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Assessment of Factors that Impact Hydration Status of Professional and Collegiate Mascots

Caroline Atwell

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ASSESSMENT OF FACTORS THAT IMPACT
HYDRATION STATUS OF PROFESSIONAL AND
COLLEGIATE MASCOTS

An Undergraduate Honors Thesis

In the

School of Human Environmental Sciences

Submitted in partial fulfillment of the requirements for the

University of Arkansas

Dale Bumpers College of Agricultural, Food, and Life Sciences

Honors Program

by

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April 2019

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Assessment of Factors that Impact Hydration Status of Professional and Collegiate

Mascots

Abstract

Mascots have unique physical demands and nutrition needs. They exert themselves tremendously on a variety of game days and at practices throughout the week. Hydration is as significant for mascots as it is for any other athlete, yet there is little to no known research available to help this population achieve a good hydration status. Studying similar populations such as cheerleaders, band members, football players, and firefighters provided a better understanding of mascot hydration. The purpose of this study was to examine the level of hydration knowledge in mascots performing at the collegiate and professional levels and determine the different factors that influence their hydrated state. Multiple factors have an impact on this status such as duration of game, amount of liquid ingested, previous hydration knowledge, and environmental temperature. A questionnaire was distributed to approximately 670 people and was completed by 27 current active mascots to discover the level of their hydration and the factors that impact this status. The questionnaire was composed of questions regarding sports the participating mascots perform for, their self-reported status of hydration, and potential factors that impact their hydration statuses. Results showed that there was no information presented to mascots regarding hydration, and no one except themselves was responsible for monitoring this status. The findings in this study overwhelmingly suggest that there is an educational gap in the mascot population regarding hydration. Further research is recommended, with a larger sample size, to more thoroughly assess the hydration behaviors of current active mascots.

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I would like to thank Mrs. Mechelle Bailey for her continued support and direction throughout this project. Thank you to committee members Dr. Laura Hill and Dr. Kate Shoulders for their assistance with this Honors thesis. Thank you also to Taylor Farr for his continued help and commitment to helping see this project through. I would like to thank my father and mother, David and Paula Atwell, for their constant support, encouragement, and inspiration.

INTRODUCTION

Mascot Definition

All populations of athletes are unique in their physical demands and in their nutrition needs. These two things coincide but vary depending on the population being discussed. Mascots are a unique set of athletes; their sport is to encourage other athletic teams as they attempt to win a game, match, meet, etc. They do this all while dressed in heavy clothing that masks their identity. Mascots are in high demand on game days, so the duration of their event is far longer than an actual game. According to the Mascot Director at the University of Arkansas (UofA), the mascots are in full costume four hours before the game begins. Their typical game day lasts eight hours or more. They are present for tailgating, fan events, the actual game, and any festivities that occur when the game ends. Throughout the week, they are required to attend practice, pep rallies, and corporate events that their organization hosts or attends. Additionally, mascots are expected to be present at most, if not all, sporting events, which essentially leaves them with no off-season. The most demanding sports for mascots seem to be football and basketball. Other sports such as gymnastics, softball, soccer, and baseball are generally less time consuming; they require mascots to only be 30 minutes early to a game, and mascots occasionally leave these games at or after halftime. This high demand means mascots should be aware of their hydration status and work toward optimal nutrition; but, it must be difficult to accomplish because there is no research available to aid them in achieving this objective.

Hydration Definition

One of the most important conditions for athletes to be aware of is hydration status. Water, even though it provides no energy, is perhaps the most crucial nutrient for athletes. Too much or too little could be devastating. Dehydration is defined as the severe loss of fluid which results in an imbalance of metabolic processes¹. Dehydration is easy to achieve for athletes, as they are constantly sweating to lower the temperature of their bodies. Inversely, some endurance sports can lead to overhydration, also known as water intoxication or hyponatremia; this is the result of excess water and low sodium concentration in the blood stream, and it occurs as athletes rehydrate over the course of a few hours with only water². The human body was made to effectively operate with the correct balance of fluid and electrolytes; consequently, any disturbed hydration state negatively affects the body and leaves it functioning at a suboptimal level².

Importance of Hydration Related to Mascots

Mascots' duties are taxing and result in an extreme energy exertion; this effect has a negative correlation with athletic performance. The amount that an athlete sweats can depend on size, genetics, health status, environment, length of exertion, and garments worn³. Aside from the normal concerns faced by athletes, mascots have an enhanced challenge because of their uniforms; most mascots have to don a thick wool-like bodysuit, covering and encapsulating their entire bodies. This suit does not allow the ventilation of heat. The heat becomes trapped in the suit, and cooling through evaporation is hindered; so, body temperature increases as the body tries to cool itself⁴. The temperature of the environment and percent of humidity can enhance or alleviate this issue; a cool environment could lead to overhydration. Mascots sweat during activity; if the temperature is cool, the urge to rehydrate is lessened which leads to dehydration with a subtle onset. As mentioned above, mascots arrive at sporting events early, and a typical

football game's duration is about four hours. When combined, the time mascots devote on game days easily reaches eight hours or more. They are expending energy during this time-frame which can result in a severe loss of fluid through sweat. Overall, there are multiple factors that mascots encounter that easily lead to an altered hydration status.

