How it Started?

- 2 undergraduate students living in car
  - Found placement/housing for students
  - Faculty offered housing

Preventative Practices to Improve the Mental Health of Nursing Students During the COVID-19 Pandemic

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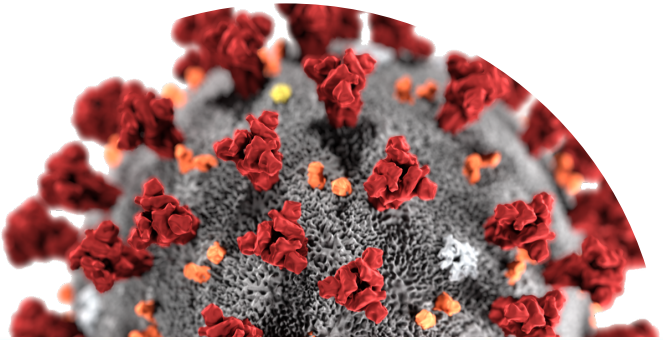

Evaluation of a “Check-In Care” campaign targeted to nursing students during the COVID-19 pandemic

Lee Anne Walmsley
PhD, EdS, MSN, RN

Background

- Social isolation during the COVID-19 pandemic created unique mental health challenges for nursing students
- Nursing students may have had limited access to mental health resources due to home-mandated quarantines
- Certain populations may have been inherently more vulnerable to stressors associated with social isolation

Salerno, J. P., Williams, N. D., & Gattamorta, K. A. (2020). LGBTQ populations: Psychologically vulnerable communities in the COVID-19 pandemic. Psychological Trauma: Theory, Research, Practice, and Policy, 12(S1), S239

Kim, S. C., Sloan, C., Montejano, A., & Quiban, C. (2021). Impacts of Coping Mechanisms on Nursing Students' Mental Health during COVID-19 Lockdown: A Cross-Sectional Survey. *Nursing Reports, 11*(1), 36-44.

Li, X., Fu, P., Fan, C., Zhu, M., & Li, M. (2021). COVID-19 Stress and Mental Health of Students in Locked-Down Colleges. *International Journal of Environmental Research and Public Health, 18*(2), 771.

Methods

A 10-minute electronic survey was sent to UK CON students

Data from 234 students were analyzed

- Demographic variables: age, gender, ethnicity, sexual orientation, grade level, marital status, employment status, living situation
- The survey asked questions related to students receiving faculty contact and its perceived impact on the recipients.
- Psychological distress: The Kessler Screening Scale, K-6 (Kessler et al., 2003)

Statistical analysis

- Chi-square analysis: determine the association between contact versus no contact and a student's risk for serious mental illness

Findings

- 68% of students endorsed that faculty contacts made them feel “cared for”
- 25% wished they had more regular faculty “check-ins”
- 20% of students were at risk for serious mental illness
- Higher proportion of students who reported not receiving contact were at risk for serous mental illness
  - 17.1% vs. 29.8%
  - Chi-square=3.82, p=.051

Findings

- Students who self-identified as non-heterosexual were more at risk for reporting higher levels of psychological distress compared to those who identified as heterosexual

- 55.6% vs 18.2%
- Chi-square=7.64, p=0.006

Conclusions

1. Important to take a systematic approach for faculty members contacting students during stressful situations such as the COVID-19 Pandemic
2. Need for faculty to assess and care for needs of students who self-identify as non-heterosexual

Looking to the Future

Research needs to address other interventions that help alleviate psychological distress in vulnerable nursing student populations

Future studies should determine preferences of vulnerable nursing student populations and their desire or need for supportive contact by faculty

Looking to the Future

- Need for future research to create innovative strategies to maintain personal connection and support psychological well-being of students during periods of social isolation

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How Many of You Practiced Daily Self-care This Week?

