

Attitudes Toward and Usage of Face Masks or Face Coverings Among Certified Athletic Trainers During the COVID-19 Pandemic

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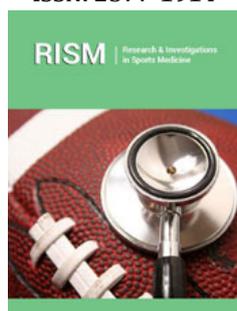
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Abstract

Following the widespread transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the majority of colleges and high schools canceled all face-to-face courses and athletic activities. As institutions allowed for athletes to return to campus, many institutions and government entities enacted requirements for the use of face masks or face coverings in public. Current research is being conducted to evaluate the epidemiology, recognition, treatment, and prevention of coronavirus disease 2019 (COVID-19), the disease associated with SARS-CoV-2. At the time of this study, there is no published research on attitudes toward and usage of face masks or face coverings among certified athletic trainers during the COVID-19 pandemic. The purpose of this study was to describe these attitudes toward face masks or face coverings and usage in this context. A total of 265 certified athletic trainers participated in this study (age = 42 ± 12 , years of certified experience = 18 ± 11). An electronic survey was sent to these participants via email to collect demographic information and assess their attitudes toward and usage of face masks or face coverings. Data was downloaded and analyzed using a commercially available statistics package. The overwhelming majority of certified athletic trainers in this study, agreed on some level, the use of face masks to mitigate the transmission of SARS-CoV2 was strongly supported by the available evidence (Strongly Agree = 55.8%, Agree = 26.4%, Somewhat Agree = 9.4%). Most athletic trainers also reported that their institutions currently had mandates in place requiring face masks during patient encounters and coworker interactions (Patient Encounters = 66.4%, Coworker Interactions = 57.4%). Most athletic trainers reported wearing face masks the majority of the time when entering public spaces outside of work. Athletic trainers cited influence of their personal use of face masks, was for personal health, health of those in their household, and attempting to be a role model of best practices for public health. The findings of this study suggest a majority of athletic trainers are wearing face masks or face coverings, even when not actively involved in patient care or other aspects of their jobs

Introduction

Coronavirus disease 2019 (COVID-19) is a serious respiratory disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) [1]. COVID-19 was first reported in late 2019 in Wuhan, China [1]. The disease has shown to be highly infectious and features symptoms such as fever, dry cough, fatigue, loss of smell, loss of taste, muscle and joint pain, shortness of breath, nausea, vomiting, and diarrhea [1]. In severe cases, patients have developed potentially fatal pneumonia, septic shock, metabolic acidosis, and coagulation dysfunction [2]. In the absence of a proven treatment or vaccine, the primary recommendations to mitigate the spread of COVID-19 have been social distancing, recognition through testing, contact tracing, enhanced hygiene precautions, and face coverings [3-6].

As the global COVID-19 pandemic progressed, many communities and organizations enacted legislation and rulings to decrease the transmission of COVID-19. To this end, the National Collegiate Athletic Association (NCAA) chose to cancel all remaining spring and winter championships [7]. After this decision was made, the majority of institutions and

conferences chose to cancel the remainder of their seasons [8]. In addition to cancellations at higher education institutions, secondary schools also postponed or suspended athletic activities for the remainder of the 2020 spring semester [9]. Not only were athletic activities canceled, the majority of higher education institutions and secondary schools in the United States cancelled face-to-face instruction [10,11]. As institutions and communities began to reopen following closures, rules requiring the use of face masks or face coverings were enacted in many areas [12-15]. However, some communities have thus far chosen to leave the use of face masks to individual choice [5,6].

Currently, research is being conducted to evaluate the epidemiology, recognition, treatment and prevention of COVID-19 [1-4]. At the time of this study there is no published research on the attitudes toward and usage of face masks among certified athletic trainers during the COVID-19 pandemic. Therefore, the purpose of the present study was to describe the attitudes toward and usage of face masks among certified athletic trainers during the COVID-19 pandemic.

Table 1: Totals and percentages for participant demographic information.

