

Awareness and Practices on Handwashing and the Use of Mask Among Non-Allied Health Students: A Basis for Health Promotion

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Abstract

The use of masks for the protection against COVID-19 infections has been very common in the year 2020. However, there is little to no literature regarding this concept. The aim of the study was to identify the level of awareness and practices in the use of masks and as well as to determine if the relationship exists between the variables. A descriptive-evaluative, descriptive-comparative, and descriptive- correlational research design was used in this study. One hundred non-allied health students were chosen to participate in this study using the purposive sampling technique. The results revealed that awareness of the respondents on handwashing and its use is *high*. It also shows that there is a *high* level of practice on handwashing and the use of masks. The respondents' perception of the use of masks and handwashing practices showed a *significant positive relationship* between the awareness of the use of masks and practice on handwashing. There was *no significant difference* found in the level of awareness and practices on handwashing when grouped according to sex, year level, colleges, and family income. However, a *significant difference* was found in the awareness level when grouped according to age and also in practices on the use of masks when grouped according to sex and the college they belong to.

Keywords: awareness, practices, mask, handwashing, health promotion

INTRODUCTION

The extended use of face masks and careful handwashing is mostly common during outbreaks and pandemics. As the COVID-19 pandemic progresses, the US Centers for Disease Control and Prevention (CDC) strongly suggests wearing face masks when going out in public (Cheng, Lam & Leung, 2020). On April 2, 2020, the Philippine government required all the residents of Luzon to wear masks when going out of their houses. However, most people are not aware of the correct practices with regard to these preventive measures (Chughtai, 2019).

METHODOLOGY

The researchers aimed to identify the level of awareness of the respondents' use of masks and handwashing practices. A descriptive correlational research design was used in this study, and 100 non-allied health students were chosen purposively. The study used an adopted survey

questionnaire to know the extent of awareness on handwashing and the use of masks among non-allied health students.

RESULTS

Table 1: Extent of Awareness on Handwashing

AWARENESS	N	Mean	Std. Deviation	Qualitative interpretation
1. I am aware that the use of soap and water is a better hand hygiene technique.	100	4.5500	.83333	Very High
2. I am aware that handwashing is necessary after using the comfort room.	100	4.6000	.88763	Very High
3. I am aware that handwashing should be done after sneezing, coughing, or blowing the nose.	100	4.4400	.82045	High
4. I am aware that handwashing is necessary after touching Personal Protective Equipment.	100	4.4200	.98658	High
5. I am aware of the 40-60 seconds step-by-step procedure of proper handwashing.	100	4.0500	1.12254	High
Overall extent of awareness	100	4.4120	.74607	High

Legend: Very High=4.5-5, High=3.5-4.49, Fair=2.5-3.49, 1.5-2.49=Low, 1.0-1.49=Very Low

The item which ranked the highest was question number 2, which states, “I am aware that handwashing is necessary after using the comfort room,” with a mean score of 4.60 ($SD=.88763$), which is *very high*. The second highest was question number 1, which states, “I am aware that use of soap and water is a better hand hygiene technique,” with a mean score of 4.55 ($SD=.833$), which is also *very high*. Questions number 3 and 4 are high, with a mean of 4.44 ($SD=.82045$) and 4.42 ($SD=.98658$), respectively. The lowest ranking was question number 5, which states, “I am aware of the 40-60 seconds step by step procedure of proper handwashing,” with a mean score of 4.05 ($SD=1.12254$), which is also high. The grand mean of the respondents was 4.4120 with a standard deviation of .74607. It means that the non-allied health students’ extent of awareness on handwashing was *high*. This finding implies that the respondents have adequate awareness of proper handwashing.

Table 2: Extent of Awareness on the Use of Mask

AWARENESS	N	Mean	Std. Deviation	QI
1. I am aware that wearing a surgical face mask with the white side facing in is the correct way.	100	4.0800	.13422	High
2. I am aware that there are 3 layers in a surgical face mask.	100	3.6500	1.23399	High
3. I am aware that the middle layer acts as a filter media barrier.	100	3.5900	1.23169	High
4. I am aware that a surgical face mask can only be worn for 8 hours maximum.	100	3.5300	1.20147	High
5. I am aware that proper wearing of a surgical mask is to cover the nose, mouth, and chin.	100	4.4200	.83097	High
6. I am aware that a cloth facial mask is not effective in place of a surgical mask.	100	3.7000	1.15907	High
7. I am aware that a surgical mask is worn for droplet precaution.	100	3.8700	1.07923	High
8. I am aware that N95 is worn for airborne precaution.	100	4.1500	1.03840	High
9. I am aware that masks are not reusable.	100	4.1600	1.05141	High
Overall extent of awareness	100	3.9056	.75432	High

