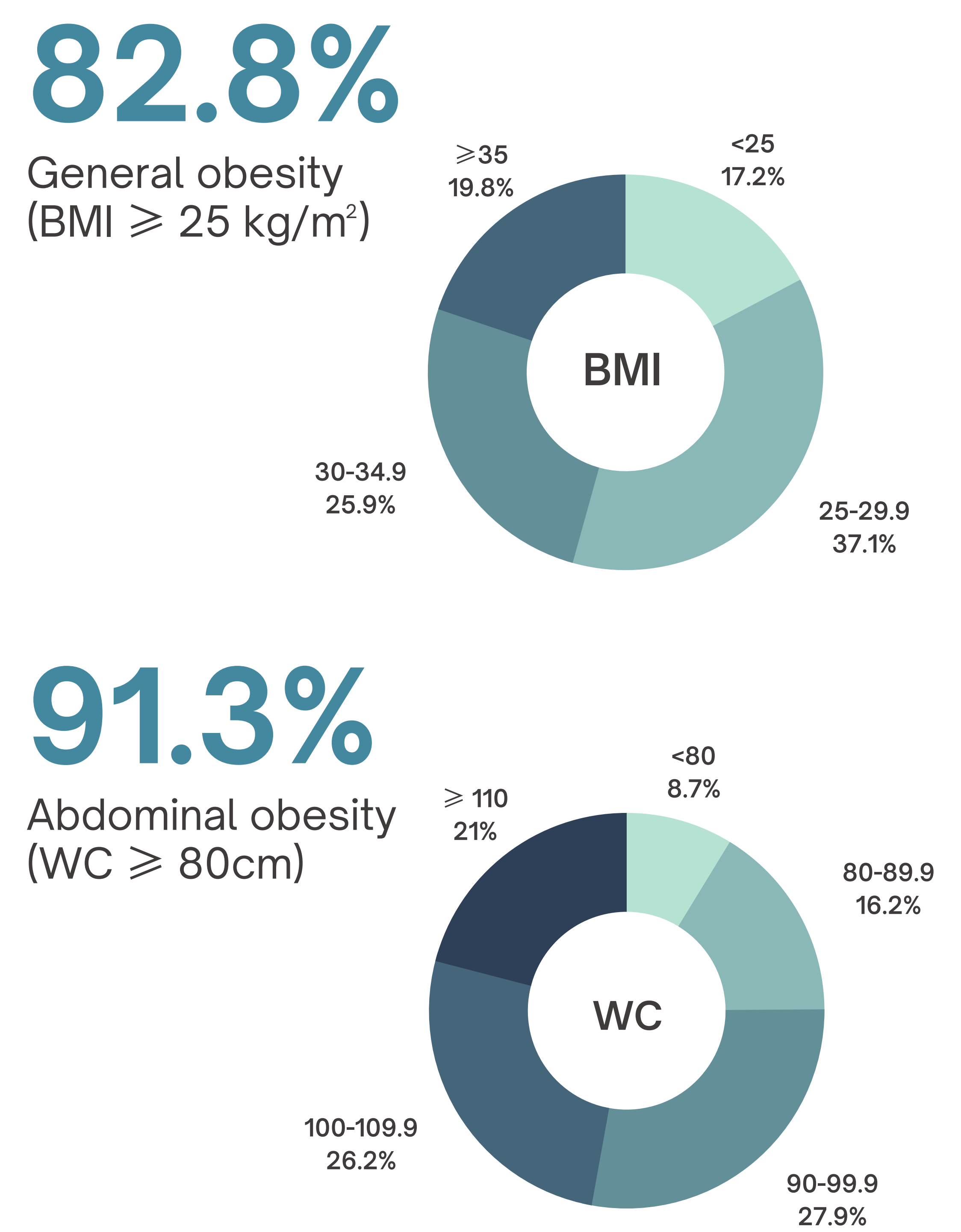
Demographic factors:



