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ORIGINAL RESEARCH

Demographics of NATA Fellows: An Analysis of the First 15 Years

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The purpose was to describe the demographics of current National Athletic Trainers' Association (NATA) fellows and determine if a relationship between time to receive a fellowship and demographics existed. In this cross-sectional study, we used an online survey of the first 15 cohorts of NATA fellows (completion rate: 65.2%; n = 47/72) self-reporting their demographics and academic appointment milestones. Demographics collected included age, race or ethnicity, sex, year of degree completion, and familial status. The sample was mostly men (74.5%; n = 35), self-identified as White (93.6%; n = 44), and married (93.6%; n = 44). Birth or adoption of children occurred before fellowship application (80.9%; n = 38), with 83.0% (n = 39) having active coparents. A relationship existed between the child-to-fellowship time frame and the terminal degree-to-fellowship time frame ($r = .728$, $P \leq .001$). Many demographics are underrepresented in the fellowship cohorts, and familial variables may affect time to achieve the award.

Key Words: Diversity, award, research

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Demographics of NATA Fellows: An Analysis of the First 15 Years

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KEY POINTS

- National Athletic Trainers' Association Fellow demographics lack diversity.
- Children may affect the time it takes to achieve fellowship status.
- Current and new mentorship programs should be considered as an avenue to assist in successful fellow applications.

INTRODUCTION

The National Athletic Trainers' Association (NATA) offers a prestigious career recognition called fellowship. Fellow status "recognizes members of the association who have demonstrated outstanding professional scholarly achievement in combination with leadership in advancing research and scholarly endeavors in the profession."[1] The Fellow Award has existed since 2008 and is bestowed on an average of 4 individuals annually after the inaugural cohort of 18.[1] Professional organizations across diverse fields bestow awards to recognize significant effect on the profession. The awardee may benefit, as promotion and salary raises use awards in decision-making. Evaluating the demographics of previous fellows can help the award granting agency determine if it represents the organization's membership.[2] Anecdotally, work and life factors may influence the potential time to achieve awards and recognition. When examining higher academia, variables of age, gender, children, marriage, working time, and psychological stressors all have been shown to negatively affect sustainability within the job setting.[3,4] Researchers in athletic training have implicated many of the same variables.[5,6] Therefore, it is essential to explore these variables at the intersection of athletic training and higher academia, fellowship status. It is a great honor to receive a fellowship; however, research is lacking surrounding the demographics of those awarded and the time frame it takes to accomplish this distinction. Therefore, the purpose was to describe the demographics of current NATA fellows and determine if a relationship between time to receive a fellowship and demographics existed.

METHODS

A cross-sectional study design was used. Outcome variables were age, race, sex, gender, familial status, marital status, and time to achieve fellow status. Familial status variables included birth or adoption of children, number of children, and coparent involvement. Marital status variables included single, marriage, or divorce. Current NATA fellows were surveyed, while retirees were excluded. Before recruitment, Institutional Review Board approval was obtained through the University of South Carolina.

A Web-based survey (Qualtrics, Inc) was developed by the research team to gather the demographics of NATA fellows and additional study variables. The survey was internally reviewed by the author group before beginning the process of content validation. The first round involved a panel of 3 content experts who have applied for NATA fellowship in the past, are currently a NATA fellow, produced scholarship related to higher education in athletic training, or all of the above. The experts each marked the survey items with either "needs attention" or "sufficient as written" with detailed feedback. The next draft of the survey was uploaded into Qualtrics and returned to the content review panel with a content analysis rubric. The panel scored each item based on relevancy and clarity on a 4-point Likert scale (1 = *not relevant*, 4 = *very relevant*; 1 = *not clear*, 4 = *very clear*). An acceptable content validity index (CVI) value of $\geq$0.90 was not reached after the first round of review. Therefore, another round of revisions was made based on feedback, and the improved survey was redistributed to the content panel. Return of the content analysis rubric demonstrated a scale-level CVI based on the average method for a relevancy value of 0.95 and a clarity value of 0.92, suggesting that the tool met satisfactory levels of content validity.

Names of previously awarded fellows were obtained via the NATA Website (2008–2024) and contacted through publicly available e-mails and Website directories.[1] An invitation to participate with an overview of the study and the Qualtrics survey link was distributed to all valid e-mail addresses. The participants were given 4 weeks to complete the survey and sent 4 reminder e-mails between the distribution of the survey and the deadline. Questions included multiple choice, ranking, and open response boxes. Questions were broken into 3 sections: current demographics, demographics at the time fellowship was awarded, and perceptions of fellow criteria demand. In the last section of the survey, each criterion on the NATA fellows Website was listed, and respondents were asked to rank them from least to most difficult to achieve.[7] The de-identified data were downloaded into an Excel file for coding. The dataset was cleaned by checking for typos or anomalies. A data dictionary was created to ensure coding consistency.