Social Influencers of Hydration

Social constructs also have an impactful role in overall health. The social cognitive theory suggests that there is a specific set of determinants that influence the choices made regarding health. These determinants include previous knowledge of health practices, belief in one's self to make beneficial choices, perceived advantages and disadvantages of certain health routines, personal goals, and social influencers that inhibit or facilitate health practices⁵. Every health practice is influenced by this theory, even hydration. People are less likely to make positive healthful changes if they are unaware of what they need to change or why a change should be made. Every mascot program is different, but mascot education about hydration is not required or regulated; therefore, the depth and accuracy of the hydration education mascots get is unknown. The variation in hydration education could lead some mascots to believe they are hydrating enough when the opposite is true, or that all liquids have the same effectiveness in hydration. These are just two points that can largely impact a mascot's hydration level and, consequently, his or her level of performance. Education is important, but healthy habits cannot be enforced; people must learn to manage themselves in order to see lasting success⁵. In addition to education and self-management, perceived obstacles have a large influence on health habits. It is easy to see that mascots may not be eager to undress, even partially, to hydrate themselves because their costume may be "too difficult" to take off as many are comprised of wool and other heavy material. Because of this, some may feel that hydrating is not worth it. If there is

only one mascot present at an event, he or she may feel the responsibility to be present for the crowd and team, and they may feel that they cannot take a break to rehydrate. Similarly, the burden of taking off the suit may deter mascots from voiding their bladders when the urge is present. There are many different components that influence people's behavior, and mascots are no exception. This becomes evident when discussing hydration level and factors that could affect this status.

Problem Statement

Mascots are a specific population of athletes that are underrepresented because of a deficit in research; consequently, there is no information about hydration that could positively impact this population and aid them in achieving the optimum hydration status for their sport. Naturally, their hydration status could be suffering in some way because of the lack of direction in this specific area. Hydration status impacts a plethora of other variables and either permits mascots to do their job well or hinders them. This is one of the most important aspects in athlete nutrition and absolutely in mascot nutrition. This study computed the initial research about this specific area.

LITERATURE REVIEW

Little is known about mascots and the cautions they should take when performing; hydration status is influenced by an array of variables. Taking a look at other populations that are similar to mascots helps to gain a deeper understanding of the effects nutrition has on them as they perform, specifically their hydration level. Firefighters, football players, cheerleaders and marching band members all allow a glimpse into the experience of a mascot. Truly these specific groups have some facets that are present for mascots as well; this allows the understanding of mascots to broaden, and it provides an idea of what might affect mascots when focusing on hydration.

Firefighters and Hydration Levels

Firefighters and mascots have very different main goals, but they are similar in in how they achieve them. Comparable to mascots, firefighters have a very taxing occupation; the added factor of the protective clothing they wear only increases the extremity of their circumstances. The levels of heat stress and hypohydration are notable because of this; these levels are a result of necessary but demanding tasks⁶. When firefighters are exerting themselves, their bodies work to cool themselves down; this is achieved by sweating. Producing sweat is not enough to solely cool the body; vaporization of the sweat from the skin also helps relieve the body of excess heat. This dissipation process is halted when wearing encapsulating clothing. An environment is created that traps the heat being expelled; this decreases evaporative cooling and leads to a preservation of heat storage as well as an increased temperature⁴. It is easy to understand how a mascot, dressed in full garb, could potentially have a hard time cooling him or herself by natural body functions because of the costume in which he or she must operate. The constant high body temperature would only continue to elicit excess amounts of sweat in order to try to eventually

cool the body; essentially, the body would significantly decrease in water volume because of the production of sweat, causing the mascot to become dehydrated ⁴.