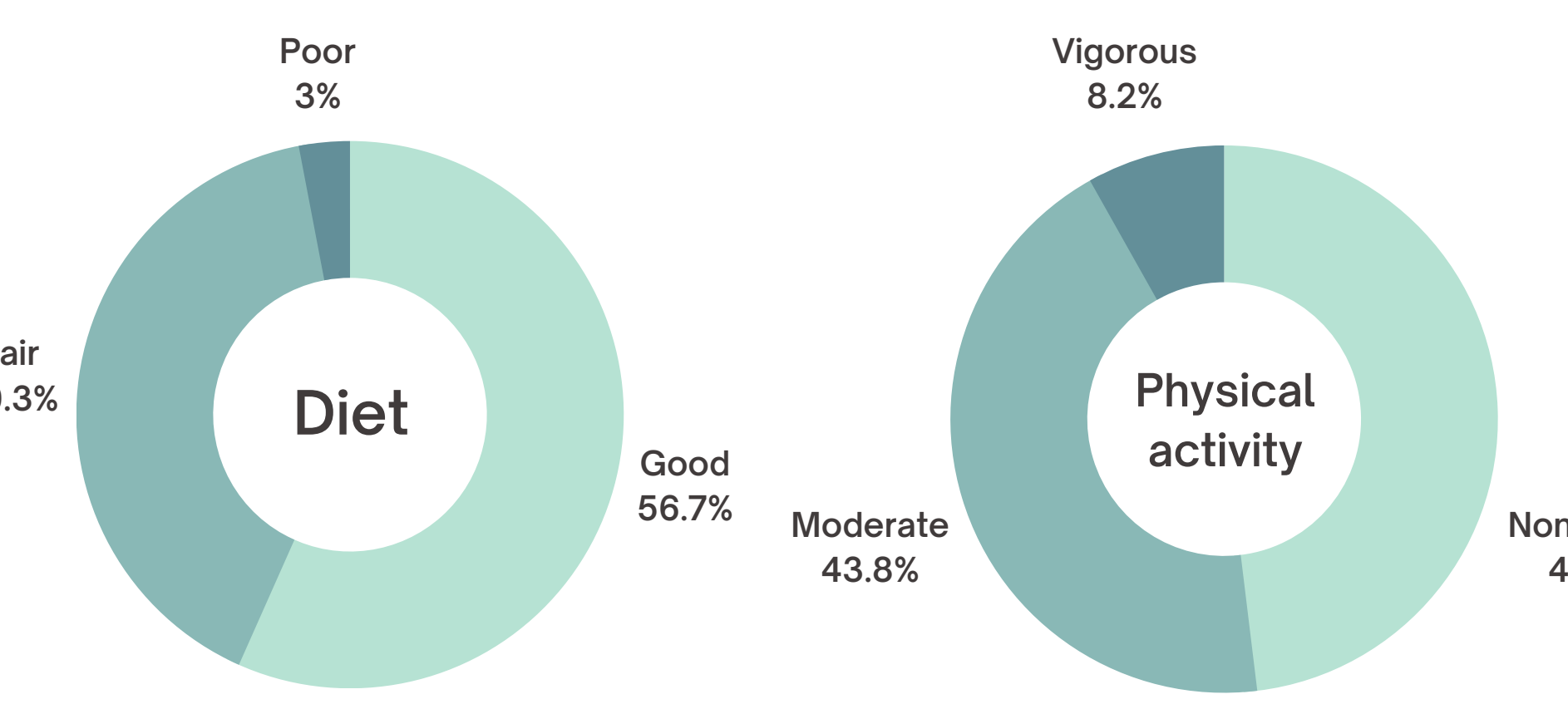
Socioeconomic factors:



