

Preventive Practices Against COVID-19: Comparison Between Gender in Klang Valley, Malaysia

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ABSTRACT

Coronavirus disease 2019 (COVID-19) is an infectious disease that spreads through respiratory droplets carrying the virus. The outbreak was previously declared as a global pandemic and raised international concern. As the preventive practices are very critical, this study aims to determine the preventive practices against COVID-19, especially among gender in Klang Valley, Malaysia.

An online cross-sectional study was conducted among the community in Klang Valley who were selected through convenience sampling. Malaysian aged 18-year-old and above, residing in that area were studied using a set of validated questionnaires via google form. The data were analyzed using JASP.

The prevalence of poor prevention practices against COVID-19 was significantly higher in male (88.9%) as compared to female (57.3%) (p-value <0.001). Higher prevalence of poor practices among males were reported in hand hygiene (63.0%), wearing mask (18.5%), sanitization (74.0%), abiding authority (14.8%) and self-initiative on COVID-19 prevention (37.0%).

It is important to provide health education to encourage adequate preventive practices against COVID-19 among the communities, more specifically among males.

Keywords: preventive practices, prevention, gender, COVID-19, Klang Valley

INTRODUCTION

Coronavirus disease 2019 (COVID-19) is a disease caused by a virus named SARS-CoV-2 and was discovered in December 2019 in Wuhan, China. It is very contagious and has quickly spread around the world. [1] The most frequent mode of transmission of COVID-19 is through inhalation of infected respiratory fluids or by touching faces without cleaning hands following exposure to contaminated surfaces. [2]

Rhinitis (66.7%), fever (19.7%) and cough (15.2%) were the most common clinical characteristics at the outset of illness in a study of 147 hospitalized patients in Malaysia. [3] WHO has devised protective measures for COVID-19 which are getting vaccinated, social distancing, opening windows if possible, putting on masks, practicing good hand hygiene, covering mouth and nose when coughing and sneezing, and isolating when not feeling well. [4]

A study conducted in Malaysia in 2020 has shown that good preventive behaviours against COVID-19 were 40.0%, [5] with females are shown to be more significantly associated with better practice (OR: 2.04, CI: 95%, p<0.001). [6] However, one study showed men had better COVID-19 preventive methods (29.6%) compared to women (28.4%) (p<0.001). [7]

Hence, this study aims to compare the preventive practices against COVID-19 among gender in Klang Valley, Malaysia.

MATERIALS AND METHODS

This cross-sectional study was conducted among Malaysian residing in Klang Valley and aged at least 18 years old. The respondents were selected through convenience sampling.

Data was collected through an online survey which was distributed on several social media platforms. The questionnaire consists of two sections which were sociodemographic [8] and COVID-19 prevention with Cronbach alpha = 0.82. [9] Pearson's chi-square test was used to determine the association between gender and prevention practices status against

COVID-19. The level of significance was set at a p-value <0.05.

RESULT

A total of 143 respondents participated in this study with a response rate of 99%.

Table 1: Status of prevention practices against COVID-19 by gender (n = 143)

Gender	Preventive status		Total n (%)	Statistical test	
	Good n (%)	Poor n (%)		χ^2 (df)	P-value
Male	6 (11.1)	48 (88.9)	54 (37.8)	15.74 (1)	<.001
Female	38 (42.7)	51 (57.3)	89 (62.2)		
TOTAL	44 (30.8)	99 (69.2)	143 (100.0)		

Table 1 shows that the majority of the respondents were poor in prevention practices against COVID-19 (69.2%) with significantly higher in males (88.9%) as compared to females (57.3%) (p<0.001).

Table 2: Prevention practices by sociodemographic variables (n=143)

