ORIGINAL RESEARCH

CEPA 2020 Clinical Exercise Physiology Practice Survey

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ABSTRACT

Background: The Clinical Exercise Physiology Association first conducted a clinical exercise physiology practice survey in 2010, with a goal to repeat it every 5 y. The purpose of this survey was to collect updated data on employment, including salary, scope of work, patient population, and job responsibilities among practicing clinical exercise physiologists (CEP).
Methods: The 2020 survey was disseminated by email and through social media to attract a wide range of individuals who reported working as a CEP.
Results: In total, data from 776 individuals who responded to the survey were analyzed, which is less participants than in the 2010 and 2015 surveys. The median salary was $56,251, $7,500 higher than that of 2015. Those with a master's degree and clinical certification had higher median salaries compared with those without certification. There was a difference in median salary by sex, with women earning $7,500 less than men did. When mean hourly salary was adjusted for years of experience and academic degree, the difference by sex remained.
Conclusion: Median salary for CEPs surveyed increased between 2015 and 2020. Data revealed benefits from obtaining a clinical certification and an advanced degree for greater compensation. Data also show a discrepancy in salary based on sex. It is unclear how the ongoing coronavirus pandemic affected the current survey results. *J Clin Exerc Physiol*. 2022;11(1):2–11.

Keywords: salary, cardiac rehabilitation

INTRODUCTION

The Clinical Exercise Physiology Association (CEPA), an affiliate society of the American College of Sports Medicine (ACSM), was founded in 2007 to advance the profession of clinical exercise physiology through advocacy, education, and career development. A Clinical Exercise Physiologist (CEP) is an allied health professional who is trained to work with persons with chronic disease for which exercise training has been shown to be of therapeutic benefit, including those with cardiovascular disease, pulmonary disease, and metabolic disorders, among others. CEPs work primarily in a medically supervised environment that provides a program or service that is directed by a licensed physician (https://acsm-cepa.org).

The ACSM-certified CEP credential (ACSM-CEP) is the gold standard certification and has the most rigorous educational requirements in the fitness industry. To sit for that exam, an individual must have a minimum of a bachelor's degree in exercise physiology, exercise or movement

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science, or kinesiology and 1,200 h of clinical experience or a master's degree in clinical exercise physiology and 600 h of clinical experience. Practicing ACSM-CEPs are dedicated to improving the quality of life through individualized prescribed exercise and behavior-change interventions to improve or attenuate declines in fitness and health. Working with a wide variety of populations, the ACSM-CEP provides primary and secondary strategies promoting physical activity for children to older adults (https://www.acsm.org/get-stay-certified/get-certified/cep).

Previous CEP practice surveys were conducted in 2010 and 2015 (1,2). The goals of the 2020 survey were to update employment data, including information on the scope of work, job responsibilities, job setting (e.g., hospitals, universities, and health clubs), patient populations served (e.g., those with cardiovascular, pulmonary, metabolic, and neuromuscular diseases), and the salaries of practicing CEPs. The purpose of this article is to provide an update on current practices and salary trends for the CEP, including differences in salary range between sex and among ethnicities, based on data from the 2020 survey. This updated survey also presents data on CEP salaries based on years of experience, level of education (e.g., a bachelor's versus a master's degree), geographic regions of the United States, and whether or not individuals hold the ACSM clinical certification.

METHODS

In early 2020, an ad hoc committee was formed to continue the work of the previous CEPA surveys conducted in 2010 and 2015. Most questions for the 2020 survey were replicated from the 2010 and 2015 surveys (for older surveys, please see the Supplemental Material [https://doi.org/10.31189/2165-6193-6.1.9]) to permit comparisons among surveys. Race was incorporated for the first time in the 2020 survey to enable salary analysis for this important demographic factor. Questions about currently held certifications were updated to reflect changes by ACSM, in which the ACSM-registered CEP credential was merged with the ACSM-CEP credential. Qualtrics software (Qualtrics, Provo, Utah) was used to collect anonymous participant responses. The 2020 survey is provided in the Supplemental Material.

