

# Health-Related Quality of Life Among Individuals With Asthma in the United States

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## INTRODUCTION

- Nearly 28 million people in the U.S. have asthma. This equals about 1 in 12 people.<sup>1</sup>
- The short and long-term disability impacting health related quality of life (HRQOL) is a major concern among asthmatic patients.<sup>2</sup>

## OBJECTIVES

- To examine the impact of asthma on HRQOL and disparities among different demographic groups.

## METHODS

- The Medical Expenditure Panel Survey (MEPS) data from 2013 to 2016 were used in this study.<sup>3</sup>
- Individuals with asthma were identified using ICD-9 and ICD-10 codes.
- Adults of 18 years above, for whom data on quality-of-life measures based on the Short-Form generic measures (SF-12 V.2), Kessler Psychological Distress Scale (K-6) and Patient Health Questionnaire-2 (PHQ-2) were included.
- Data were analysed for descriptive statistics, differences and associations using the t-test, ANOVA and Chi-squared test.
- HRQOL scores were compared between different demographic groups.
- A p-value of <0.05 was considered statistically significant.

**Table 1. Demographic Characteristics of the Participants**

Variables	All (N=7331)	Male (n=2434)	Female (n=4897)	p-value
Age (yrs.) ± SE	51.7 ± 0.3	51.6 ± 0.5	51.8 ± 0.4	0.779
Race/Ethnicity (n, %)				<0.001
White	3595 (51.4)	1296 (55.5)	2299 (49.3)	
Black	1808 (25.8)	517 (22.1)	1291 (27.7)	
Hispanic	1269 (18.1)	406 (17.4)	863 (18.5)	
Asian	327 (4.7)	118 (5.0)	209 (4.5)	
Education (n, %)				<0.001
<High school	1577 (21.6)	543 (22.5)	1034 (21.2)	
High school	2236 (30.7)	821 (34.0)	1415 (29.0)	
Associate degree	1900 (26.1)	537 (22.2)	1363 (28.0)	
Bachelors	820 (11.3)	287 (16.8)	533 (10.9)	
Master's & above	755 (10.4)	229 (9.5)	526 (10.8)	
Region (n, %)				0.05
Northeast	1483 (20.4)	471 (19.6)	1012 (20.8)	
Midwest	1585 (21.8)	580 (24.1)	1005 (20.7)	
South	2581 (35.5)	813 (33.8)	1768 (36.4)	
West	1618 (22.3)	542 (22.5)	1076 (22.1)	
Poverty Level (n, %)				<0.001
Near Poor	534 (9.9)	159 (8.3)	375 (10.8)	
Low Income	1156 (21.5)	387 (20.3)	769 (22.2)	
Middle Income	1872 (34.8)	670 (35.1)	1202 (34.7)	
High Income	1810 (33.7)	691 (36.2)	1119 (32.3)	
Insurance (n, %)				<0.001
Private	3662 (50.0)	1361 (55.9)	2301 (47.0)	
Medicaid	3125 (42.6)	859 (35.3)	2266 (46.3)	
Uninsured	544 (7.4)	214 (8.8)	330 (6.7)	