Exercise

Meditation

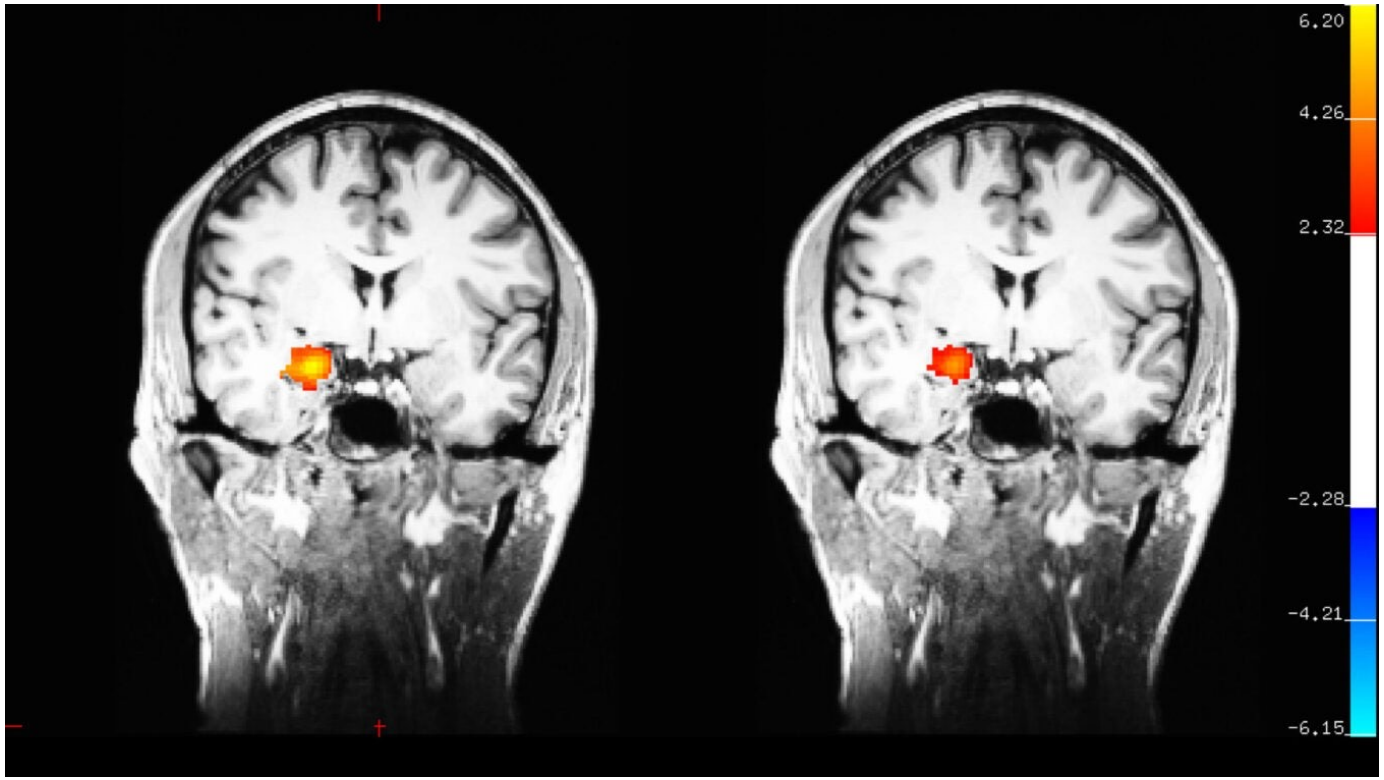
Yoga

Proper sleep/sleep hygiene

Brain Changes with Meditation

"Functional MRI (left) showing activation in the amygdala when participants were watching images with emotional content before learning meditation. After eight weeks of training in mindful attention meditation (right) note the amygdala is less activated after the meditation training."

- Desbordes, G., Negi, L., Pace, T., Wallace, B., Raison, C., & Schwartz, E. (2012). Effects of mindful-attention and compassion meditation training on amygdala response to emotional stimuli in an ordinary, non-meditative state. Frontiers in Human Neuroscience, 6(292). doi:10.3389/fnhum.2012.00292



Examining associations between self-care practices and psychological distress among nursing students during the COVID-19 pandemic

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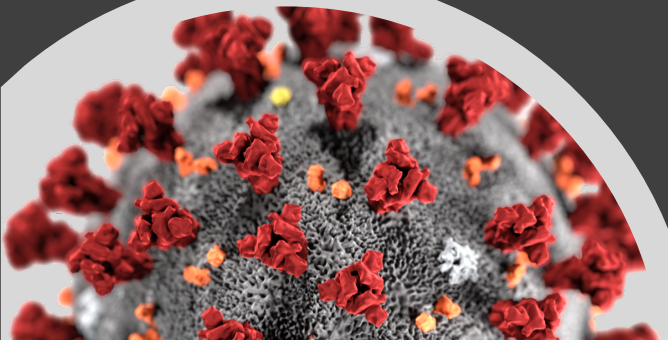
- Lee Anne Walmsley, PhD, EdS, MSN, RN
- Chizimuzo Okoli, PhD, MPH, MSN, APRN, FAAN



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Background

- Limited research during pandemics related to the impact of self-care practices on psychological distress
- Nursing students may already face challenges in following basic health recommendations
  - Self-care practices: diet & exercise
- 82% of nursing students surveyed (n=94) reported having at least 1 modifiable health risk factor and 42% were either overweight or obese (Purcell, Moyle, & Evans, 2006)

Background

- Studies have already shown psychological distress among nursing student during the COVID-19 pandemic (Li et al., 2020; Wang et al., 2020)

- Nursing students reported low levels of psychological well-being
  - Increased levels of stress + incidence of negative psychological health (Li & Hasson, 2020)

Methods

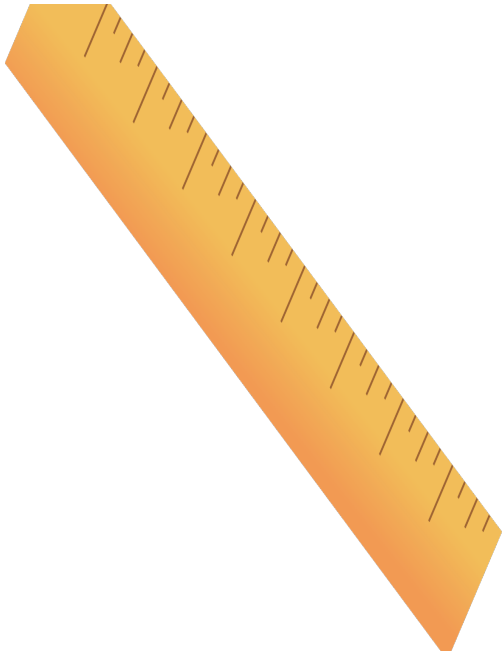
A 10-minute electronic survey was sent to UK CON students