The survey was disseminated through direct email to CEPA contacts and promoted by the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR), who circulated the survey through email to its members. In addition, the survey was promoted in ACSM's *Sports Medicine Bulletin* publication. Website links to the survey were included in newsletters published by CEPA. In addition, information about the survey was shared on the social media accounts of both CEPA and ACSM. All electronic communications were designed to target professionals who identified as CEPs. Individuals were encouraged to share the survey weblink information with other CEP colleagues. The survey was active from May 1, 2020, through December 31, 2020. Because of the ongoing coronavirus disease 2019 (COVID-19) pandemic, the survey was kept open for a significantly longer period than previous surveys to maximize the response rate.

Survey data were coded and downloaded from Qualtrics for analysis. In accordance with the previous CEPA surveys, annual salary information was collected as ranges (e.g., US$45,001–$47,500), with the midpoint of each range reported in the tables (i.e., $46,251). Hourly wage data were collected as discreet numbers, with salaried, part-time, and pro re nata (as needed) respondents instructed to convert their salary to an hourly rate based on a 40-h work week. When available, direct comparisons were made with the 2010 and 2015 surveys. In addition, data were compared with 2019 data from the US Bureau of Labor Statistics for all (clinical and nonclinical) exercise physiologists combined. Geographical analysis was conducted with the ACSM division of regional chapters as a guide to best represent areas across the United States.

All analyses were performed with SPSS Statistics software (v 27.0; IBM Corp, Armonk, New York). Median data, as well as 25th and 75th percentiles, are reported. Analysis of covariance was used to examine mean differences in hourly wage data among various demographic groups, such as gender, academic degrees, and ACSM clinical certification status, and to calculate an adjusted mean (± SD) salary.

RESULTS

A total of 819 individuals responded to the survey. Because CEPs are the focus of this survey, respondents who reported having a degree consistent with another health profession (e.g., nursing, physical therapy, or athletic training) were excluded. Of the remaining responses (n = 776), 95% listed their highest academic degree as exercise science/physiology/kinesiology. Of the remaining 5%, various degrees related to health and health promotion, business, and health administration were provided.

Geographic distribution of responses is shown in Figure 1. Regions of the United States were divided according to the ACSM into the 12 regional-chapter footprints. The Midwest region had the most respondents (27%), followed by the Southeast (23%) and Mid-Atlantic (15%) regions. Forty-nine states plus the District of Columbia and the US Virgin Islands were represented in the responses. No responses were received from Alaska. Twenty responses were received from Canada, 3 from Australia, and 19 from other countries. These individuals are included in the demographic analysis, but because of differences in exchange rates and cost of living, salary data for those responses were not included in salary analysis. This is consistent with previous surveys.

Table 1 contains demographics for the 776 respondents who reported working solely as a CEP (no concomitant health professional certification). Women made up most of the responses (65%). Non-Hispanic white respondents comprised the largest proportion (86%), with Hispanic/Latino as the next-largest responders (5%). Men tended to report longer median work experience (10–15 y) compared with that of women (8–9 years). Most respondents reported their highest degree as master's (65%), and most respondents had