Factors that influence Football Players' Hydration

Football players also experience added physiological stress because of the uniform they must wear. Roughly 70% of a football player's skin surface area is covered by the uniform ⁷; similarly, most mascots are covered head to toe with little ventilation in their costumes. The environment is an additional factor that impacts a football player's hydration level. Because football players' uniforms cover most of their bodies, the skin to air ratio is significantly lower; this decreases the body's ability to expel heat through radiation and convection ⁷. This restriction is present when the environment is hot, and it is enhanced when the humidity levels are elevated. It has been noted in previous research that it is not uncommon for football players to lose 3.5 to 5 kg of body weight during a normal practice; and losses of 14 liters (L) of sweat were common during football practices in which they practiced two times per day ⁸. It has already been stated that choice of uniform and environment impact hydration status but enforcing safe hydration practices also has an obvious role. The recurring issue in the data mentioned above is that football players did not adequately replenish their fluid levels in between practices, thus creating a vicious cycle in which they were consistently dehydrated before they began each practice ⁸. If this is occurring in a highly valued and monitored sport that generally takes priority at most institutions, it is reasonable to believe that mascots could easily fall into this same cycle because of the lack of attention and guidance they receive.

Additional Populations and influence of education on hydration

The final populations to assess in the effort to understand a mascot's experience related to hydration would be marching band members and cheerleaders. Marching band members and cheerleaders find themselves looking to one or two directors for guidance. What their directors do or do not know or enforce significantly affects them as athletes and performers. The implementation of certain hydration practices differs depending on the director and also on the director's level of education in relation to hydration.⁹ Someone who is ill informed may be less inclined to strictly monitor fluid intake and sweat loss, while someone who understands the implications may be more of an advocate for healthful hydration practices. Most mascots have only one director, and each mascot is usually expected to monitor his or her own nutrient levels. Without proper enforcement and monitoring, there is no way to determine if a mascot has practiced good hydration. Level of education in mascots themselves and in their directors has an enormous impact on their overall hydration status.

There is not another population exactly like mascots; assessing different athletic groups is the best approach at understanding the different factors that influence hydration status in this unique population. Firefighters, football players, marching band members, and cheerleaders are the closest related groups that, when evaluated, offer a glimpse into the experience of the mascot.

METHODS

The purpose of this study was to examine the practice of hydration in mascots performing at the collegiate and professional levels and understand the different factors that influence their hydrated state. The following objectives allowed the achievement of this purpose:

- Determine the basic hydration knowledge of mascots
- Determine and assess mascots' intake of food or beverages that contribute to hydration
- Assess the environmental factors that directly or indirectly affect hydration level

Participants and Sampling

A sample was taken from a variety of mascots across the United States. A variety was necessary because geographical location has an impact on a mascot's experience as well as gender and level of performance. Noting and analyzing the differences between mascots across the country only strengthened this study and allowed the data compiled to be more inclusive.

Treatments/Instruments

The primary instrument that was used in this study was a questionnaire. The pilot questionnaire was not validated, but it was analyzed, critiqued, edited, and approved by multiple faculty at the University of Arkansas. The use of this instrument allowed the succinct gathering of data in an effortless way and allowed access to multiple areas of the country because of the way it was distributed. The questionnaire was assembled using Qualtrics survey software (Appendix 1). It was comprised of 32 multiple choice or short answer questions. The initial question explained that, by clicking "yes", the participants were giving consent; if participants chose "no," they were immediately directed to the end of the questionnaire and were not given the option of answering additional questions. Gender and weight were asked next as questions 2

and 3. The remaining 29 questions pertained to sports for which the mascots perform for, their hydration statuses, and factors that impact their hydration statuses. Institutional Review Board approval was granted at the University of Arkansas (IRB #35454) (Appendix 2).

Data Collection

The questionnaire was distributed across the country through a list serve to a collection of active mascots and their directors. A link to the instrument was sent through a database that was provided by the director of mascots at the University of Arkansas; this database is essentially a compilation of contacts of numerous mascots across the United States. Using this database provided convenience and succinct gathering of data as all those who were polled were electronically located in one “place.” The initial period of three weeks was altered to five days, which proved enough time to receive an adequate number of questionnaire submissions. There was no incentive or reimbursement provided to those who participated in this study.

