

Mask Tracks: An On-campus Observation of Style, Function, and Behavior

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Background and Purpose: As COVID-19 rapidly spread through the globe amid the 2020 Spring semester, students across the United States were challenged with the sudden implication and necessity for masks when returning to in-class instruction and on-campus living in Fall 2020. While the main challenge was the pandemic itself, the resulting changes including wearing face masks and keep social distance also impacted students' lives. *The objective of this study* was to observe college students' behaviors on campus, focusing on mask wearing and socializing with others outdoors in a new "masked up" environment.

Conceptual Framework: This is an exploratory, qualitative ethnographic research project observing the impact of masks mandated on students in a major university in the United States. While collecting data, coding, and analyzing, we expected results that showed if students were participating in a mandated mask wearing and social distancing environment while following the precautions communicated CDC in order to prevent the spread of COVID-19 including the influence of social behaviors. Undergraduate student researchers were trained to observe attributes of masks including fit, branding/slogans and colors/patterns based on the FEA (Functional, Expressive and Aesthetics) dimensions outlined by Lamb and Kallal (1992).

Method: This observational study utilized an undergraduate team research approach with a team of 8 "Mask Tracks" students trained to observe, code, and analyze data based on non-reactive observations of the campus population during the two weeks of mid-October 2020, after obtaining IRB approval for the study. Observed and coded data included gender, ethnicity, mask deployment, pattern/mask type, style, and proximity from others. The data analysis included ANOVA in order to uncover trends in how the university population accommodated the mask mandate.

Results: Frequency analysis found that the majority of masks were solid colored as opposed to having a pattern, in part because of the large number of solid-colored medical masks. As for mask types, there was a popularity in pleated masks, as they do support both medical and patterned masks making it the most versatile mask type. The axe-head style mask, with curved shaping to improve fit was the next most popular with envelope and cone style masks less frequently observed. Observations were made of unapproved mask types including neck gaiters, bandannas and vented masks, all of which were disallowed under the university mask guidelines. Favorably, 84% of those observed deployed their masks correctly while just 15.8% were observed wearing their masks incorrectly by not covering both the nose and mouth, for example. Furthermore, 70 % students practiced acceptable social distancing measures by staying beyond 6 feet from others while walking or standing outdoors. Small but significant difference in the behaviors of men and women were revealed by ANOVA with men being less likely to properly deploy or possess a mask but on the other hand being more likely to be walking or standing

further apart than women (see Table 1). ANOVA also demonstrated that while there was not a significant difference in behavior and proximity based on ethnicity, there were observed differences between people from different ethnic groups based on the possession /wearing of a mask and the wearing of an approved mask type (see Table 2).

Table 1. Means for Mask Behaviors by Gender and College Student Likelihood

	Gender						College Student Likelihood					
	Masculine			Feminine			Likely			Unlikely		
	Mean	SD	n	Mean	SD	n	Mean	SD	n	Mean	SD	n
Wear/Possess	0.94 ^a	0.239	3806	0.98 ^b	1.370	4020	0.96 ^a	1.890	7253	0.93 ^b	0.249	604
Approved Mask	0.93 ^a	0.258	3551	0.98 ^b	0.120	3923	0.96 ^a	1.960	6944	0.93 ^a	0.248	561
Deployment	1.58 ^a	1.358	3581	1.49 ^b	1.252	3943	1.55 ^a	1.319	6993	1.33 ^b	1.061	562
Behavior	1.23 ^a	0.566	3808	1.29 ^b	0.610	4201	1.25 ^a	5.870	7256	1.38 ^b	0.676	604
Proximity	4.97 ^a	1.723	3807	4.76 ^b	1.850	4020	4.89 ^a	1.769	7254	4.62 ^b	1.988	604

Note. There were not enough observations of nonbinary persons to include them in the ANOVA

Note. Means sharing subscripts for each variable across a behavior are not significantly different at the .0001 level based on an ANOVA.

Table 2. Means for Mask Behaviors by Ethnicity

	African American			Hispanic/Latino			White			Other		
	Mean	SD	n	Mean	SD	n	Mean	SD	n	Mean	SD	n
Wear/Possess	0.98 ^a	0.152	1223	0.97 ^a	0.158	2022	0.95 ^b	0.223	4218	0.98 ^a	0.123	394
Approved Mask	0.98 ^a	0.152	1187	0.98 ^a	0.153	1958	0.94 ^b	0.236	3974	0.99 ^a	0.113	386
Deployment	1.52 ^c	1.251	1195	1.41 ^{at}	1.165	1972	1.61 ^{bc}	1.390	4000	1.35 ^a	1.114	388
Behavior	1.23 ^a	0.612	1223	1.27 ^a	0.589	2022	1.27 ^a	0.573	4221	1.27 ^a	0.652	394
Proximity	4.96 ^a	1.700	1223	4.85 ^a	1.843	2022	4.84 ^a	1.792	4219	4.90 ^a	1.733	394

Note. Means in a row sharing subscripts are not significantly different at the .0001 level based on an ANOVA.

Discussion/implications: The results show that dimensions of fashion behavior, including attitudes towards the FEA dimensions of social expressiveness, aesthetics and functional performance can be used to structure the observation and evaluation of public health behavior that involves personal protective equipment. The observation of functional attributes such as the fit, shape or features of masks allows evaluation of the ability of the use of masks to perform the protective function. The observation of social expressive attributes of the masks including patterns, branding, statements, characters, flags, and memberships within social groups provides implications for public health policy makers, such as university officials, to reflect on how masks are being used in social relationships. In the case of this study, the social expressive features of the observed masks indicated some of the political tensions (e.g. camo, flags and political statements) as well as university affiliations (e.g. social group color use and branding). The predominant aesthetics features observed, from simplified, graphic patterns, and solid colors suggest the increasing trend towards pleated medical style masks in either black or bright colors and patterns. The results of the ANOVA related to gender show a balance between public health strategies employed by masculine and feminine students, with masculine students substituting social distancing for appropriate masking. The results confirm the body of research that shows

gender influencing fashion behavior Koca and Koc (2016). The implications of the ANOVA related to ethnicity is of greater concern, with white students observed significantly less frequently conforming to University guidelines related to wearing an approved mask type, when worn at all. One possibility that has been born out in national conversations related to masking is that a highly visible, apparel related public health strategy can become tangled in the other, social uses of apparel, including signaling “in group” membership. Overall, the results show that university students were highly compliant with mask policies even in the midst of changing advice and political climate. Additionally, studies of this type provide an opportunity for fashion students to engage on topics of social importance while learning basic research skills.

References:

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