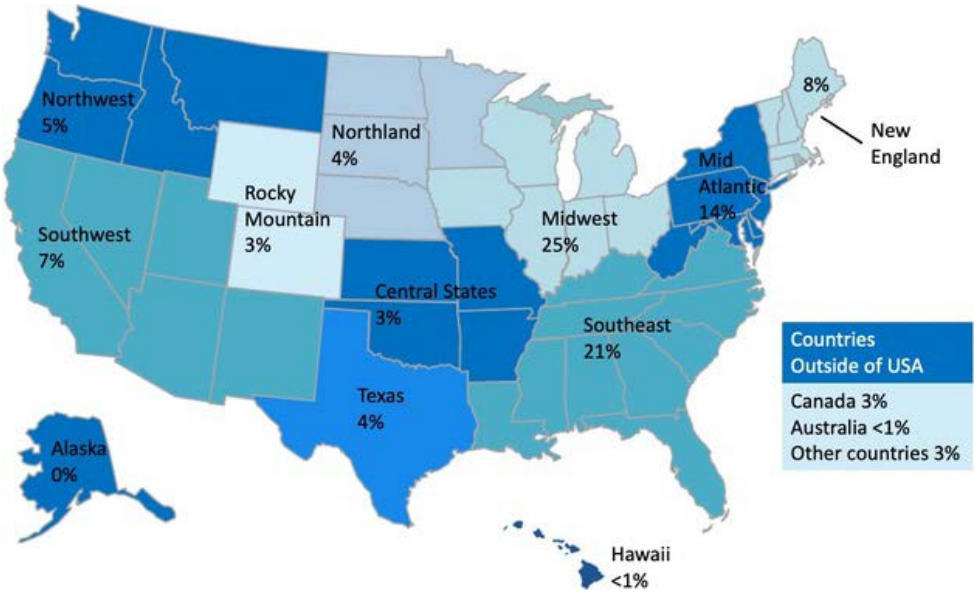

FIGURE 1. Geographic distribution of respondents. Regions are divided according to the 12 regional chapters of the American College of Sports Medicine.

ACSM-CEP certification (64%). Fewer than one half (42%) reported that ACSM certification was required by their employer. Most respondents reported that their billing mechanism operated through a hospital-based system (80%).

Professional practice data are presented in Table 2. Most respondents listed cardiac rehabilitation as their primary work setting (59%), with cardiovascular stress testing (10%), "other" (10%), and university (9%) also listed. Comments provided in the "other" category that encompassed "cardiopulmonary rehabilitation" or "half cardiac rehab, half cardiovascular stress testing," or similar descriptions, were included in the "cardiac-rehabilitation" category. Most respondents (90%) reported some level of direct patient contact.

Annual salary data for individuals who reported working full-time as a CEP in the United States are presented in Table 3. The median salary was $7,500 more than it was in the 2015 and 2010 surveys. The median salary for women was $7,500 less than it was for men. Median salary increased with higher degree attained. Those with a master's degree had a $2,500 higher median salary than those with a bachelor's degree, and a $30,000 lower median salary than those with a doctoral degree. Certified professionals had a higher median salary by $7,500 compared with those who were not certified and varied between a $5,000 (bachelor's degree) and $10,000 (master's degree) difference depending on academic degree. Respondents from the Southwest geographical region had the highest median salary ($76,251), followed by that of those in the Northwest ($63,751) and Central States ($63,751) regions. The Texas region had the lowest median salary ($51,251).

Annual salary for full-time respondents, stratified by sex and years of experience for individuals with a bachelor's or master's degree, is presented in Figure 2. Years of experience demonstrated a linear trend for annual salary, with increasing salary with increasing years of experience and a plateau between 6 and 15 y of experience. Women with 8–9 y of experience (n = 21) did report a median salary higher than that of men (n = 7), the only category in which the men's salary was not higher than that of the women. Median salary was equal for men and women at 2–3 y and at 10–15 y of experience. In all other categories, median salary was less for women than it was for men.

Hourly wage data are presented in Table 4. The median hourly wage was $3.94 per hour higher than it was in the 2015 survey (2). The median hourly wage for women was $2.87 per hour less than that for men. Compared with the 2015 survey, the median hourly wage was $3.50 per hour higher for women and $4.37 per hour higher for men. By race, Non-Hispanic white respondents had the highest median hourly wage ($28.56 per hour), followed by Hispanic/Latino ($28.00 per hour) respondents. The median hourly wage for individuals with a master's degree was $1.85 greater than those with a bachelor's degree (Table 4). Certified professionals had a higher median hourly wage than those who were not certified. This was true for all respondents, as well as by academic degree (Table 4).