Data from 255 students were analyzed

- Demographic variables: age, gender, ethnicity, sexual orientation, grade level, marital status, employment status, living situation
- Behavioral variables: dietary practices and exercise
- Self care practices: sixteen questions from the Self-Care assessment that focused on five different dimensions of self-care: psychological, emotional, spiritual, relationship and workplace (Saakvitne & Pearlman, 1996)
- Psychological distress: The Kessler Screening Scale, K-6 (Kessler et al., 2003)

Scales

1. Self Care Practices
   a) Likert scale (1=I never do this to 4=I always do this).
   b) Total scale internal consistency: Cronbach's alpha=0.86
   c) Subscale internal consistency: Cronbach's alpha=0.59-0.78
2. Psychological Distress: Kessler-6
   a) Likert scale (0=low levels of psychological distress; 24=higher levels of psychological distress)
   b) 13 to 24 denotes 'serious mental illness'
   c) Internal consistency: Cronbach's alpha=0.86



Statistical analysis

- Pearson correlation coefficient: examine relationship between self-care practices and psychological distress
- Multivariate regression analysis: examine relationship between self-care practices and psychological distress
  - While controlling for behavioral and demographic variables

Findings

- Significant and negative correlation between psychological distress and total/subscale self-care practice scores
  - Total: ($r=-0.43$, $p<0.0001$)
  - Subscale self-care practice scores:
    1. Psychological ($r=-0.21$, $p<0.0001$)
    2. Emotional ($r=-0.36$, $p<0.0001$)
    3. Spiritual ($r=-.29$, $p<0.0001$)
    4. Relationship ($r=-0.36$, $p<0.0001$)
    5. Work ($r=-.36$, $p=0.0001$)

Findings

- Multivariate regression analysis
  - Compared to averaging 6 hrs of sleep/night, lower psychological distress was associated with averaging 7-9 hrs of sleep/night (β=-0.15, p=0.015) and 10 hrs of sleep/night or greater (β=-0.21, p=0.001)
  - A greater self-care score (β=-0.43, p=0.015) also was associated with lower psychological distress

Conclusions

1. Increased utilization of self-care practices may be associated with lower levels of psychological distress among nursing students

2. Appropriate sleep hygiene may also benefit student's psychological distress levels

Looking to the Future

- Practices of self-care and sleep hygiene practices should be integrated into school curricula
- Future studies may assess specific interventions for populations with poor self-care and sleep hygiene practices
  - To understand and potentially alleviate the increasing levels of psychological distress

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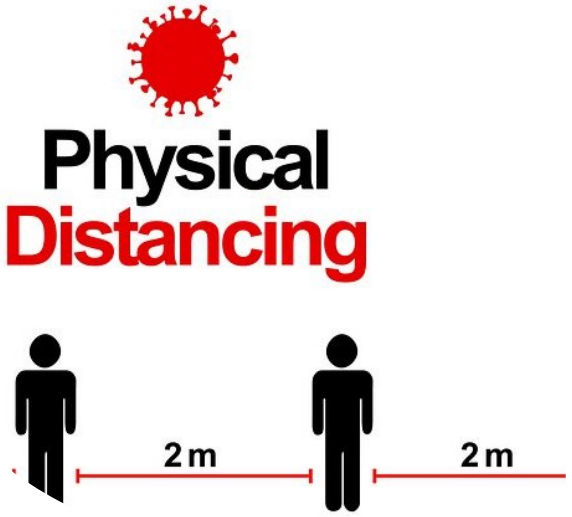
Using the Health Belief Model to examine preventive measures adherence during COVID-19 among nursing students



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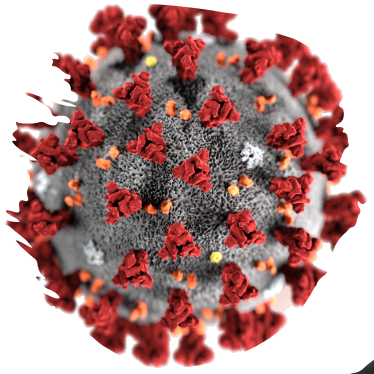


Preventive Practices

- Public health measures to curb infectious disease outbreaks
  - Home-based quarantines
  - Physical distancing in public
  - Wearing face masks/coverings in public

- Volunteer/mandatory enactment can reduce COVID-19 community infection rates

Chu, D. K., Akl, E. A., Duda, S., Solo, K., Yaacoub, S., Schünemann, H. J., & authors, C.-S. U. R. G. E. s. (2020). Physical distancing, face masks, and eye protection to prevent person-to-person transmission of SARS-CoV-2 and COVID-19: a systematic review and meta-analysis. Lancet (London, England), 395(10242), 1973-1987. doi:10.1016/S0140-6736(20)31142-9