RESULTS

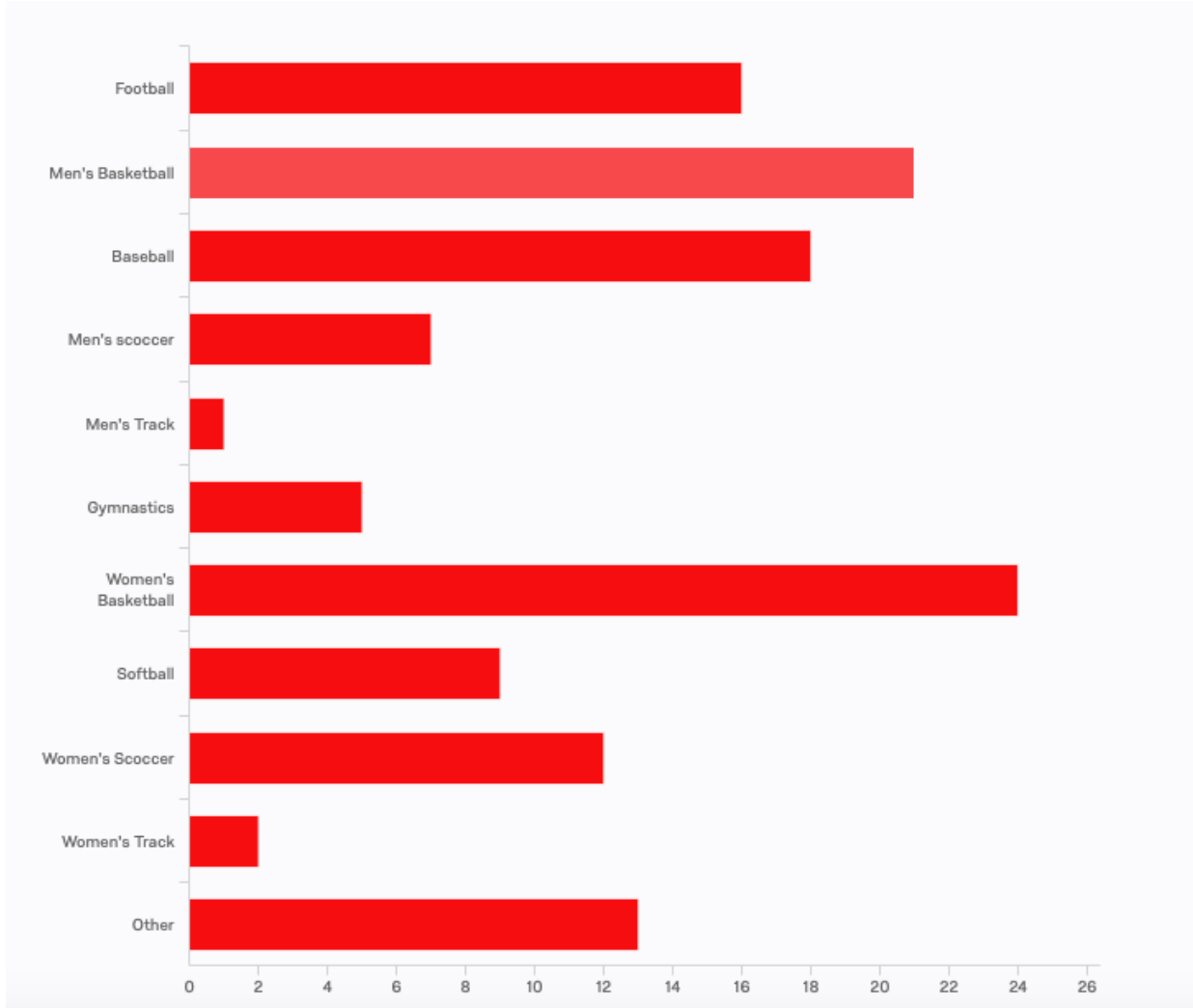
The complete number of those with access to the questionnaire was 963 people. Of those people, it is assumed that roughly 30% of those were mascot alumni; the goal was for only current active mascots to participate. That left approximately 674 mascots who were eligible to complete the questionnaire they were given. The questionnaire was completed by a total of 27 mascots from various areas of the United States. It was not required for any mascots to complete; all participants acted voluntarily and with consent. To completely conceal the identities of those participating, demographic information was not asked; age of participants was also not inquired. Gender and weight status were inquired but not reported due to a glitch in the flow of the questionnaire.

The average number of hours that mascots typically practice per week was reported as roughly 1.5 hours. The lowest recorded time was zero, which was reported from 8 mascots; and the highest recorded time was six hours, which was reported by only two mascots. The average reported time that mascots spent performing per week was 9.5 hours, with 2.5 hours as the least and 50 hours as the greatest. Additionally, it was stated that the average time spent conditioning was 3 hours; zero hours were reported as the least and 30 as the greatest.

It was found that most mascots perform for more than one sport. The highest number reported was 10, and the lowest was one; this low number was only stated by two mascots. The bar graph below shows that 88% of participants perform for women's basketball, making it the most popular sport for these respondents to attend. Men's basketball follows closely behind at 78%, and men's track was reported as the least popular with .04% of mascots attending. Among the sports given as options in the questionnaire, "other" was chosen by 48% of participants; the

“other” sports mascots perform for were volleyball, lacrosse, field hockey, tennis, fencing, ice hockey, and swim and dive.

Bar Graph 1: Popularity of Sport Dependent on Mascot Attendance



Each sport can have a unique weather atmosphere. Most outdoor sports were reported as hot and humid, while almost all indoor sports were stated to be “indoor” or “controlled” temperature. There were a few exceptions with outdoor sports; when conducted during the colder months, these sports were reported to be cold and occasionally rainy. When asked how much time mascots perform before and after their respective games, most reported a range of zero hours to two hours for pre-game, and zero hours to one hour for post-game activities.