Median annual salary, stratified by years of experience and academic degree, for full-time CEPs is presented in Table 5. Compared with the 2015 survey, median salary for all experience categories increased for those with a bachelor's degree, with the exception of <2 y of experience. The median annual salary for entry-level professionals decreased by $2,500. For those with a master's degree, median salary increased across all experience categories when compared with the results of the 2015 survey, except for those with <2 y experience. Entry-level median salary did not change. Evaluating salary across the 9 experience categories, 7 categories revealed individuals with master's degrees reported higher median salary than those with bachelor's degrees. In

TABLE 1. Demographics of clinical exercise physiologists.

Characteristic	2020 Survey, = 776	2015 Survey, n = 1271 (Kerrigan et al.[2] 2017)	2010 Survey, n = 813 (Brawner et al.[1] 2010)
Age, y			
Median	36	33	38
25th, 75th percentile	29, 47	28, 43	28, 48
Women, %	65	70	68
Race, %			
Non-Hispanic white	86	NR	NR
Hispanic or Latino	5	NR	NR
Black	3	NR	NR
Asian/Pacific Islander	4	NR	NR
Native American or Alaskan Native	<1	NR	NR
Other	1	NR	NR
Work experience, y			
Median	10–15	8–9	10–15
25th, 75th percentile	4–5, 16–20	2–3, 16–20	4–5, 16–20
Women	8–9	NR	NR
Men	10–15	NR	NR
Highest academic degree, %			
Associate	0	1	<1
Bachelor	26	36	26
Master	65	58	66
Doctorate	9	5	8
Employer requires ACSM certification, %	42	36	59
ACSM-certified CEP, %	64	61[a]	81[a]
Employment status, %[b]			
Full-time	83	75	86
Part-time	13	15	11
Per diem	4	3	2
Billing mechanism, %			
Hospital based	80	72	78
Physician based	7	5	9
Private pay	7	13	5
Other	6	10	8

NR = Not reported
[a]Includes individuals who reported current Clinical Exercise Physiologist or Registered Clinical Exercise Physiologist certification from the American College of Sports Medicine
[b]2015 and 2010 survey also included students for 100%

the 2–3 y of experience category, median salary was equal. In the 8–9 y of experience category, the median salary was $2,500 less than for those with a master's degree.

Given the differences by sex seen in median annual salary and median hourly wage, analysis of covariance was employed on the continuous variable of hourly salary to examine whether certain factors may have contributed to those differences. When adjusted for years of experience, academic degree, and certification status, the mean hourly wage for women remained significantly less than that of men ($P = 0.001$; Figure 3). When evaluating within an academic degree, mean hourly wage for individuals with a master's degree did not differ by sex ($29.35 ± $10.41 versus $31.45 ± $10.79; $P = 0.10$, for women versus men). For

TABLE 2. Professional practice of clinical exercise physiologists.

Characteristic	2020 Survey, n = 796	2015 Survey, n = 1271 (Kerrigan et al.[2] 2017)	2010 Survey, n = 813 (Brawner et al.[1] 2010)
Primary work setting, %			
Cardiac rehabilitation	59	43	39
Commercial/community fitness center	1	12	2
University	9	10	7
Cardiovascular stress testing	10	8	5
Exercise oncology	1	NR	NR
Hospital wellness	1	7	7
Corporate fitness/wellness	<1	6	2
Government fitness/wellness/research	<1	5	1
Medical fitness center	3	3	NR
Physical therapy clinic	<1	2	NR
Weight loss or bariatric surgery clinic	2	2	2
Pulmonary rehabilitation	2	2	21
Primary/secondary school	<1	<1	NR
Nonuniversity research	<1	NR	NR
Other	10	<1	6
Direct patient contact, %	90	77	88