The descriptive statistics were calculated for both parametric and nonparametric variables. Depending on the data type, associations between select variables were determined by either Spearman rank or Pearson correlation. A 1-sample binomial test was run to compare percentages of the demographic variables. SPSS (version 27; SPSS Inc) was used for analysis, and a priori α was set at .05 for significance.

RESULTS

This survey was distributed to 72 NATA fellows via e-mail. The response rate was 72.2% (n = 52/72), with a completion rate of 65.2% (n = 47/72). The sample was mostly men (74.5%; n = 35) and on average 55 $\pm$ 9 years old (Table 1). Examination of race revealed that 93.6% (n = 44) self-identified as White, and most participants were married 93.6% (n = 44). The binominal test indicated that the percentage of male respondents was significantly ($P = .001$) higher than females.

When examining the birth or adoption of children, 80.9% (n = 38) of participants reported this occurring before their fellowship application, 83.0% (n = 39) reported having active coparents (Table 2), of which 74.4% (n = 29) also had a full-time job. The percentage of NATA fellows who were parents ($P \leq .001$) was

Table 1. Demographics of Responding NATA Fellows at Time of Survey

Variable	Mean ± SD or No. (%)
Age (y)	55 ± 9
Sex	
Male	35 (74.5%)
Female	12 (25.5%)
Gender	
Man	25 (53.2%)
Women	10 (21.3%)
Declined to answer	11 (23.4%)
Prefer to self-describe	1 (2.1%)
Race	
White	44 (93.6%)
Hispanic or Latin	1 (2.1%)
Declined to answer	2 (4.3%)
Marital status	
Married	44 (93.6%)
Separated	1 (2.1%)
Never married	1 (2.1%)
Parental status	
Parent or guardian	40 (85.1%)
Nonparents	7 (14.9%)

Table 2. Professional Fellowship Path of Responding NATA Fellows at Time of Awarded Fellowship

Variable	Mean ± SD or No. (%)
Age (y)	
Minimum	32
Average	46 ± 8
Maximum	72
Time to fellowship (y)	
Minimum	9
Average	14 ± 6
Maximum	36
NATA meeting attendance frequency	
Attends every year	36 (76.6%)
Attends every other year	7 (14.9%)
Attends every 3–5 y	4 (8.5%)
Academic institution appointment	
Currently appointed at an institution	43 (91.5%)
On tenure track	36 (76.6%)
Doctoral degree	
Doctor of Philosophy	38 (80.9%)
Doctor of Education	6 (12.8%)
Doctor of Physical Education	1 (2.1%)
Declined to answer	2 (4.3%)
Birth or adoption of first child	
Before fellowship application	38 (80.9%)
Active coparent	39 (83.0%)
Men with active coparent	28 (71.8%)
Women with active coparent	11 (28.2%)

significantly higher than those who were not parents, and those reporting an active coparent were higher than those who reported not having an active coparent ($P \leq .001$). A positive and strong relationship existed between the child-to-fellowship time frame and the terminal degree-to-fellowship time frame ($r = 0.728$, $P \leq .001$; Figure). The remaining variables of sex, race, marital status, parental status, and number of children did not have significant correlations ($P > .05$) with time to fellowship. Most participants (59.6%, n = 28) felt the most demanding criteria to achieve NATA Fellow was "demonstrated development and leadership of a research agenda … resulting in a noteworthy impact on the athletic training profession" followed by (21.3%, n = 10) a "sustained involvement in the dissemination of research …"

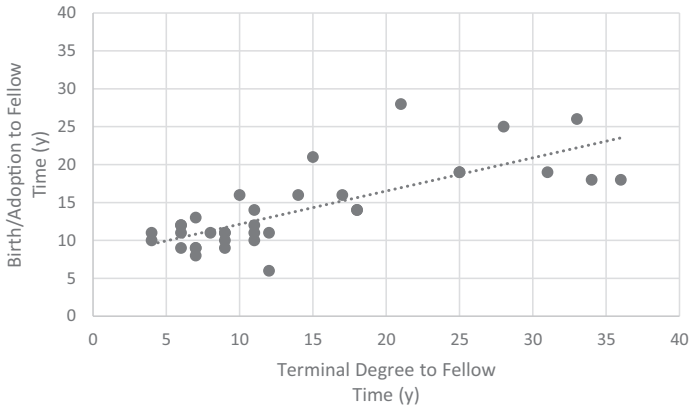
DISCUSSION

Being awarded a NATA fellowship is a great honor in the athletic training research community. It denotes leaders in scholarly advancements and faithful service to the overall improvement of the profession. It is important for the NATA to continue to recognize the contributions of those involved in scholarship and service through the fellowship distinction. In this research, we aimed to describe the demographic of those awarded this prestigious distinction since the award's inception 15 years ago. A secondary purpose explored the potential relationship between demographic variables and the time it takes to achieve fellowship.