A large factor in mascot hydration is the duration that mascots exert themselves. The 27 mascots that participated in the questionnaire collectively reported attending 127 sporting events. This number was found by combining every sport each mascot reported attending. It was reported that mascots were in attendance for the entirety of the game for 71% of the 127 games, and a mascot was present but left before the game was finished in 29% of the 127 games recorded. Table 1 below further breaks down the statistics of mascots that stay the entire game verses those that do not; this is organized by sporting event.

Table 1: Percentage of Mascots that Perform for the Entirety of the Game vs. Those that Leave Before the Conclusion of the Event

#	Field	Yes	No	Total
1	Football	50.00% 8	50.00% 8	16
2	Men's Basketball	90.48% 19	9.52% 2	21
3	Baseball	44.44% 8	55.56% 10	18
4	Men's soccer	85.71% 6	14.29% 1	7
5	Men's Track	0.00% 0	100.00% 1	1
6	Gymnastics	100.00% 5	0.00% 0	5
7	Women's Basketball	95.83% 23	4.17% 1	24
8	Softball	44.44% 4	55.56% 5	9
9	Women's Soccer	58.33% 7	41.67% 5	12
10	Women's Track	50.00% 1	50.00% 1	2
11	Other	75.00% 9	25.00% 3	12

All 27 participants claimed to be aware of their hydration, and only 78% stated that they were concerned about staying hydrated. No mascots reported having minimal knowledge of proper hydration; “average” and “extreme” were the only options chosen for this in which 78% claimed to have average knowledge of proper hydration and 22% claimed to have extensive knowledge. There were 16 participants (59%) that reported being educated about proper hydration when becoming a mascot; the credit for this education was mainly attributed to mascot coaches in their respective facilities. A few other sources of education were listed as Universal Cheerleaders Association Camp, knowledge from previous experience, the internet, and other mascots. Two of the 27 participants reported that someone other than themselves is in charge of their nutrition status; and when asked who was in charge of monitoring their hydration status during performances, seven mascots stated that someone other than themselves is responsible. This status was reported to be overseen by coaches and trainers.

Regarding alcohol, it was reported to be consumed by 62% of participants. The average of alcoholic beverages consumed by participants in a week time was 2.5. Only three mascots claimed to consume roughly two alcoholic beverages 24 hours prior to a performance. Water and Gatorade were the most common beverages consumed on game-day. The average ounces (oz) of water consumed was 60 with 12 oz being the least and 160 oz being the greatest. Gatorade was consumed at an average of 13 oz on game-day; the greatest amount consumed that was reported was 36 oz and the least amount reported was zero. Four participants recorded consuming an average of 10 oz of soda on game-day, and one mascot claimed to consume “one shot of vodka.” Coffee, milk, and a sports drink called BODYARMOR were additionally reported for game-day consumption; these were recorded as 8 oz, 8 oz, and 20 oz. Water and Gatorade were reported to

be the only two beverages consumed at practice. The average amount of water consumed was 26.8 oz. Gatorade was only consumed by six participants at an average of 21.5 oz per practice.

When asked if any participating mascots had experience dehydration 73% reported that they had, and only 5% claimed that medical attention was required. The amount of times participants reported experiencing dehydration ranged from one time to 10 times; one participant stated that it happened so many times that there were “too many to count.” Out of all 27 responses, 18 participants claimed to monitor their hydration. They mostly monitored their hydration status through observation and awareness of the environment; factors they used for assessment included color of urine, amount of water ingested before and during a game, outside temperature, sweat levels, activity level, rate of breathing, presence of headaches, and dry mouth. Two participants also mentioned that they utilized a schedule for hydration breaks throughout the game.

It was asked if mascots consumed supplements, and how much of each they consumed. One mascot reported consuming an electrolyte supplement during the game. No other participants reported consuming supplements. It was also found that none of the programs require mascots to weigh themselves before and after performances, but 27% of mascots stated that they have personally chosen to implement this practice of weighing. The last inquiry made regarded the components of the mascots’ costumes. A large majority of participants stated that they wore full-body muscle suits made of wool, some with fur, and a total head covering; in addition to the suit, they also reported wearing shorts and a t-shirt underneath. There were a few reports of wearing a thin body suit with a thin plastic head.