Martini, M., Gazzaniga, V., Bragazzi, N. L., & Barberis, I. (2019). The Spanish Influenza Pandemic: a lesson from history 100 years after 1918. Journal of preventive medicine and hygiene, 60(1), E64-E67. doi:10.15167/2421-4248/jpmh2019.60.1.1205

Lyu, W., & Wehby, G. L. (2020). Community Use Of Face Masks And COVID-19: Evidence From A Natural Experiment Of State Mandates In The US. Health Affairs, 39(8), 1419-1425. doi:10.1377/hlthaff.2020.00818

Thu, T. P. B., Ngoc, P. N. H., Hai, N. M., & Tuan, L. A. (2020). Effect of the social distancing measures on the spread of COVID-19 in 10 highly infected countries. The Science of the total environment, 742, 140430-140430. doi:10.1016/j.scitotenv.2020.140430

Deterrents to Preventive Practice Adoption

Internal (individual) Factors	External (psychosocial) Factors
Infection risk perception	Social acceptability of measures
Perception of preventive measure effectiveness	Social support
Psychological distress	Neighborhood income
Attitudes towards preventive measures	Employment status
	Information

- Beeckman, M., De Paepe, A., Van Alboom, M., Maes, S., Wauters, A., Baert, F., . . . Poppe, L. (2020). Adherence to the Physical Distancing Measures during the COVID-19 Pandemic: A HAPA-Based Perspective. Applied Psychology: Health and Well-Being, n/a(n/a). doi:https://doi.org/10.1111/aphw.12242
- Coroiu, A., Moran, C., Campbell, T., & Geller, A. C. (2020). Barriers and facilitators of adherence to social distancing recommendations during COVID-19 among a large international sample of adults. PloS one, 15(10), e0239795-e0239795. doi:10.1371/journal.pone.0239795
- Jay, J., Bor, J., Nsoesie, E. O., Lipson, S. K., Jones, D. K., Galea, S., & Raifman, J. (2020). Neighbourhood income and physical distancing during the COVID-19 pandemic in the United States. Nature Human Behaviour. doi:10.1038/s41562-020-00998-2
- Romer, D., & Jamieson, K. H. (2020). Conspiracy theories as barriers to controlling the spread of COVID-19 in the U.S. Social science & medicine (1982), 263, 113356-113356. doi:10.1016/j.socscimed.2020.113356

Preventive Practices among Nursing Students

- Studies examining adherence to preventive practice among nursing students vary:
  - Anhui China (N=613): 71.2% endorsed wearing masks, gloves, and goggles in crowded areas
  - Saudi Arabia (N=1226): 81.6% endorsed physical distancing; 76.6% wore facemasks in public
  - Oman (N=163): 47.9% wore masks when leaving the home
  - Nepal (N=214): 99.5% wore masks in a crowd.
  - Korea (N=241): 97.1% almost always/always wore face masks when going outside
  - Egypt (N=144): 85.5% endorsed social distancing; 42.4% observed wearing masks during exam time.

Yuan, T., Liu, H., Li, X. D., & Liu, H. R. (2020). Factors Affecting Infection Control Behaviors to Prevent COVID-19: An Online Survey of Nursing Students in Anhui, China in March and April 2020. Medical science monitor : international medical journal of experimental and clinical research, 26, e925877-e925877. doi:10.12659/MSM.925877

Albaqawi, H. M., Alquwez, N., Balay-Odao, E., Bajet, J. B., Alabdulaziz, H., Alsolami, F., ... & Cruz, J. P. (2020). Nursing Students' Perceptions, Knowledge, and Preventive Behaviors Toward COVID-19: A Multi-University Study. Frontiers in public health, 8.

Sun, Y., Wang, D., Han, Z., Gao, J., Zhu, S., & Zhang, H. (2020). Disease prevention knowledge, anxiety, and professional identity during COVID-19 pandemic in nursing students in Zhengzhou, China. Journal of Korean Academy of Nursing, 50(4), 533-540.