Demographic Factor	Criteria	Responses
Sex	Female	111, 49.8%
	Male	111, 49.8%
	Prefer not to answer	1, 0.4%
Clinical Practice Setting	College/University	199, 89.2%
	Secondary School	15, 6.7%
	Clinic/Hospital	7, 3.1%
	Emerging Settings	1, 0.5%
	Professional Sports	1, 0.5%
Highest Degree Earned	Professional Bachelor's	26, 11.7%
	Professional Master's	47, 21.1%
	Post-Professional Masters (in Athletic Training)	29, 13%
	Post-Professional Master's (not in Athletic Training)	86, 38.6%
	Post-Professional Clinical Doctorate	30, 13.5%
	Academic Doctorate	5, 2.2%

Data collection

An email was sent to head athletics trainers and CAATE accredited program directors at colleges and universities. These individuals were asked to complete the survey and forward the message to any fellow athletic training staff members or preceptors they work with. Survey invitations were also sent out through several regional athletic training organizations in an attempt to collect the most responses possible. The email included an invitation to participate in an electronic survey via a link from a web-based survey company (Qualtrics Inc., Provo, UT) in July 2020.

Methods

Design

This study was conducted using a cross-sectional design utilizing an internet-based survey for data collection.

Participants

Participants were recruited for this study by emailing the head athletic trainers at NCAA Division I, Division II, and Division III institutions, Commission on Accreditation of Athletic Training Education (CAATE) accredited program directors, and memberships of several regional and local athletic training organizations. These individuals were asked to send the survey invitation to any fellow staff members or preceptors associated with their programs. A total of 223 participants (age= 42 ± 12 , years of certified experience = 18 ± 11) opened the survey link and completed the instrument. Demographic information for participants is presented in Table 1. All participants were informed of the survey's purpose and informed consent was obtained.

The initial message included information about the investigators, the purpose of the study, the purpose of the survey, and also informed the participants that they could opt out of the survey at any time.

Instrument

Following the demographics section, the survey contained questions regarding the participants' practice settings and whether the participant had returned to work after a COVID-19 pandemic stay at home order. The participants were also asked whether they were subject to any institutional or government mandates

to wear face masks at work or in public. Other questions gathered information on the attitudes of participants toward wearing face masks, how often they wore face masks outside of work while in public, and what their primary considerations were when deciding whether to wear face masks.

The survey consisted of 18 questions in total. These questions included: one question regarding consent to participate in the study, two fill in the blank and three multiple choice questions regarding demographic information, 10 multiple choice questions regarding attitudes and usage of face masks at work and in public, and two ranking questions regarding considerations for whether or not to wear a facemask.

Statistical analysis

The information from participant responses was downloaded and analyzed using a commercially available statistics package (SPSS Version 26, IBM, Armonk, NY). A total of 265 athletic trainers

responded, consented, and completed the study. All 265 responses were included in the data analysis. Measures of central tendency (means, standard deviations, frequencies) were calculated where appropriate.

Results

Attitudes toward the use of face masks or face coverings

The majority of responding athletic trainers agreed, at least to some extent that the use of face masks or face coverings to mitigate the spread of COVID-19 was strongly supported by the available evidence. More respondents reported considering personal and community safety rather than concerns about the perceptions of others or having their liberties infringed upon when deciding whether or not to wear a mask in public. Table 2 provides a breakdown of the questions that gathered information on respondents' attitudes toward the use of face masks or face coverings in public.

Table 2: Responses for questions on the attitudes toward the use of facemasks or face coverings in public.