Sociodemographic Variables	Gender	Status of Prevention Practices			Statistical test	
		Good n (%)	Poor n (%)	Total n (%)	χ^2 (df)	P-value
Age						
18-29	Male	1 (3.1)	31 (96.9)	32 (100.0)	10.178 (1)	0.001
	Female	16 (32.7)	33 (67.3)	49 (100.0)		
30-39	Male	1 (14.3)	6 (85.7)	7 (100.0)	2.524 (1)	0.112
	Female	7 (50.0)	7 (50.0)	14 (100.0)		
40-49	Male	1 (14.3)	6 (85.7)	7 (100.0)	4.105 (1)	0.043
	Female	8 (61.5)	5 (38.5)	13 (100.0)		
50-59	Male	2 (40.0)	3 (60.0)	5 (100.0)	0.142 (1)	0.707
	Female	6 (50.0)	6 (50.0)	12 (100.0)		
≥ 60	Male	1 (33.3)	2 (66.7)	3 (100.0)	1.333 (1)	0.248
	Female	1 (100.0)	0 (0.0)	1 (100.0)		
Marital Status						
Never married	Male	2 (6.7)	28 (93.3)	30 (100.0)	6.546 (1)	0.011
	Female	15 (31.3)	33 (68.7)	48 (100.0)		
Married/Divorcee/Widow	Male	4 (16.7)	20 (83.3)	24 (100.0)	9.692 (1)	0.002
	Female	23 (56.1)	18 (43.9)	41 (100.0)		
Education Level						
Primary	Male	1 (100.0)	0 (0.0)	1 (100.0)	5.000 (1)	0.025
	Female	4 (100.0)	0 (0.0)	4 (100.0)		
Secondary	Male	0 (0.0)	4 (100.0)	4 (100.0)	3.592 (1)	0.058
	Female	4 (57.1)	3 (42.9)	7 (100.0)		
Tertiary	Male	5 (10.2)	44 (89.8)	49 (100.0)	15.764 (1)	<0.001
	Female	34 (43.6)	44 (56.4)	78 (100.0)		
Occupation						
Unemployed/Housewife/Retiree	Male	0 (0.0)	1 (100.0)	1 (100.0)	2.182 (1)	0.140
	Female	8 (72.7)	3 (27.3)	11 (100.0)		
Government	Male	0 (0.0)	2 (100.0)	2 (100.0)	1.587 (1)	0.208
	Female	7 (46.7)	8 (53.3)	15 (100.0)		
Private	Male	3 (10.7)	25 (89.3)	28 (100.0)	7.314 (1)	0.007
	Female	9 (45.0)	11 (55.0)	20 (100.0)		
Self-employed	Male	2 (33.3)	4 (66.7)	6 (100.0)	0.278 (1)	0.598
	Female	2 (50.0)	2 (50.0)	4 (100.0)		
Student	Male	1 (5.9)	16 (94.1)	17 (100.0)	4.114 (1)	0.043
	Female	12 (30.8)	27 (69.2)	39 (100.0)		
Household Monthly Income						
B40 (≤RM 4850)	Male	0 (0.0)	17 (100.0)	17 (100.0)	13.484 (1)	<0.001
	Female	13 (54.2)	11 (45.8)	24 (100.0)		
M40 (RM4851-10970)	Male	3 (14.3)	18 (85.7)	21 (100.0)	5.301 (1)	0.021
	Female	19 (43.2)	25 (56.8)	44 (100.0)		
T20 (≥RM10971)	Male	3 (3.9)	13 (81.3)	16 (100.0)	0.476 (1)	0.490
	Female	6 (28.6)	15 (71.4)	21 (100.0)		

Table 2 shows that younger age group males (18-29 and 40-49) had significant differences in poor prevention practices compared to the older age group (>60) with a p-value of 0.001 and 0.043 respectively. For marital status, males in both never married and married/divorcee/widow groups have significantly poor prevention practices with a p-value of 0.011 and 0.002 respectively. There is also a significant

difference between gender at the tertiary education level (p<0.001). Males who are private workers and students are significantly poorer in prevention practices with a p-value of 0.007 and 0.043 respectively. With respect to income, the lowest income group (B40) for males had the most significant difference in poor prevention practices compared to the high-income group (T20) (p<0.001).

Table 3: Comparison of prevention practices items against COVID-19 by gender (n=143)