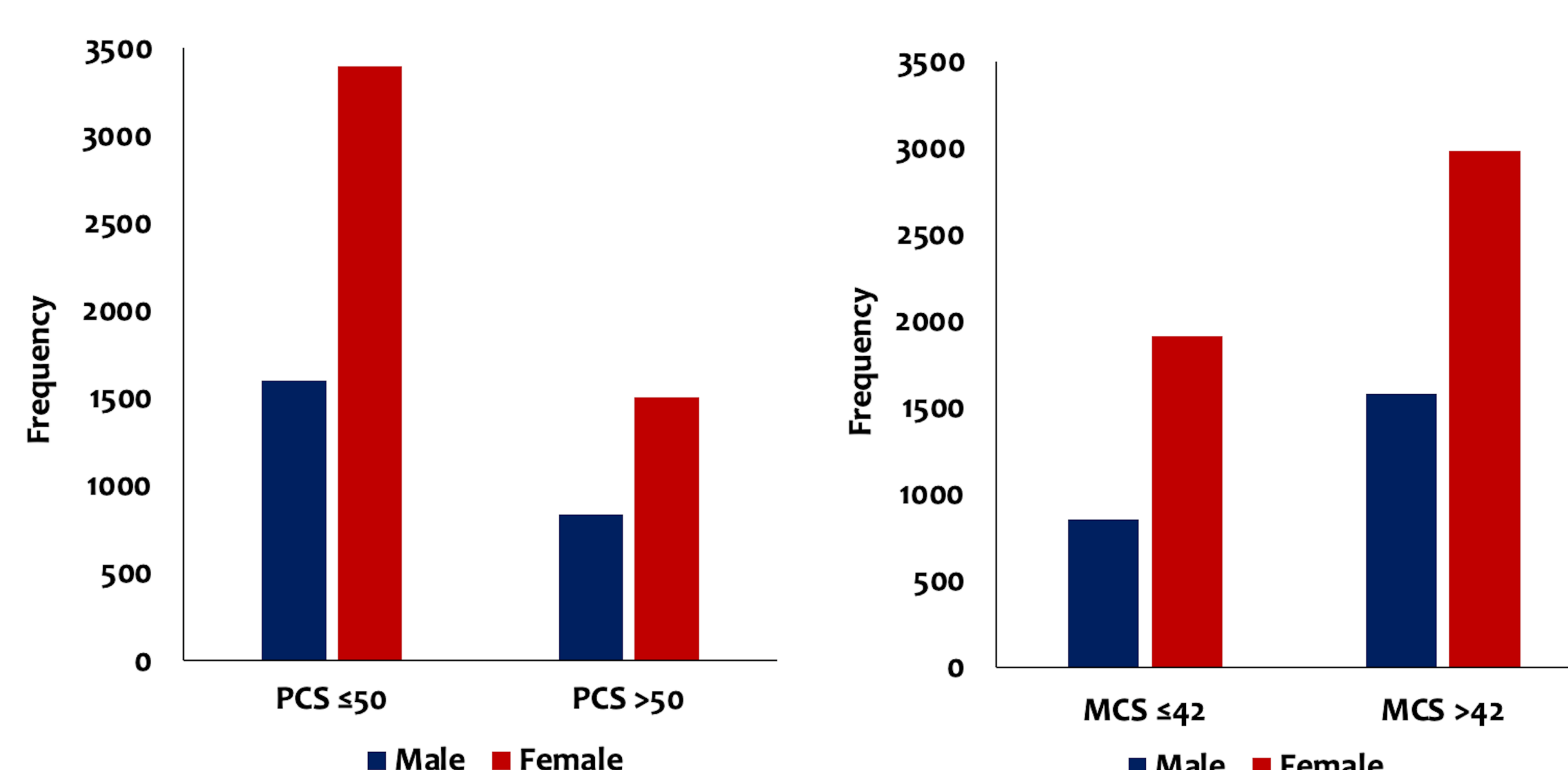
## RESULTS

- The study included 7,331 noninstitutionalized individuals with asthma.
- Participants' mean age was 51.7 ± 0.3 years; 66.8% participants were female; 51.4% participants were white.
- Participants' mean Physical Component Summary (PCS) - 12 score was 39.9 ± 0.30 whereas the mean Mental Component Summary (MCS) - 12 score was 45.4 ± 0.28, considerably lower than the US population mean (50 ± 10).
- A total of 4,993 (64.2%) participants reported a score of ≤50 for PCS - 12 indicating physical impairment whilst 2,767 (31.9%) participants scored ≤ 42 on the MCS - 12 indicating of having a clinical depression.
- Twice the number female had MCS ≤ 42 compared to males indicating poor mental health status (p<0.001).
- Similarly, racial and ethnic disparities in psychological distress scores were significant among whites and blacks and Hispanics and whites, respectively (p<0.001).