NR = not reported

those with a bachelor's degree, there was a trend for lower mean hourly wage for women ($28.11 ± $24.26) versus that of men ($34.82 ± $43.88; $P = 0.065$), but it did not reach statistical significance. Evaluating within ACSM clinical certification status, the mean hourly salary for certified women was significantly less than it was for certified men, when adjusted for years of experience and academic degree ($29.61 ± $9.39 versus $36.46 ± $26.45; $P < 0.001$, for women versus men). For noncertified professionals, the mean hourly salary for women did not differ from that of men ($28.57 ± $12.85 versus $28.23 ± $8.29; $P = 0.79$, for women versus men) when adjusted for years of experience and academic degree.

Given the significantly higher percentage of respondents who reported cardiac rehabilitation as their primary work setting, a subanalysis was conducted in that group of respondents. The median annual salary for respondents who reported working primarily in cardiac rehabilitation was $53,751, and hourly wage was $28.30 per hour. The median annual salary for respondents with a bachelor's degree was $53,751, whereas the median hourly rate was $26.89 per hour. For respondents with a master's degree, the median annual salary and median hourly rate were $56,251 and $28.19 per hour, respectively. When stratified by sex, the median annual salary and hourly wage were $5,000 (Figure 4A) and $2.48 per hour (Figure 4B) less, respectively, for women versus men. When adjusted for years of experience, academic degree, and certification status, mean hourly salary among individuals who reported cardiac rehabilitation as their primary work setting was significantly less among women ($28.47 ± $7.92) than it was for men ($30.23 ± $9.91; $P = 0.049$).

DISCUSSION

The main finding in this current salary survey is that regardless of degree, sex, or clinical certification, practicing CEPs reported higher levels of median salaries in 2020 compared with that in the 2015 survey. As with the previous iteration of this survey, it is important to find variants that may explain differences in reported salaries beyond the general cost-of-living increases. Certainly, a very important variant when compared with the previous surveys was that the 2020 salary survey was conducted during the COVID-19 pandemic. Although it is unclear how much COVID-19 affected the reported salaries, it is a plausible explanation for the fewer participants, which may have contributed to some of the observed variance compared with previous surveys. Possible contributors to higher reported salaries are more years of experience (10–15 y in 2020 versus 8–9 years in 2015) and a larger proportion of respondents with a master's degree (65% in 2020 versus 58% in 2015). In addition, researchers noted a significant difference in hourly pay rates by sex after covariate adjustment, an analysis that had not been performed in the 2 prior CEPA surveys.

The overall 15% higher reported salary is similar to other allied health professionals during the same period. For example, between 2015 and 2020 the US Bureau of Labor and Statistics reported a 6% and 9% increase in median

TABLE 3. Median annual salary, stratified by sex, race, geographical region, academic degree, and certification, among respondents who reported working full-time as a clinical exercise physiologist in the United States.