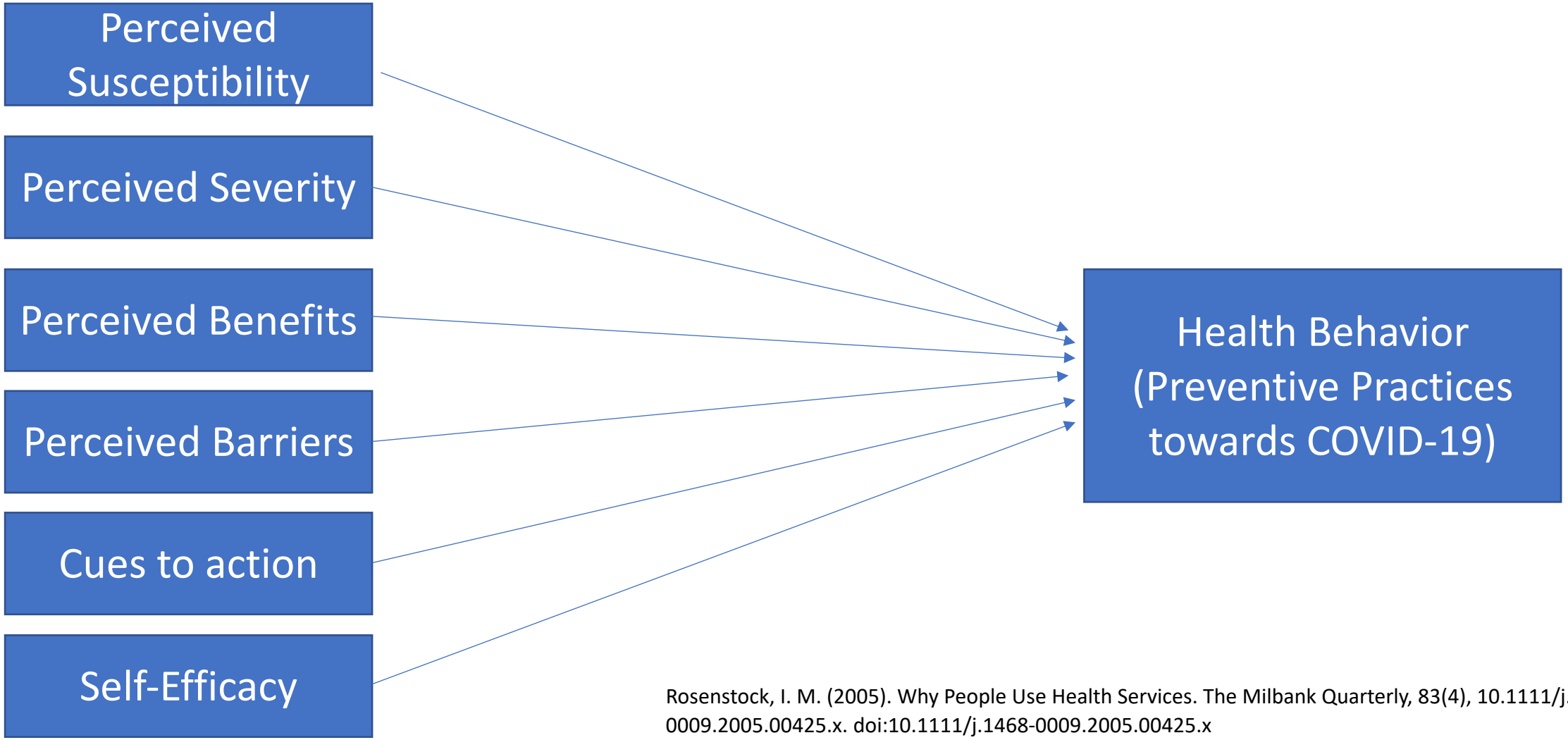
Alshdefat, A., Jansirani Natarajan, M. A. J., Baker, R. A., & Qutishat, M. G. (2021). Knowledge, Attitude and Practice of Nursing Students towards COVID-19 Pandemic in Oman. International Journal of Nursing Education, 13(1), 23.

Shrestha, S., Tuladhar, J. B., & Thapa, N. (2021). Knowledge, Practices and Anxiety related to Corona Virus Disease-19 (COVID-19) among Nursing Students in Nepal. Journal of Lumbini Medical College, 9(1), 7-pages.

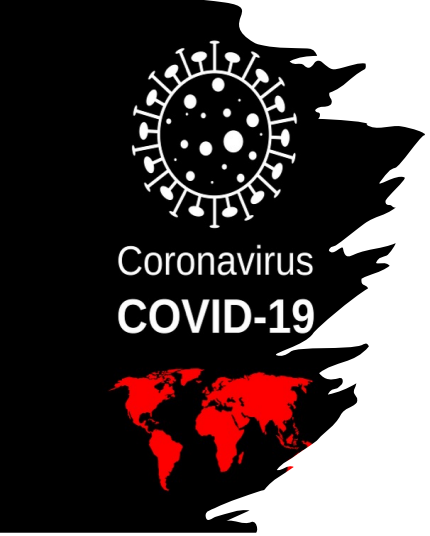
Park, J. H., Kim, J. H., Lee, H. J., & Kang, P. (2021). The Relationship of Anxiety, Risk Perception, Literacy, and Compliance of Preventive Behaviors during COVID-19 Pandemic in Nursing Students. Journal of the Korean Applied Science and Technology, 38(1), 48-59.

Elzeky, M. E. H., & Ali, W. G. M. (2020). Adherence to Preventive Measures and Suspected Covid-19 Symptoms Development Among Nursing Students During Written Exams. Egyptian Journal of Health Care, 11(4), 715-725.