Statement	Most Common Responses (%)
The current available evidence strongly supports the use of facemasks or face coverings when interacting with others to decrease the transmission of COVID-19.	Strongly Agree, 128 (57.4%) Agree, 55 (24.7%) Somewhat Agree, 23 (10.3%)
I feel safer/would feel safer if my institution required facemasks or face coverings at work.	Strongly Agree, 124 (55.6%) Agree, 42 (18.8%) Somewhat Agree, 18 (8.1%)
I feel safer/would feel safer if my local or state government required facemasks or face coverings in public.	Strongly Agree, 119 (53.4%) Agree, 43 (19.3%) Somewhat, 16 (7.2%)
I would prefer that wearing facemasks or coverings be left to individual responsibility rather than to a mandate from my institution.	Strongly Disagree, 83 (37.2%) Disagree, 61 (27.4%) Agree, 22 (9.9%)
I would prefer that wearing facemasks or coverings be left to individual responsibility rather than to a mandate from my state or local government.	Strongly Disagree, 90 (40.4%) Disagree, 59 (26.5%) Strongly Agree, 19 (8.5%)
Please rank the following considerations when deciding whether or not to wear a facemask or face covering outside of work.	Personal Safety, 115 (51.6%) Community Safety, 84 (37.7%) Being a role model of public health, 7 (3.1%)
Please rank the following parties based off of how strongly you consider them when deciding whether or not to wear a facemask outside of work.	Family in your household, 77 (34.5%) Yourself, 69 (30.9%) Vulnerable populations, 52 (23.3%)

Face mask usage at work and in public

Out of the responding athletic trainers, 75.4% reported that their institutions had allowed them to return to work (n=168). The

majority of respondents reported being required to wear face masks during patient interactions (66.4%, n=176) and during coworker interactions (57.4%, n=152). Table 3 outlines how often athletic trainers reported wearing masks in public when not at work.

Table 3: Frequency of facemask use in public when not at work among athletic trainers.

Frequency	Responses
100% of the time	99, 44.4%
75% of the time	60, 26.9%
50% of the time	22, 9.9%
25% of the time	28, 12.6%
0% of the time	14, 6.3%

Discussion

The purpose of this study was to describe the attitudes of certified athletic trainers toward the use of face masks or face coverings during the COVID-19 pandemic. A secondary purpose to this study was to describe the usage of face masks among athletic trainers outside of work.

The majority of survey respondents agreed on some level that current evidence strongly supports the use of face masks or face coverings to decrease the transmission of COVID-19 (Strongly Agree = 55.8%, Agree = 26.4%, Somewhat Agree = 9.4%). Furthermore, athletic trainers reported that most would feel safer if there were mandates from their institution or government requiring the use of face masks in public. This suggests that the majority of the athletic trainers surveyed feel that face masks are a useful tool for mitigating the spread of COVID-19.

Most athletic trainers reported their institutions had required or allowed them to return to work. At the institutions where athletic trainers had returned, the majority required the use of face masks during patient and coworker interactions. When not at work, most athletic trainers reported wearing face masks in public at least 75% of the time. Only 6.8% of surveyed athletic trainers reported never wearing a face mask in public. This suggests that athletic trainers are wearing face masks in public even when not at work during the COVID-19 pandemic. The most important considerations for these behaviors appear to be personal safety, household safety, and community safety.

A possible limitation of this study was the relatively low number of participants. While the total number of responses is similar or higher than other survey-based studies conducted on athletic trainers, an exhaustive and definitive statement on the attitudes and usage of face masks among athletic trainers would require a larger scale study [16,17]. The completion of this study provides a framework for conducting a study that collects data from a larger number of respondents.

There is a need for additional research into the attitudes, moods, and behaviors of athletic trainers and other allied healthcare professionals during the COVID-19 pandemic. One previous study investigated the moods of athletic trainers following the 2020

academic and athletic spring semester, and suggested athletic trainers were experiencing both anxiety and depression [18]. Given the athletic trainer's role in providing day-to-day patient care, it is imperative to evaluate the stresses and obstacles they are encountering due to the COVID-19 Pandemic.

Conclusion

In conclusion, the majority of surveyed athletic trainers believe the best available evidence supports the use of face masks or face coverings to decrease the transmission of COVID-19. Athletic trainers reported the majority of their institutions required face masks during patient and coworker encounters, which appeared to make them feel safer in their workspace. The majority of athletic trainers reported placing personal and community safety ahead of public perception and concerns over personal liberties being infringed upon when considering whether to wear a facemask in public. As athletic trainers, coaches, and administrators move forward, it is important to consider the best implementation and enforcement of using personal protective equipment.

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