Practices Items	Gender	Status of Prevention Practices		Statistical test	
		Good n (%)	Poor n (%)	χ^2 (df)	P-value
Hand Hygiene					
Shakes hands while greeting people	Male	28 (51.9)	26 (48.1)	3.98 (1)	0.046
	Female	61 (68.5)	28 (31.5)		
Washes hands with soap and water/alcohol-based sanitiser	Male	42 (77.8)	12 (22.2)	3.12 (1)	0.078
	Female	79 (88.8)	10 (11.2)		
Wash/sanitise hands for at least 20 seconds	Male	20 (37.0)	34 (63.0)	11.63 (1)	<.001
	Female	59 (66.3)	30 (33.7)		
Covers face with a handkerchief/ bent elbow while coughing/sneezing	Male	41 (76.0)	13 (24.0)	6.10 (1)	0.013
	Female	81 (91.0)	8 (9.0)		
Wash/sanitise hands before touching your eyes/nose/mouth	Male	36 (66.7)	18 (33.3)	5.14 (1)	0.023
	Female	74 (83.1)	15 (16.9)		
Social Gathering					
Maintain a minimum distance of one meter outside the house	Male	38 (70.4)	16 (29.6)	1.25 (1)	0.264
	Female	70 (78.7)	19 (21.3)		
Avoid going out of the house unnecessarily	Male	29 (53.7)	25 (46.3)	4.90 (1)	0.027
	Female	64 (71.9)	25 (28.1)		
Days of attending social gatherings per week	Male	19 (35.2)	35 (64.8)	3.30 (1)	0.069
	Female	19 (21.3)	70 (78.7)		
Wearing Mask					
Wears masks while going out of home	Male	48 (88.9)	6 (11.1)	7.20 (1)	0.007
	Female	88 (98.9)	1 (1.1)		
Covers nose and mouth while wearing a mask	Male	50 (92.6)	4 (7.4)	3.93 (1)	0.047
	Female	88 (98.9)	1 (1.1)		
Throw mask into the dustbin after using it	Male	44 (81.5)	10 (18.5)	14.32 (1)	<.001
	Female	88 (98.9)	1 (1.1)		
Sanitization					
Sanitize personal items upon reaching home	Male	14 (25.9)	40 (74.1)	15.26 (1)	<.001
	Female	53 (59.6)	36 (40.4)		
Take precautions when buying things to avoid virus contamination	Male	22 (40.7)	32 (59.3)	21.05 (1)	<.001
	Female	70 (78.7)	19 (21.3)		
Abiding in authority					
Obey government restrictions regarding the COVID-19 pandemic	Male	46 (85.2)	8 (14.8)	4.66 (1)	0.031
	Female	85 (95.5)	4 (4.5)		
Self-initiative on COVID-19 Infection					
Contact the hospital/helpline/authority regarding it upon developing COVID-19 symptoms	Male	34 (63.0)	20 (37.0)	2.97 (1)	0.085
	Female	68 (76.4)	21 (23.6)		
Self-quarantine after becoming close contact with COVID-19 positive person	Male	44 (81.5)	10 (18.5)	2.06 (1)	0.151
	Female	80 (89.9)	9 (10.1)		

Table 3 shows that most male respondents had poorer preventive practices against COVID-19 in washing/sanitizing their hands for at least 20 seconds (63.0%), avoided going out of the house unnecessarily (46.3%), throwing their used mask into the dustbin (18.5%), sanitized their personal items upon reaching home

(74.0%), obeyed the government restrictions regarding COVID-19 (14.8%) and contacted the hospital, helpline or authority upon developing symptoms (37.0%). Except for attending social gatherings for at least three days per week, which was higher in females (78.7%).

DISCUSSION

Our study showed that males have significantly poorer preventive practices against COVID-19 (88.9%) compared to females (57.3%). This is supported with a previous study where females were two times more likely to have better COVID-19 practices compared to men, [6] which might be due that men having lower concerns for global health problems and health-seeking activity. [10]

A study done in United States of America on 'Proper Hand-Washing Techniques in Public Restrooms' found that males had a lower percentage of washing hands for more than 15 seconds (17.9%) compared to females (44.8%), which was consistent with our findings on more male poorly washed/sanitized their hands for at least 20 seconds (63.0%). [11] This might be due to a significantly reduced knowledge in males on the effective duration of handwashing ($p < 0.0001$) [12] of at least 20 seconds to prevent the spreading of pathogens as recommended by the CDC. [13]

WHO required that people discard used masks immediately in a closed bin. [14] However, our study revealed that 18.5% of male respondents are less likely to throw their masks into the dustbins after using them. Reusing face masks may be attributed to this finding as over half of people use disposable masks more than once before disposal. [15]

Poorly obeying the government restrictions regarding COVID-19 were found to be significantly higher in male for our study (14.8%) which was supported by an analysis in Jakarta, Indonesia that showed 29.6% of their male respondents were significantly non-compliant to their large-scale social restrictions issued by the government as compared to female (20.7%) ($p = 0.01$). [16] This could be related to the public's satisfaction level with the actions taken by the government which was significantly associated with gender as reported in a study done in Johor, Malaysia ($p = 0.001, 0.049, 0.035, 0.025, 0.025$). [17] Likewise, males tend to have lower health literacy

scores which might be another contributor to the lack of compliance with pandemic regulations. [18]

The poorest preventive practices for COVID-19 among the younger age group could be due to poor health literacy in lower education groups as found in a previous study. [19] Similarly, in lower income groups where low income is also a predictor outcome for knowledge of the virus. [20] The lack of knowledge could be factored by the increased odds of poor health literacy among those with low incomes. [21]

CONCLUSION

Males are the least likely to be proactive to practice preventive habits to prevent COVID-19 infection. Specifically, males are less likely to wash their hands for at least 20 seconds, avoid going out unnecessarily, sanitize their personal items, adhere to government restrictions regarding the pandemic, have proper mask usage as well as seek medical help when necessary. Therefore, it is crucial the Health Ministry address the situation more specifically for males. With several studies proving males, having low literacy and concern for health, interventions should be focused more on education and promoting awareness among men.

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