Legend: Very High=4.5-5, High=3.5-4.49, Fair=2.5-3.49, 1.5-2.49=Low, 1.0-1.49=Very Low

The item which ranked the highest is item number 5, which states, “I am aware that proper wearing of a surgical mask is to cover the nose, mouth, and chin,” with a mean score of 4.42 (SD=.83097), which is high. The lowest-ranked is item number 4, which states, “I am aware that surgical face mask can only be worn for 8 hours maximum,” with a mean of 3.53 (SD=1.20147). Respondents’ extent of awareness on the use of masks was also rated high on item 1 with the mean of 4.08 (SD=.13422); item 2 with the mean of 3.65 (SD=1.23399); item 3 with the mean of 3.59

(SD=1.23169); item 6 with the mean of 3.70 (SD=1.15907); item 7 with the mean of 3.87 (SD=1.07923); item 8 with the mean of 4.15 (SD=1.03840); and item 9 with the mean of 4.16 (SD=1.05141). The grand mean of the respondents was 3.9056 with a standard deviation of .75432. It means that non-allied health students have a *high* level of extent of awareness of the use of masks, which implies that the respondents have enough awareness of the use of masks.

Table 3: Extent of Practices on Handwashing

PRACTICES	N	Mean	SD	QI
1. I use soap and water when I perform handwashing.	100	4.6000	.60302	Very High
2. I wash my hands after using the comfort room.	100	4.7400	.57945	Very High
3. I wash my hands after sneezing, coughing, or blowing the nose.	100	4.1700	.85345	High
4. I wash my hands after touching Personal Protective Equipment.	100	4.3500	.80873	High
5. I perform the 40-60 seconds step-by-step procedure of proper handwashing.	100	3.9400	1.04272	High
Overall extent of practices	100	4.3600	.60503	High

Legend: Very High=4.5-5, High=3.5-4.49, Fair=2.5-3.49, 1.5-2.49=Low, 1.0-1.49=Very Low

The item with the highest mean score of 4.7400 (SD=.57945) was Question No. 2, which says, “I wash my hands after using the comfort room.” The second highest mean score was question No. 1 with a mean score of 4.6000 (SD=.60302), that is, “I use soap and water when I perform handwashing.”. Question No. 4 mean score of 4.3500 (SD=.880873), and Question 3 averaged a score of 4.1700 (SD=.85345). The lowest score was question No 5, which says: I perform the 40-60 seconds step by step procedure of proper handwashing.”, with a mean score of 3.9400 (SD=.60503). The respondents’ grand mean is 4.3600 (SD=.60503), which means that the respondents have a *high* level of extent of practices on handwashing.

Table 4: Extent of Practices on the Use of Mask

PRACTICES	N	Mean	SD	QI
1. I wear a surgical face mask with the white side facing in.	100	4.2600	1.02119	High
2. I wear a surgical face mask for 8 hours only.	100	3.6200	1.23730	High
3. I cover my nose, mouth, and chin when wearing a surgical face mask.	100	4.3700	.91734	High

4. I wear a cloth mask to replace the surgical face mask or N95.	100	3.1300	1.30775	Fair
5. I wear a surgical face mask for droplet precaution.	100	3.9800	1.09157	High
6. I wear N95 for airborne precaution.	100	3.8900	1.20517	High
7. I dispose of the mask after use.	100	4.1400	1.11028	High
8. I dispose of masks in the infectious material bin.	100	3.5300	1.28279	High
9. I practice proper handwashing along with using masks.	100	4.3500	.80873	High
Overall extent of practices	100	3.9189	.58643	High

Legend: Very High=4.5-5, High=3.5-4.49, Fair=2.5-3.49, 1.5-2.49=Low, 1.0-1.49=Very Low

The extent of practice on the use of masks among non-allied health students is presented in Table 4. The item with the highest mean score of 4.3700 ($SD=.91734$) is question no. 3, which says, “I cover my nose, mouth, and chin when wearing a surgical face mask.”. The second highest mean score was questioned no. 9 with a mean score of 4.3500 ($SD=.80873$), that is, “I practice proper handwashing along with using masks.”. Question no. 1 has a mean score of 4.2600 ($SD=1.02119$); question no. 7 has a mean score of 4.1400 ($SD=1.11028$); question no. 5 has a mean score of 3.9800 ($SD=1.09157$); question no. 6 has a mean score of 3.8900 ($SD=1.20517$); question no. 2 has a mean score of 3.6200 ($SD=1.23730$), and question no. 8 has a mean score of 3.5300 ($SD=1.28279$) all were high. The question with the lowest score was no. 4, which says: “I wear cloth mask to replace surgical face mask or N95.”, with a mean score of 3.1300 ($SD=.1.30775$), which is interpreted as fair. The grand mean of the respondents was 3.9189 with a standard deviation of .58643, which is high. This implies that the respondents’ practice of the use of masks is the correct and proper way.