DISCUSSION

The data collected in this study proved to be significant in relation to mascot hydration. The popularity of sports performed was interesting. There appeared to be a correlation between popularity of sport and duration of mascot performance; the more popular a sport was, the longer the mascot reported performing for that athletic event. It can be assumed that some organizations place more of an emphasis on one sport while another chooses a different sport; the finding that women's basketball was the most popular out of this population contrasts with the U of A mascot director's claim that football was their most popular athletic event to attend. These two sports proved to be very different in demand, duration of game, and environmental temperature. This finding alone is enough to suggest that each program should be reviewed individually when assessing hydration status and making implementations.

All mascots claimed to be aware of their hydration, but there was no explanation provided to discover what this technically meant. An interesting finding was that, even though all participants reported to be aware of their hydration, most claimed to not have been given any instruction about this. Similarly, there was no education given about general nutrition. As indicated by the responses, it seemed that not all participants were confident in their knowledge of proper hydration; 77.8% of participants reported having average knowledge of proper hydration. Another intriguing result was that almost no instruction was provided for mascots in the areas of nutrition and hydration, yet almost all mascots reported being in charge of these areas for themselves.

Overall, the largest factor that impacted hydration status seemed to be a significant lack of education regarding hydration in the mascot population. Almost all participants claimed to have had an experience with dehydration, and only one reported that medical attention was

required. This was found from sampling a relatively small number of mascots; this could be a greater problem across the population as a whole. The details of the extent of the reported episodes of dehydration are not known; it is possible that each mascot had a different experience that led them to believe they were dehydrated. Roughly one third of the population seemed unconcerned with hydration altogether.

There were multiple limitations that were noted in this study. The first limitation was the sample size. Although the questionnaire was available for a large number of mascots to complete, a very small amount actually participated. Additionally, the identity of responders that did participate was not disclosed leaving no way to confirm that only active mascots completed participated. A short amount of time was allotted for distribution and completion of the questionnaire; more mascots may have participated had a longer period of time been provided. The distribution and setup of the questionnaire itself allowed participants to submit vague answers. The questions pertaining to typical weather conditions on performance day and hours that mascots perform were often given answers that were not definite; this resulted in the exclusion of those particular answers and a shifting of the data.

Research on the topic of mascot hydration should continue. This preliminary study yielded findings that were previously unknown, but a more thorough assessment of mascots and their directors needs to be conducted. A detailed account of the hydration statuses of mascots and the factors that impact them is pertinent. An adaptation of this study to focus on greater detail could prove to be beneficial in uncovering more information that would greatly impact the hydration status of active mascots.

LITERATURE CITED

1. Mishra SC. Dehydration treatments. *Deliberative Research*. 2015;25(1): 66-70.
2. Noakes TD, Sharwood K, Speedy D, et al. Three independent biological mechanisms cause exercise-associated hyponatremia: evidence from 2,135 weighed competitive athletic performances. *PNAS*. 2005;102(51): 18550-18555.
3. Schleh MW, Dumke CL. Comparison of sports drink versus oral rehydration solution during exercise in the heat. *Wilderness*. 2018;29(2): 185-193.
4. Ng J, Wingo JE, Bishop PA, Casey JC, Aldrich EK. Slurry ingestion and physiological strain during exercise in non-compensable heat stress. *AMHP*. 2018;89(5): 434-441.
5. Bandura A. Health promotion by social cognitive means. *Health Educ Behav*. 2004;31(2): 143-164.
6. Hostler D, Colburn D, Rittenberger JC, Reis SE. Effect of two work-to-rest ratios on cardiovascular, thermal, and perceptual responses during fire suppression and recovery. *Prehosp Emerg Care*. 2016;20(6): 681-687.
7. Armstrong LE, Johnson EC, Casa DJ, et al. The American football uniform: uncompensable stress and hyperthermic exhaustion. *J Athl Train*. 2010;45(2): 117-127.
8. Godek SF, Godek JJ, Bartolozzi AR. Hydration status in college football players during consecutive days of twice-a-day preseason practices. *Am J Sports Med*. 2005;33(6): 843-851.
9. Hatheway M, Chesky K. Epidemiology of health concerns among collegiate student musicians participating in marching band. *Med Probl Perform Art*. 2013;28(4): 242-251.

Hydration Assessment for Mascots

Start of Block: Default Question Block

Q1 Assessment of Factors that Impact Hydration Status of Professional and Collegiate Mascots

Consent to Participate in a Research Study

Principal Researcher: Caroline Atwell **Invitation to Participate** You are invited to participate in a research study that is investigating the different factors that influence the hydration status of professional and collegiate mascots. You have been asked to participate in this study because you are currently an active collegiate or professional level mascot.