Health Belief Model



Rosenstock, I. M. (2005). Why People Use Health Services. The Milbank Quarterly, 83(4), 10.1111/j.1468-0009.2005.00425.x. doi:10.1111/j.1468-0009.2005.00425.x
Champion, V., & Skinner, C. (2008). The health belief model. health behavior and health education: theory, research, and practice. Glanz K, Rimer BK & Viswanath K. In: San Francisco. Jossey-Bass



Purpose

- To examine the associations between the Health Belief Model (HBM) risk appraisal constructs (e.g., perceived susceptibility, severity, benefits, barriers, cues to action, self-efficacy) and nursing student engagement in COVID-19 preventive practices (6-feet physical distancing and wearing face masks/coverings in public).

Methods

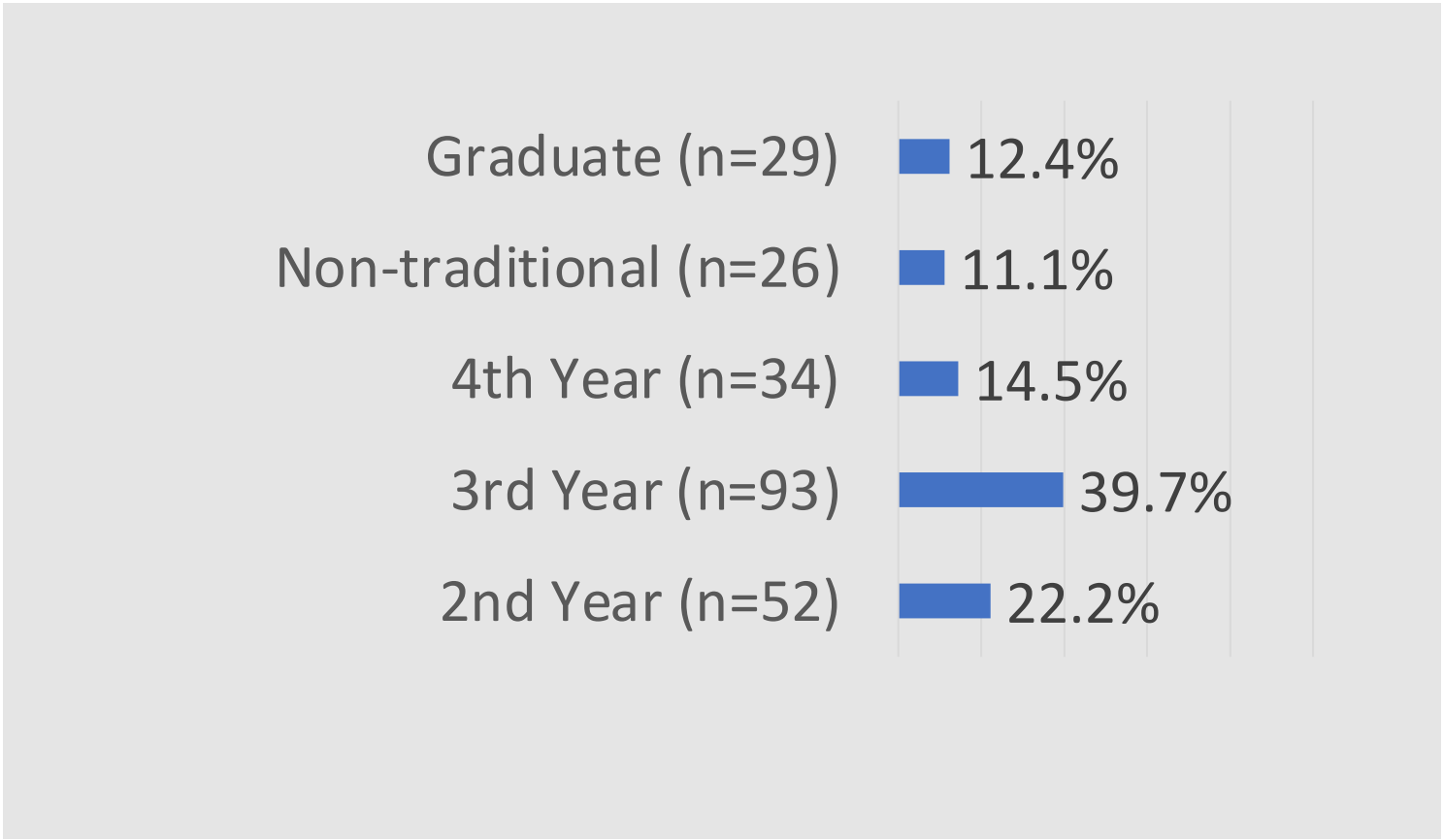
A 10-minute electronic survey was sent to UK CON students (n=234)

Measures

- **Demographic variables**: age, sex, race/ethnicity, gender identity, grade level, marital status, employment status, living situation
- **Psychological distress**: The Kessler Screening Scale, K-6 (Kessler et al., 2003)
- **Health Belief Model Questionnaire**: 18 items with 6-scales (Cronbach's alpha ranged from .54 to .79)
- **Preventive Practices Questionnaire**: Frequency on a scale of 1=never to 4=very often to which participants:
  - 1.Kept 6 feet physical distance from people outside the home
  - 2. Wore face masks/covering when outside in public areas