Difference Between the Awareness and Practices on Handwashing Among Non-Allied Health Students When Grouped According to Profile

Table 5: Differences in the awareness and practice of handwashing among non-allied health students when sex is considered

Handwashing	<i>F</i>	<i>Sig.</i>	<i>QI</i>
Awareness	.745	.266	<i>NS</i>
Practices	9.677	.065	<i>NS</i>

*. The mean difference is significant at the 0.05 level.

Legend: *S*=Significant, *NS*= Not Significant

For the awareness, the significant value is .266 and is greater than 0.05. This is interpreted as not significant. While for the practices on handwashing, the significant value is .065, which is also greater than 0.05. Therefore, there is no significant difference between the awareness and practices on handwashing among non-allied health students in terms of their sex.

Table 6: Differences in the awareness and practice of handwashing among non-allied health students when age is considered

Handwashing	<i>F</i>	<i>Sig</i>	<i>QI</i>
Awareness	5.547	.005	<i>S</i>
Practices	1.887	.157	<i>NS</i>

*. The mean difference is significant at the 0.05 level

Legend: *S*=Significant, *NS*= Not Significant

Table 6 presents the difference between the awareness and practices on handwashing among non-allied health students when grouped according to three ranges of age 18-21, 22-25, and 26-31 years old. Based on the table, the age ranges have a significant value of .005, which is lower than 0.05, which indicates that these age ranges have a significant difference in their awareness regarding handwashing, but there is no significant difference between these ages ranges on practices of handwashing.

Table 7: Differences in the awareness and practice of handwashing among non-allied health students when year level is considered

Handwashing	<i>F</i>	<i>Sig.</i>	<i>QI</i>
Awareness	.675	.569	<i>NS</i>
Practices	1.396	.249	<i>NS</i>

*. The mean difference is significant at the 0.05 level

Legend: *S*=Significant, *NS*= Not Significant

Table 7 shows the significant value of .569 for awareness on handwashing and .249 for practices. These values are greater than 0.05, which means that there is no significant difference between the awareness and practices on handwashing among non-allied health students according to their year level.

Table 8: Differences in the awareness and practice of handwashing among non-allied health students when college is considered

Handwashing	<i>F</i>	<i>Sig.</i>	<i>QI</i>
Awareness	.948	.440	<i>NS</i>
Practices	.654	.625	<i>NS</i>

*. The mean difference is significant at the 0.05 level

Legend: S=Significant, NS= Not Significant

Table 8 shows the significant value of .440 on the awareness of handwashing and .625 on the practices. These values are greater than 0.05, which means that there is no significant difference between the awareness and practices on handwashing among non-allied health students based on their colleges.

Table 9: Differences in the awareness and practice of handwashing of non-allied health students when income is considered

Handwashing	<i>F</i>	<i>Sig.</i>	<i>QI</i>
Awareness	2.542	.084	<i>NS</i>
Practices	1.393	.253	<i>NS</i>

*. The mean difference is significant at the 0.05 level

Legend: *S*=Significant, *NS*= Not Significant

Table 9 shows that the awareness of handwashing has a significant value of .084 while the practices have a significant value of .253. These values are both greater than 0.05. Therefore, there is no significant difference between the awareness and practices on handwashing among non-allied health students based on their family income.

Difference Between the Awareness and Practices on the Use of Mask Among Non-Allied Health Students When Grouped According to Profile

Table 10: Differences in the awareness and practice on the use of masks among non-allied health students when sex is considered

Use of Mask	<i>F</i>	<i>Sig.</i>	<i>QI</i>
Awareness	.508	.742	<i>NS</i>
Practices	2.708	.027	<i>S</i>

*. The mean difference is significant at the 0.05 level

Legend: *S*=Significant, *NS*= Not Significant

Table 10 describes the difference between the awareness and practice of mask use among the participants of their sexes. There is no significant difference in awareness between males and females because of the sig. 0.742 is higher than the standard range of 0.05. However, the use of masks has a significant difference between males and females since the sig. 0.027 is in the standard range (<0.05).

Table 11: Differences in the awareness and practice on the use of masks among non-allied health students when age is considered

Use of Mask	<i>F</i>	<i>Sig.</i>	<i>QI</i>
Awareness	1.963	.146	<i>NS</i>
Practices	3.078	.051	<i>NS</i>

*. The mean difference is significant at the 0.05 level.