Who is the Principal Researcher? This study is being conducted by Caroline Atwell, a student at the University of Arkansas in the Dale Bumpers College of Agricultural, Food, and Life Sciences, and Mrs. Mechelle Bailey MS, RD at the University of Arkansas in the Dale Bumpers College of Agricultural, Food, and Life Sciences. Ms. Atwell can be reached by email at ceatwell@uark.edu. Mrs. Bailey can be reached by phone at 479-575-6726 or by email at mlb13@uark.edu. **What is the purpose of this research study?**

This study is aiming to help close the research gap in regard to mascots by assessing their hydration status. **Who will participate in this study?** Approximately 40 active mascots for a university or organization are participating in this study. **What am I being asked to do?** It is asked that participants provide honest and thorough answers to the survey and complete the survey. The survey will be available for approximately three weeks. Participants are asked to complete the survey during this time-frame.

What are possible risks or discomfort? There are no anticipated risks involved with this study. Participants have the option to terminate their involvement at any time. There is no penalty for deciding to end involvement in the study. **What are the possible benefits of this study?**

Participants will help bridge the research gap where mascots are concerned. There is essentially no research on mascots, and this study is helping to begin to understand the basic hydration aspects of mascots. **How long will the study last?**

The survey should take approximately five to ten minutes to complete. **Will I have to pay for anything?** No, there is no cost involved for participating. **What are the options if I do not want to be in the study?**

Your participation is voluntary. If you do not want to be in the study, you do not have to participate. Additionally, there is no penalty for ceasing to participate at any point during the study. **How will my confidentiality be protected?**

All data collected will be kept confidential to the extend allowed by applicable State and Federal law. Your survey response is anonymous; your identity will not be asked and has no connection to your responses in the survey. Your answers will not be tied to your email address, name, or any other personal information. The link to the survey will be distributed through Qualtrics, and data collected will be anonymously processed though Qualtrics before returning to the investigators.

What do I do if I have questions about the research study? You may contact the researcher, Caroline Atwell, at any time through email at ceatwell@uark.edu. The University of Arkansas Research Compliance office can also be contacted if there are any questions regarding participant rights, concerns, or problems with the research. Ro Windwalker, CIP Institutional Review Board

Coordinator Research Compliance University of Arkansas 109 MLKG Building Fayetteville, AR 72701-1201 479-575-2208 irb@uark.edu

Informed Consent I understand the goal of this study and the possible risks and benefits that are involved. I am aware that my participation is voluntary and that no rights have been waived by consenting to participate in this specific study. I understand that I am allowed to keep a copy of this information sheet. By completing and returning the online survey, I am implying my consent to

participate in this study.

If you understand the above disclaimer and would like to continue, please click yes. If you would not like to continue with this survey, please click no.

Yes (1)

No (2)

Skip To: End of Survey If Assessment of Factors that Impact Hydration Status of Professional and Collegiate Mascots Consent... = No

Page Break

Q2 You are

Female (1)

Male (2)

Q3 what is your ...

Height (1) _____

Current Weight (lbs) (2) _____

Page Break

Q4 How many hours per week, in season, do you typically...

Practice (1) _____

Perform (2) _____

Condition (3) _____

Page Break

Q5 Which sport(s) do you perform for?

Football (1)

Men's Basketball (2)

Baseball (3)

Men's soccer (4)

Men's Track (5)

Gymnastics (6)

Women's Basketball (7)

Softball (8)

Women's Soccer (9)

Women's Track (10)

Other (11) _____

Page Break

Carry Forward Selected Choices from "Which sport(s) do you perform for? "



Q6 What are the typical weather conditions (ex. extremely hot and humid, slightly cold and dry, etc.) during your performance days?

	Weather conditions (1)
Football (x1)	
Men's Basketball (x2)	
Baseball (x3)	

Men's soccer (x4)	
Men's Track (x5)	
Gymnastics (x6)	
Women's Basketball (x7)	
Softball (x8)	
Women's Soccer (x9)	
Women's Track (x10)	
Other (x11)	

Page Break

Carry Forward Selected Choices from "Which sport(s) do you perform for? "



Q7 How many hours are you performing pre-game on a game-day?

	Hours performing pre-game (1)
Football (x1)	
Men's Basketball (x2)	
Baseball (x3)	
Men's soccer (x4)	
Men's Track (x5)	
Gymnastics (x6)	
Women's Basketball (x7)	
Softball (x8)	
Women's Soccer (x9)	

Women's Track (x10)

Other (x11)

Page Break

Carry Forward Selected Choices from "Which sport(s) do you perform for? "



Q8 Do you perform the whole game?