Characteristic	2020 Survey, US$	2015 Survey, US$ (Kerrigan et al.[2] 2017)	2010 Survey, US$ (Brawner et al.[1] 2010)
All	56,251 (n = 602)	48,751 (n = 945)	48,751 (n = 749)
Sex			
Women	53,751 (n = 360)	46,251 (n = 656)	46,251 (n = 508)
Men	61,251 (n = 241)	51,251 (n = 289)	53,750 (n = 234)
Race			
Non-Hispanic white	58,751 (n = 532)	NR	NR
Hispanic or Latino	51,251 (n = 26)	NR	NR
Black	48,751 (n = 19)	NR	NR
Asian/Pacific Islander	66,251 (n = 16)	NR	NR
Other	58,751 (n = 9)	NR	NR
Academic degree			
Bachelor	53,751 (n = 147)	43,751 (n = 306)	41,251 (n = 157)
Masters	56,251 (n = 391)	48,751 (n = 586)	48,751 (n = 421)
Doctorate	86,251 (n = 58)	71,251 (n = 53)	NR
ACSM-certified CEP (all respondents)			
Yes	58,751 (n = 412)	48,751 (n = 560)	48,751 (n = 471)
No	51,251 (n = 190)	46,251 (n = 385)	43,751 (n = 115)
ACSM-certified CEP (women)			
Yes	56,251 (n = 238)	NR	NR
No	48,751 (n = 122)	NR	NR
ACSM-certified CEP (men)			
Yes	66,251 (n = 174)	NR	NR
No	56,251 (n = 67)	NR	NR
ACSM-certified CEP (bachelor's degree)			
Yes	56,251 (n = 80)	48,751 (n = 180)	43,751 (n = 115)
No	51,251 (n = 67)	38,751 (n = 188)	38,751 (n = 65)
ACSM-certified CEP (master's degree)			
Yes	58,751 (n = 287)	48,751 (n = 381)	51,251 (n = 356)
No	48,751 (n = 105)	48,751 (n = 204)	48,751 (n = 65)
ACSM, US region			
New England	58,751 (n = 45)	53,751 (n = 67)	NR
Southwest	76,251 (n = 41)	53,751 (n = 67)	NR
Mid-Atlantic	58,751 (n = 86)	51,251 (n = 116)	NR
Rocky Mountain	53,751 (n = 18)	51,251 (n = 22)	NR
Northwest	63,751 (n = 25)	48,751 (n = 45)	NR
Northland	53,751 (n = 19)	48,751 (n = 74)	NR
Midwest	56,251 (n = 145)	46,251 (n = 217)	NR
Southeast	53,751 (n = 127)	43,751 (n = 216)	NR
Central States	63,751 (n = 19)	38,751 (n = 31)	NR
Texas	51,251 (n = 23)	NR	NR

ACSM = American College of Sports Medicine; NR = Not reported

[a]Includes individuals who reported current Clinical Exercise Physiologist or Registered Clinical Exercise Physiologist certification from the American College of Sports Medicine

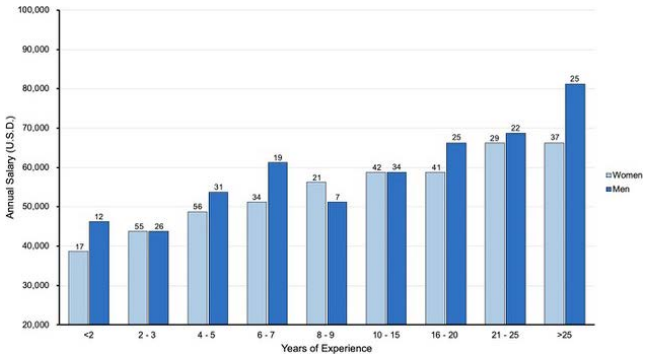

FIGURE 2. Median annual salary stratified by sex and years of experience among respondents who reported working full-time as a clinical exercise physiologist with a bachelor's or master's degree in the United States. The numbers on top of the column represent the number of respondents in that category.

salary for both registered nurses and dietitians, respectively (3,4). It is important to note that, although the US Bureau of Labor and Statistics does not have separate categories for CEPs and general exercise physiologists, salary for all exercise physiologists (which includes the CEPs) did increase. According to the US Bureau of Labor and Statistics, the salary for exercise physiologists rose similar to that of nurses and dietitians, with an average increase of 5% since 2015 (3,4). The determinants to why the 2020 version of the CEP salary survey revealed a rate of increase greater than other similar health care professionals is unclear. The most likely factor could be the above-mentioned demographic differences between the respondents from 2020 compared with 2015.