Most participants in this study were male. This coincides with previous literature surrounding the underrepresentation of females in the health care industry, higher academia, and STEM publications.[8–11] Females receive less recognition than males in the form of academic rank, compensation, medical society awards, and selection as national conference keynote speakers.[4,10,12,13] The percentage of respondents who were women (25%) or the percentage of women who can be calculated based on the names provided on the NATA Fellow Website (28%) does not seem to represent the percentage of women who are members of the NATA in the higher academia setting (61%).[14] It took over 15 years after women entered the athletic training profession for scholars to emerge and contribute to sports medicine research.[15] An underrepresentation of the female sex as compared with our organization's composition may be present, particularly in research-related awards.

Almost everyone who completed the survey identified as White. This matches research indicating that most athletic trainers in the collegiate setting and tenured professors in higher academia are White.[16,17] In health care, diversity has the value of greater clinical accuracy, bridging cultural gaps, and increasing the

Figure. Relationship between time to achieve fellowship after birth or adoption of a child and time between terminal degree and fellowship.



variety of research conducted.[18] Addressing this disparity is essential, as including diversity within our profession could enhance clinical care and elevate research published by NATA fellows. Even though lack of diversity in the fellow cohorts was hypothesized before data collection, we felt the need to conduct the study to provide evidence when requesting potential action items from award granting agencies.

Most fellows were married and had children. These results should be considered in combination with respondents reporting an active coparent. Less of a barrier to career success with children could be presumed because responsibilities are shared. However, our survey did not operationally define the term coparent; respondents could have interpreted this to represent any portion of shared responsibilities (eg, 50%/50%, 70%/30%). It is difficult to discuss marital and parental variables separately due to their potential to interact with research productivity.[19] Researchers have indicated that female faculty who have children leave academia at a higher rate than males, but in athletic training, women in clinical settings gravitate toward the academic setting due to parenting accommodations offered by the institutions.[5,13] However, only 25% of NATA fellows are women. Lack of shared family responsibilities is cited as a potential reason for the decreased productivity of women in higher education.[11]

The pathway to achieve fellowship from NATA includes membership requirements, significant contributions to scholarship, and leadership recognized by peers via a nomination process.[1] In this study, we found that the average age at the time of being awarded fellowship was 46, with the oldest at 72. The average age of a graduating doctoral student in health care is 29 years old.[20] While a certain age is not a requirement to apply, the Fellow Award requires 10 years of experience since terminal degree before applying. NATA fellows reported taking an average of 14 years before earning the award. More time seems to be needed to meet the remaining criteria before researchers are awarded fellowship.

A correlation was noted between the birth or adoption of a child and an increased time between terminal degree and fellowship acquisition. In this study, we acknowledge a common thread between having a child and taking longer to become a fellow. In higher academia, researchers have examined the workload of faculty, highlighting that children at home can make balancing work challenging.[17,19] Considering the focus on scholarship development, travel to conferences, and the time commitment of service or leadership, it stands to reason that it would take longer to achieve fellowship after the birth or adoption of a child. None of the other variables had a correlation with time to fellowship. This could be partly because of the current homogenous population of NATA fellows.

Fellows ranked criteria connected with dissemination and leadership of research as the most difficult to achieve before applying for the award. NATA Fellow distinction recognizes achievement in scholarship, and therefore, these criteria should be the most demanding. Desire should exist for the NATA to recognize all who meet the criteria and encourage athletic training research to rise to this important standard. The NATA does have mentorship programs in place to help members in various aspects of their careers. Since women and individuals of color are underrepresented in the fellowship cohorts, mentorship opportunities for these groups should be optimized (availability and resources). Additionally, the amount of time until fellowship could be achieved was lengthened based on different life factors; therefore, the timing of mentorship should be considered. For instance, doctoral students and faculty early in their careers may benefit the most from mentorship programs. More clarity in the application material on the 2 most demanding criteria could assist applicants, and feedback on denied application could possibly help to diversify the fellow cohorts.

In our study, we did not collect data on all potential factors influencing fellowship recognition, which is a limitation, particularly in fully understanding barriers. Our survey was meant to serve as a preliminary study to examine the award and provide support that attention to demographics was warranted. Future researchers should examine factors such postdoctoral fellowship, Carnegie Mellon designation for current position, and previous mentorship experiences regarding scholarship productivity and successful applications. Additionally, variables of greater depth surrounding children and parenting could be explored (ie, how responsibilities are shared).

In conclusion, NATA fellows currently lack diversity of sex and race, as almost all respondents were White males. After graduating with a terminal degree, the longer a person was to birth or adopt a child, the longer the time to receive fellowship distinction. Children are a variable that might affect the time to receive this honor. The NATA and NATA Foundation should analyze award demographics as compared with the profession demographics to determine if strategies for diversification are needed.

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