Legend: *S*=Significant, *NS*= Not Significant

Table 11 describes the difference between the awareness and practice of mask use among the participants in their age group. There is no significant difference in the use of masks in terms of age, as both *sig.* Awareness (1.46) and Practices (0.051) are not below the standard range (<0.05).

Table 12: Differences in the awareness and practice on the use of masks among non-allied health students when year level is considered

Use of Mask	<i>F</i>	<i>Sig.</i>	<i>QI</i>
Awareness	.755	.522	<i>NS</i>
Practices	.599	.617	<i>NS</i>

*. The mean difference is significant at the 0.05 level.

Legend: *S*=Significant, *NS*= Not Significant

Table 12 describes the difference between awareness and the use of masks among participants at their year level. There is no significant difference in the use of masks in terms of the respondent's year level, as both *sig.* Awareness (0.522) and Practice (0.617) are not below the range of 0.05.

Table 13: Differences in the awareness and practice on the use of masks among non-allied health students when college is considered

Use of Mask		<i>F</i>	<i>Sig.</i>	<i>QI</i>
Awareness	CAH	1.720	.152	<i>NS</i>
	COB			
	COE			
	COT			
	CST			
Practices	CAH	2.530	.049	<i>S</i>
	COB			
	COE			
	COT			
	CST			

*. The mean difference is significant at the 0.05 level.
Legend: *S*=Significant, *NS*= Not Significant

Table 13 describes the difference between the awareness and practices of mask use among the participants in their colleges. There is no significant difference in mask awareness among the college groups (COB, COT, CAH, COE, CST) because their significant values are all higher than the normal range of 0.05. However, there is a significant difference in the practice on the use of masks among COT and CAH because the significant value is .049, which is below the range of 0.05

Table 14: Differences in the awareness and practice on the use of masks among non-allied health students when income is considered

Use of Mask	<i>F</i>	<i>Sig.</i>	<i>QI</i>
Awareness	1.871	.159	<i>NS</i>
Practice	2.730	.070	<i>NS</i>

*. The mean difference is significant at the 0.05 level.

Table 14 describes the difference between the awareness and practices on the use of masks among the respondents in terms of their family income. There is no significant difference in the awareness and practices in terms of family income of the respondents due to both the *sig.* of awareness (0.159) and practice (0.070) which are higher than 0.05.

Table 15: Significant Relationship between awareness and practice on handwashing among non-allied health students

Handwashing	<i>r</i>	<i>p-value</i>	<i>QI</i>
Awareness	.617	.000	<i>S</i>
Practices	.617	.000	<i>S</i>

Legend: *S*= Significant, *NS*=Not Significant

**. Correlation is significant at the 0.01 level (2-tailed).

Table 15 shows the relationship between awareness and practice of handwashing. There is a significant relationship between awareness and practice on handwashing, based on the positive result of the Pearson's *r* (0.6.17* *) and the significant value (0.00), which is less than 0.01 level.

Table 16: Significant Relationship between awareness and practice in the use of masks among non-allied health students

Use of Mask	<i>r</i>	<i>p-value</i>	<i>QI</i>
Awareness	.480	.000	<i>S</i>
Practices	.480	.000	<i>S</i>

Legend: *S*= Significant, *NS*=Not Significant, *VI*= Verbal Interpretation

** . Correlation is significant at the 0.01 level (2-tailed).

Table 16 describes the relationship between awareness and practice in the use of masks. There is a significant relationship between awareness and practices on mask based on the positive result of the Pearson's *r* (0.480 * *) and the sig. on the use of mask (0.00), which is less than 0.01 level.

DISCUSSION AND CONCLUSION

The results revealed that awareness of the respondents on handwashing and its use is *high*. It also shows that there is a *high* level of practice on handwashing and the use of masks. The respondents' perception of the use of masks and handwashing practices showed a *significant positive relationship* between the awareness of the use of masks and practice on handwashing. Moreover, there is *no significant difference* between the awareness and practices on handwashing among the respondents when grouped into sex, year level, colleges, and family income. However, there is a *significant difference* in the awareness when grouped according to age and in practices on the use of masks when grouped according to sex. When respondents are grouped according to colleges, there is a *significant difference* detected in practices of respondents from the College of Theology and College of Arts and Humanities. Pearson's correlation showed that the relationship between awareness and practice on handwashing and the use of masks among non-allied health students was positive. In contrast, the higher the extent of awareness, the higher the extent of the practice. Therefore, even as non-allied health students are grouped according to their sex, age, year level, and socioeconomic status, the outcome of raising awareness about handwashing and the use of masks had a positive effect on the respondents' future practices towards the matter.

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