Sex Differences

Demonstrated salary disparities among sex are evident throughout the 2010, 2015, and 2020 surveys. Throughout the decade (2010–2020), the median annual salary discrepancy between women and men did not change ($7,500). In 2015, the variance in discrepancy decreased to only $5,000 annually, but that drop may be due to the median years of experience being less for the respondents of the 2015 survey. Certified CEPs who were women earned $4 more per hour than noncertified CEPs but still earned less compensation in comparison with certified men (Table 4). Even when controlling for potential covariates, such as years of experience, academic degree, and certification status, an analysis done for the first time on the 2020 survey, mean hourly wage for women continued to remain less than the salary earned by men. That discrepancy is evident despite women comprising 65% of survey respondents, a similar finding in previous surveys (women were 70% of respondents in 2015 and 68% in 2010). Similar findings among a national sample of male and female cardiologists found substantial sex-based salary differences, with women earning less than men did (5). This inequity needs to be evaluated further. Addressing transparency and exploring ways to ameliorate discrepancies in career advancement will help the profession.

Diversity of CEPs

This is the first survey conducted by CEPA that collected data on race. In the 2020 sample, the most respondents (88%) identified as non-Hispanic white. It is not fully clear whether that sample represents a broader lack of diversity in practicing CEPs or is derived from the smaller 2020 response rate. Without race data from previous surveys, it is not possible to compare trends. This seeming lack of diversity in the field, however, is a concern because addressing and improving diversity in the health care workforce can have profound implications in addressing the documented health care inequities seen in the United States (6).

Limitations

These data have some limitations. First, the information provided was derived from self-reported data. In addition, some of the information presented, especially within the context of the smaller subgroups, should be interpreted with caution. Respondents of this survey were largely from email lists of certified professionals through ACSM and AACVPR; thus, a selection bias may exist. In addition, COVID-19 may have affected the overall response rate, such as clinicians lacking remote access to work email accounts. Less-experienced CEPs, who may have been furloughed or laid off from positions working as junior staff members, should be considered a possible limitation contributing to the response rate. Therefore, it may be possible that data collected sampled more-experienced and higher-paid CEPs during the COVID-19 pandemic. The low response rate resulted in relatively small subgroups. Lastly, because most respondents (86%) reported as non-Hispanic white, the generalizability of these data to individuals of other race categories is uncertain.

Future Considerations

Despite the increase in salary captured in the current survey, CEP salaries remain low compared to other allied health professionals. For example, the median annual salary for registered nurses in 2020 was $75,330 per year and the median hourly wage was $36.22 per hour (3). For registered dieticians the median salary and wage was $63,090 per year and $30.33 per hour respectively (4). Berry et al. (7) discussed frequent misconceptions about roles and responsibilities assigned to CEPs, which often limit their job responsibilities; that find may fuel salary gaps compared with other allied health providers.

It may also be prudent for future studies to investigate academic preparation across institutions as a possible means to help improve professional preparation to enhance employment expectations and thus, improve compensation. The lack of clinical exercise physiology programs accredited by the Committee on Accreditation for the Exercise Sciences may serve as a potential roadblock for the profession (7). Findings from the present survey reveal that less than half (42%) of employers require ACSM certification, aligning with the findings of O'Neil et al. (8), who reported 68% of cardiac rehabilitation programs do not require their

TABLE 4. Median hourly wage stratified by sex, state, academic degree, and certification among respondents who reported working as a clinical exercise physiologist – United States.