	Yes (1)	No (2)
Football (x1)	<input type="radio"/>	<input type="radio"/>
Men's Basketball (x2)	<input type="radio"/>	<input type="radio"/>
Baseball (x3)	<input type="radio"/>	<input type="radio"/>
Men's soccer (x4)	<input type="radio"/>	<input type="radio"/>
Men's Track (x5)	<input type="radio"/>	<input type="radio"/>
Gymnastics (x6)	<input type="radio"/>	<input type="radio"/>
Women's Basketball (x7)	<input type="radio"/>	<input type="radio"/>
Softball (x8)	<input type="radio"/>	<input type="radio"/>
Women's Soccer (x9)	<input type="radio"/>	<input type="radio"/>
Women's Track (x10)	<input type="radio"/>	<input type="radio"/>
Other (x11)	<input type="radio"/>	<input type="radio"/>

Page Break

Carry Forward Selected Choices from "Which sport(s) do you perform for? "



Q9 How long are you performing post-game?

	Hours (1)
Football (x1)	
Men's Basketball (x2)	
Baseball (x3)	
Men's soccer (x4)	
Men's Track (x5)	
Gymnastics (x6)	
Women's Basketball (x7)	
Softball (x8)	
Women's Soccer (x9)	

Women's Track (x10)

Other (x11)

Page Break

Q10 Are you aware of your hydration?

Yes (1)

No (2)

Page Break

Q11 Are you concerned about staying hydrated?

Yes (1)

No (2)

Q12 Would you label your current knowledge of proper hydration as . . .

Minimal (1)

Average (2)

Extensive (3)

Q13 Were you educated about proper hydration when becoming a mascot?

- Yes (1)
- No (2)

Page Break

Display This Question:

If Were you educated about proper hydration when becoming a mascot? = Yes

Q14 If yes, then:

- Who educated you? (1) _____

Page Break

Q15 Who is in charge of your nutrition status?

Q16 Who is in charge of monitoring your hydration status during performances?

Q17 Do you consume alcoholic beverages?

- Yes (1)
- No (2)

Page Break

Display This Question:

If Do you consume alcoholic beverages? = Yes

Q18 If so, how many alcoholic beverages within a week's time?

Page Break

Display This Question:

If Do you consume alcoholic beverages? = Yes

Q19 Do you consume alcohol 24 hours prior to a performance?

Yes (1)

No (2)

Page Break

Display This Question:

If Do you consume alcohol 24 hours prior to a performance? = Yes

Q20 If so, how much?

Page Break

Q21 What types of beverages do you normally consume on game-day?

	Amount consumed in ounces: (1)
Water (1)	
Gatorade (2)	
Soda (3)	
Alcohol (4)	
Other (5)	

Q22 What types of beverages do you normally consume at practice?

	Amount consumed in ounces: (1)
Water (1)	
Gatorade (2)	
Soda (3)	
Alcohol (4)	
Other (5)	

Q23 Have you experienced dehydration?

Yes (1)

No (2)

Page Break

Display This Question:

If Have you experienced dehydration? = Yes

Q24 How many times have you experienced dehydration?

Page Break

Display This Question:

If Have you experienced dehydration? = Yes

Q25 Was medical attention required?

Yes (1)

No (2)

Page Break

Q26 Do you monitor your hydration?

Yes (1)

No (2)

Page Break

Display This Question:

If Do you monitor your hydration? = Yes

Q27 If yes, how?

Page Break

Q28 Do you consume any type of supplement?

Yes (1)

No (2)

Page Break

Display This Question:

If Do you consume any type of supplement? = Yes

Q29 If yes, what do you consume?

	Amount consumed (1)
Protein (in grams) (1)	
Vitamins (in milligrams) (2)	
Minerals (in milligrams) (3)	
Performance Enhancing (in grams) (4)	
Caffeine (in grams) (5)	
Creatine (in grams) (6)	
Other (7)	

Page Break

Q30 Does your organization have a policy on weighing yourself before and after performances?

Yes (1)

No (2)

Q31 Do you weigh yourself before and after performances?

Yes (1)

No (2)

Q32 Describe the components of your costume (ex: shorts and a t-shirt or wool-blend bodysuit with total head covering, fan in head).

End of Block: Default Question Block

Appendix 2: Institutional Review Board Approval



To: Caroline Elyse Atwell
From: Douglas James Adams, Chair
IRB Committee
Date: 02/12/2019
Action: **Exemption Granted**
Action Date: 02/12/2019
Protocol #: 1812167316
Study Title: Assessment of Factors that Impact Hydration Status of Professional and Collegiate Mascots

The above-referenced protocol has been determined to be exempt.

If you wish to make any modifications in the approved protocol that may affect the level of risk to your participants, you must seek approval prior to implementing those changes. All modifications must provide sufficient detail to assess the impact of the change.

If you have any questions or need any assistance from the IRB, please contact the IRB Coordinator at 109 MLKG Building, 5-2208, or irb@uark.edu.

cc: Mechelle Bailey, Investigator
Laura Leigh Hill, Investigator
Kate Shoulders, Investigator