Analysis

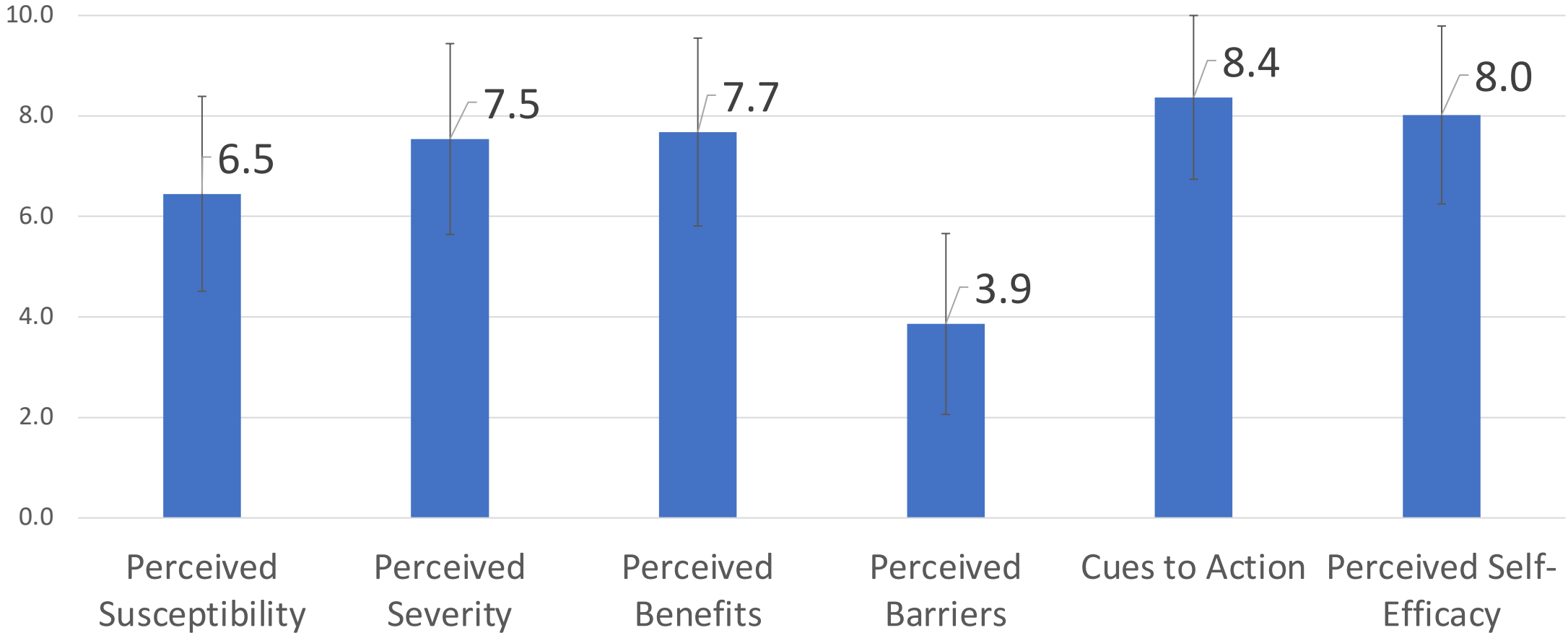
- Means with standard deviations or frequencies with percentages to describe data
- Independent sample t-tests and Analysis of Variance (ANOVA) as appropriate were used to assess differences between demographic variables and each of the HBM constructs
- Pearson correlations were used to examine the association between psychological distress and HBM constructs
- Two multivariate logistic regression analyses to determine the associations between HBM constructs and each preventive practice controlling for demographics and psychological distress.