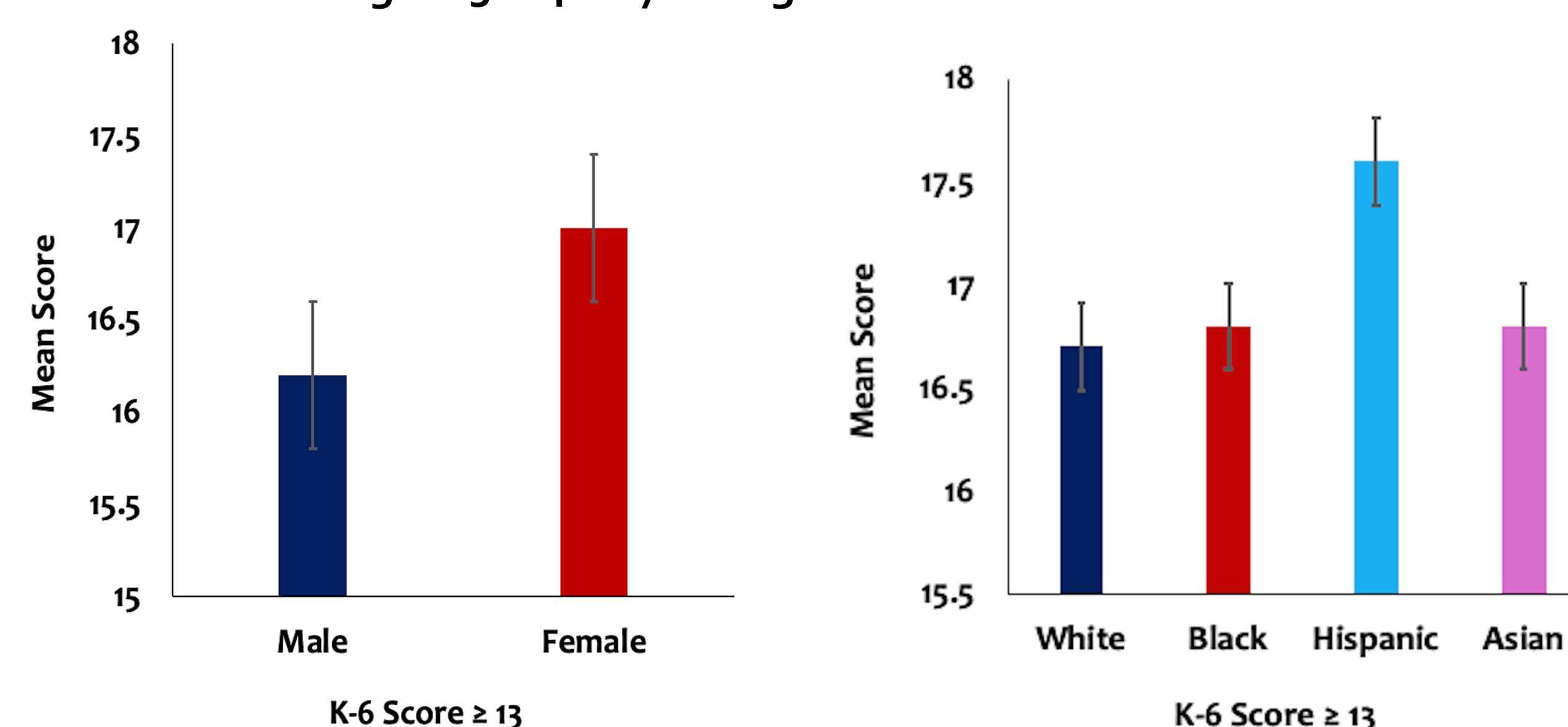
## CONCLUSIONS

- Individuals with asthma showed significant impairment in HRQOL. Our findings suggest that gender, racial/ethnic disparities in HRQOL are more pronounced and needs to be recognized and addressed more widely in the US population.

**Figure 1 & 2. Physical and Mental Health Component Score on SF-12**



**Figure 3 & 4. Psychological Distress Score on K-6**

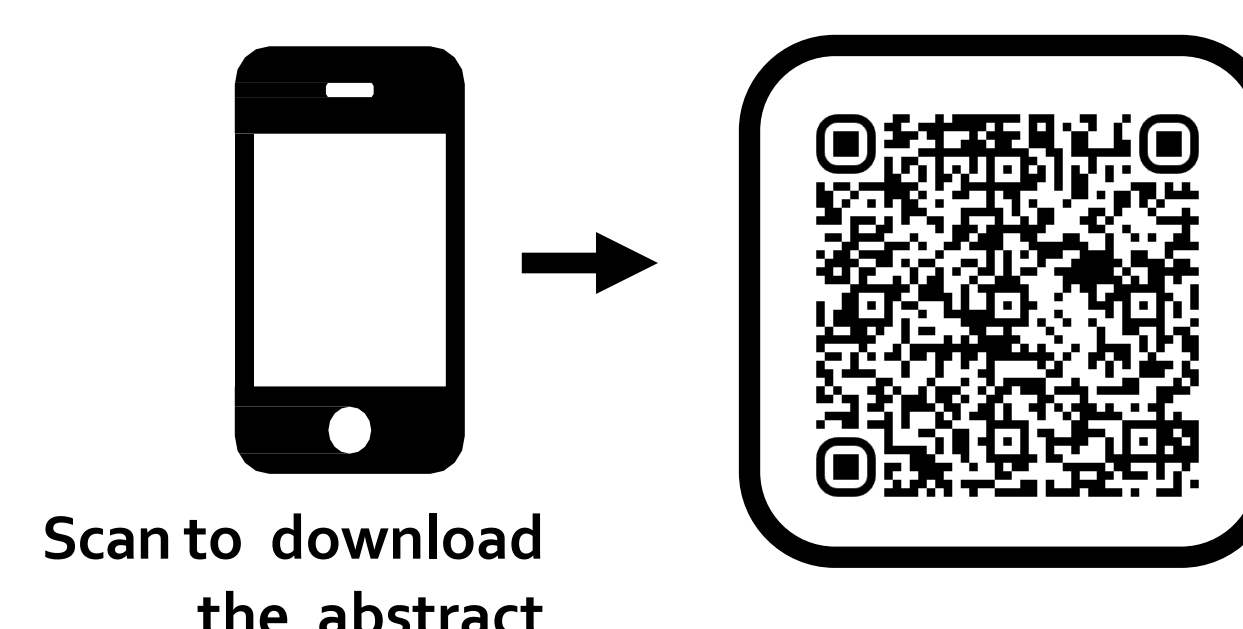


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## CONTACT INFORMATION

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