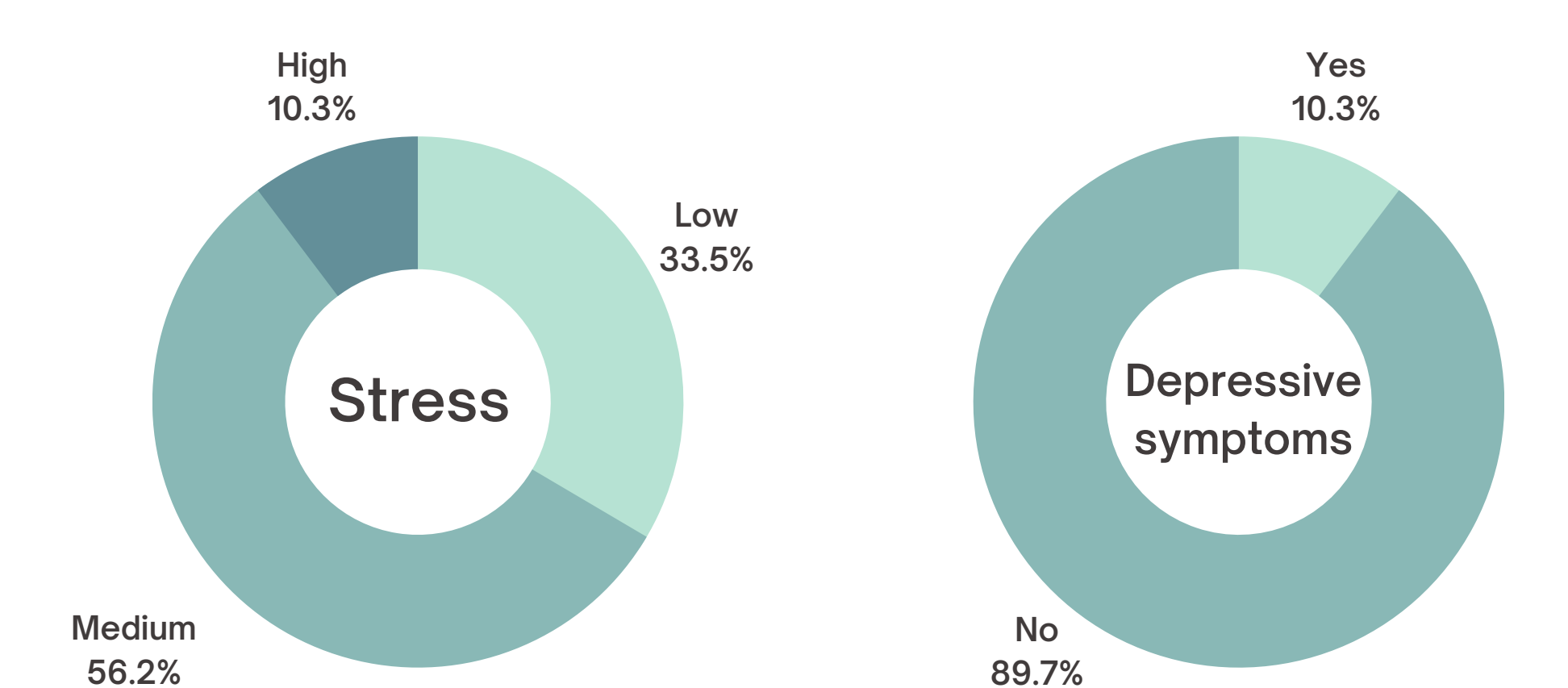
Obesity prevalences:



Lifestyle factors:



Psychological factors:



Multivariable linear regressions on the social determinants of BMI and WC

	BMI (kg/m ²)		WC (cm)	
	Coefficient (95% CI)	p-value	Coefficient (95% CI)	p-value
Age	0.09 (0.02, 0.16)	0.015	0.46 (0.30, 0.63)	<0.001
Household size				
≤4	ref			
5	0.51 (-1.51, 2.53)	0.620	1.93 (-2.68, 6.55)	0.410
6	1.49 (-0.58, 3.56)	0.157	2.77 (-1.99, 7.53)	0.252
≥7	1.46 (-0.57, 3.50)	0.158	2.89 (-1.77, 7.55)	0.222
Born in Hong Kong				
No	ref			
Yes	-1.04 (-3.50, 1.42)	0.406	-0.27 (-5.86, 5.32)	0.924
Marital status				
Never married/separated/widowed	ref			
Married	4.46 (1.64, 7.27)	0.002	9.30 (2.91, 15.68)	0.005
Education level				
Primary and below	ref			
Secondary	-1.03 (-2.81, 0.76)	0.258	-2.13 (-6.20, 1.94)	0.303
Post-secondary	0.36 (-1.90, 2.62)	0.753	-2.77 (-7.90, 2.36)	0.288
Economic activity status				
Homemaker	ref			
Employed/self-employed	-3.38 (-6.31, -0.45)	0.024	-8.09 (-14.75, -1.44)	0.017
Unemployed/Retired/Students	-1.10 (-4.61, 2.40)	0.535	-3.12 (-11.09, 4.85)	0.441
CSSA status				
Not on CSSA	ref			
On CSSA	1.68 (0.10, 3.27)	0.038	0.60 (-3.02, 4.22)	0.743
Healthy diet score	-0.39 (-0.69, -0.09)	0.010	-0.70 (-1.38, -0.02)	0.044
Physical activity score	0.12 (-0.06, 0.30)	0.195	0.18 (-0.23, 0.59)	0.383
Stress	0.18 (-0.45, 0.81)	0.570	1.46 (0.03, 2.89)	0.045
Depressive symptoms	-0.93 (-3.47, 1.61)	0.471	-1.53 (-7.31, 4.24)	0.602

Major social determinants of obesity:

- Age**
1-year increase in age was associated with a higher mean BMI by 0.09 kg/m² (p=0.015) and mean WC by 0.46 cm (p<0.001)
- Marital status**
Compared to those not currently married, those currently married had a higher mean BMI by 4.46 kg/m² (p=0.002) and mean WC by 9.30 cm (p=0.005)
- Economic activity status**
Compared to homemakers, those being employed had a lower mean BMI by 3.38 kg/m² (p=0.024) and mean WC by 8.09 cm (p=0.017)
- CSSA status (for BMI only)**
Compared to those not on CSSA, the mean BMI of those on CSSA was higher by 1.68 kg/m² (p=0.038).
- Diet**
1-unit increase in diet score (range=0-15) was associated with a lower mean BMI by 0.39 kg/m² (p=0.010) and mean WC by 0.70 cm (p=0.044).
- Stress (for WC only)**
1-unit increase in stress score (range=1-6) was associated with a lower mean WC by 1.46 cm (p=0.045).

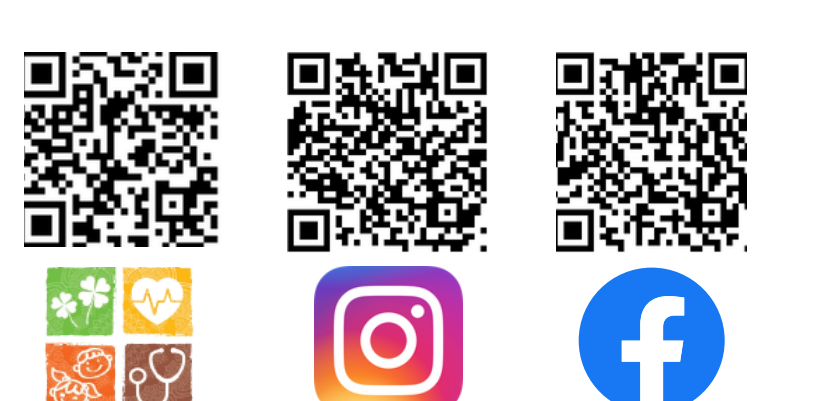
5 Conclusion

- Tremendous obesity burden was observed among Pakistani women in Hong Kong
- Being older, married, socioeconomically disadvantaged, and having poorer diet and higher stress were important social determinants of obesity, which should be targeted for screening programmes
- Culturally appropriate and female-oriented community programmes on obesity management are warranted to alleviate their alarming obesity burden

Affiliations



Funded by



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