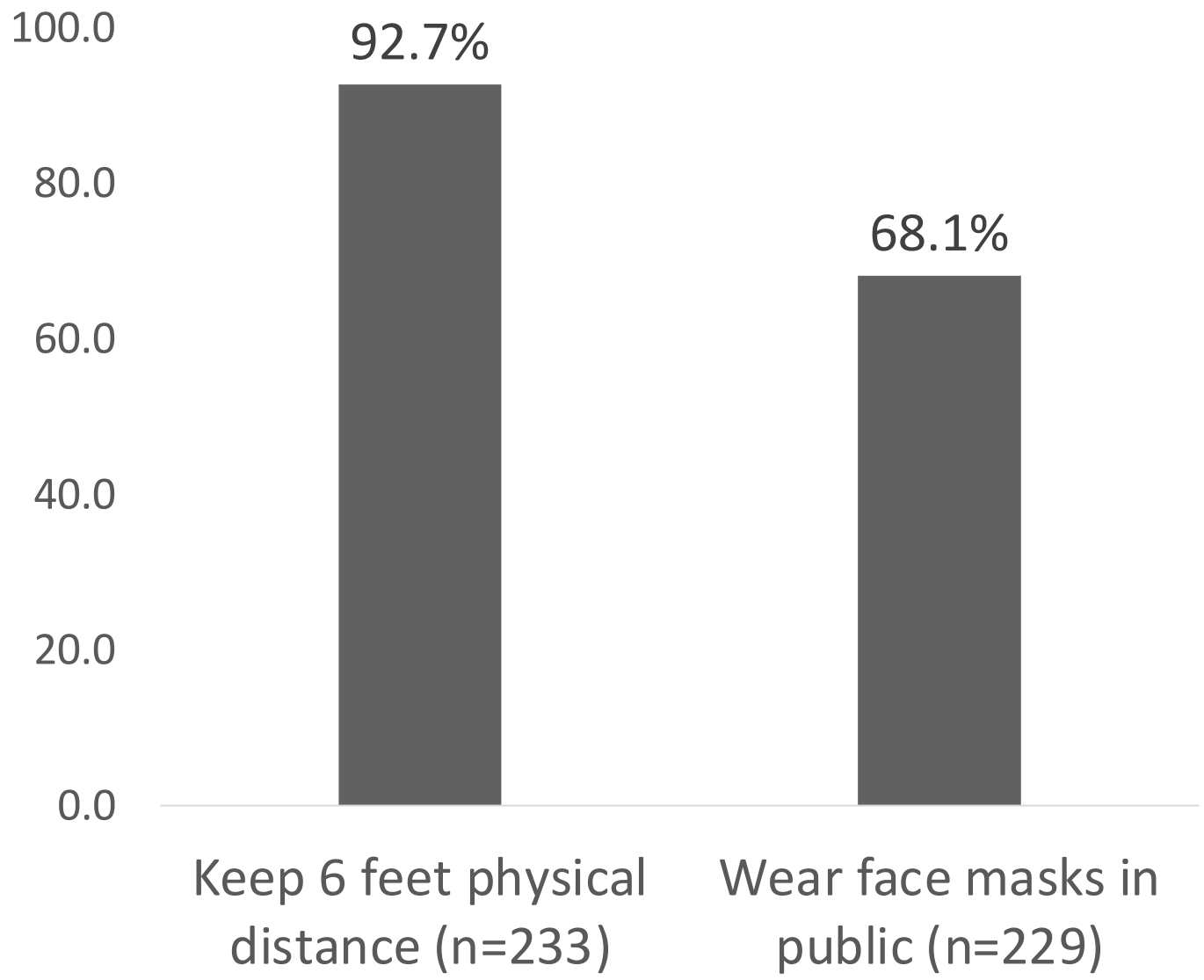
Sample Characteristics

- 89.3% White, non-Hispanic
- 92.7% Female
- 96.2% Heterosexual
- 80.8% ≤ 25 years
- 75.6% Single, never married
- 56.8% Employed
- 65.4% Living with family/relatives

Mean Scores on Health Belief Model Questionnaire (scale of 0-10)



Percentage reporting occasionally/ frequently performing preventive practices



Logistic regression analysis of associations between Health Belief Model constructs and frequently/occasionally performing preventive practices, controlling for demographic variables and psychological distress

Health Belief Model Constructs	Physical Distance[a]		Wearing Face Masks in Public[b]	
	OR	95%CI	OR	95%CI
Perceived Susceptibility	--	--	--	--
Perceived Severity	--	--	--	--
Perceived Benefits	1.31*	1.02-1.68	--	--
Perceived Barriers	--	--	.83*	.69-.99
Cues to Action	--	--	--	--
Perceived Self-Efficacy	--	--	1.25*	1.01-1.65

[a]n=233, Hosmer-Lemeshow goodness of fit test Chi-square=10.51 df=8, p=.231

[b]n=229, Hosmer-Lemeshow goodness of fit test Chi-square=2.79 df=8, p=.947

Discussion

- Most respondents reported frequently adhering to physical distance (92.7%), fewer reported wearing face masks or coverings in public (68.1%)
  - May require information about the effectiveness of face masks/coverings in protecting against infection
- Perceived benefits associated with physical distancing, perceived benefits and self-efficacy associated with wearing face masks/coverings in public
  - In comparison to other studies, relationship of HBM constructs and preventive measure adherence are context specific
  - Risk appraisals from different populations may be affected by normative practices and culture.

Sim, S. W., Moey, K. S. P., & Tan, N. C. (2014). The use of facemasks to prevent respiratory infection: a literature review in the context of the Health Belief Model. *Singapore medical journal, 55*(3), 160-167. doi:10.11622/smedj.2014037

Tadesse, T., Alemu, T., Amogne, G., Endazenaw, G., & Mamo, E. (2020). Predictors of Coronavirus Disease 2019 (COVID-19) Prevention Practices Using Health Belief Model Among Employees in Addis Ababa, Ethiopia, 2020. *Infection and Drug Resistance, 13*, 3751-3761. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7588498/pdf/idr-13-3751.pdf

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Limitations

- Cronbachs alphas for Health Belief Model scales ranged from .54 to .79 potentially affecting the internal validity of the study based on study measures
- Distribution of sample heavily represented undergraduate students and had fewer graduate students
- Cross-sectional nature of study precludes causality

Future Directions/Studies

- Follow-up survey of preventive measures given availability of vaccines
- Similar study among nurses with hospitals
- Determine appropriate messaging targeting constructs of the Health Belief Model (specifically perceived benefits, barriers, and self-efficacy) to enhance adherence to preventive measures.

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Thank you!