Characteristic	2020 CEPA Survey, US$	2019 Bureau of Labor Statistics,[3,a] US$	2015 CEPA Survey, US$ (Kerrigan et al.[1] 2017)
All	28.44 (n = 712)	23.64	24.50 (n = 1,116)
Sex			
Women	27.50 (n = 461)	NR	24.00 (n = 799)
Men	30.37 (n = 248)	NR	26.00 (n = 323)
Race			
Non-Hispanic white	28.56 (n = 626)	NR	NR
Hispanic or Latino	28.00 (n = 31)	NR	NR
Black	23.39 (n = 20)	NR	NR
Asian/Pacific Islander	27.21 (n = 20)	NR	NR
Academic degree			
Bachelor	26.50 (n = 185)	NR	22.50 (n = 388)
Masters	28.35 (n = 461)	NR	26.77 (n = 666)
Doctorate	41.59 (n = 61)	NR	36.25 (n = 62)
ACSM-certified CEP (all respondents)			
Yes	29.15 (n = 497)	NR	NR
No	25.00 (n = 215)	NR	NR
ACSM-certified CEP (women)			
Yes	28.37 (n = 318)	NR	NR
No	24.32 (n = 143)	NR	NR
ACSM-certified CEP (men)			
Yes	32.27 (n = 179)	NR	NR
No	27.24 (n = 69)	NR	NR
ACSM-certified CEP (bachelor's degree)			
Yes	27.03 (n = 108)	NR	24.17 (n = 180)
No	25.00 (n = 77)	NR	20.54 (n = 208)
ACSM-certified CEP (master's degree)			
Yes	29.03 (n = 341)	NR	27.63 (n = 430)
No	24.63 (n = 120)	NR	26.61 (n = 236)
Select States in the United States			
California	37.20 (n = 39)	44.75	34.40 (n = 33)
New York	34.93 (n = 24)	32.89	29.75 (n = 40)
Massachusetts	31.35 (n = 30)	28.43	25.91 (n = 30)
Wisconsin	29.55 (n = 44)	26.39	25.52 (n = 55)
Florida	29.25 (n = 16)	25.60	NR
Illinois	32.00 (n = 19)	26.46	NR
Pennsylvania	24.00 (n = 39)	23.76	23.80 (n = 55)
Minnesota	31.72 (n = 18)	27.64	23.50 (n = 71)
Michigan	24.69 (n = 60)	23.26	21.04 (n = 51)

CEPA = Clinical Exercise Physiology Association; NR = Not reported
[a]Reported for the broad category of exercise physiologists, not just clinical exercise physiologists

TABLE 5. Median annual salary stratified by years of experience and academic degree among respondents who reported working full-time as a clinical exercise physiologist – United States.

	Bachelor's Degree, US$			Master's Degree, US$		
Years of Experience, y	2020 Survey, n = 145)	2015 Survey, n = 368 (Kerrigan et al.[2] 2017)	2010 Survey, n = 157 (Brawner et al.[1] 2010)	2020 Survey, n = 388	2015 Survey, n = 567 (Kerrigan et al.[2] 2017)	2010 Survey, n = 421 (Brawner et al.[1] 2010)
<2	36,251	38,751	38,751	41,251	41,251	38,751
2–3	43,751	38,751	33,751	43,751	41,251	38,751
4–5	46,251	38,751	36,251	48,751	43,751	43,751
6–7	48,751	46,251	36,251	56,251	48,751	43,751
8–9	56,251	51,251	41,251	53,751	46,251	48,751
10–15	58,751	51,251	51,251	58,751	51,251	51,251
16–20	58,751	53,751	58,751	61,251	53,751	53,751
21–25	56,251	53,751	43,751	68,751	61,251	61,251
>25	58,751	73,751	NR	68,751	61,251	70,001

NR = Not reported

clinicians to hold a clinical exercise certification (ACSM or AACVPR). Lack of accredited academic programs combined with low certification accountability for CEPs may perpetuate the stagnant CEP salary.

Finally, additional data are needed to determine salary among nonwhite CEPs. A focus on black, indigenous, and people of color will provide tangible data to address racial diversity among this growing allied health care profession. Outreach and advocacy to recruit students who are black, indigenous, and people of color to the CEP field are needed. Future surveys should explore diversity and race within the profession to improve inclusion as we work to advance the profession.

In conclusion, based on the 2020 CEPA Clinical Practice and Salary Survey, the median salary for practicing CEPs has increased since 2015, but a compensation disparity continues to exist, with women receiving less than men do.

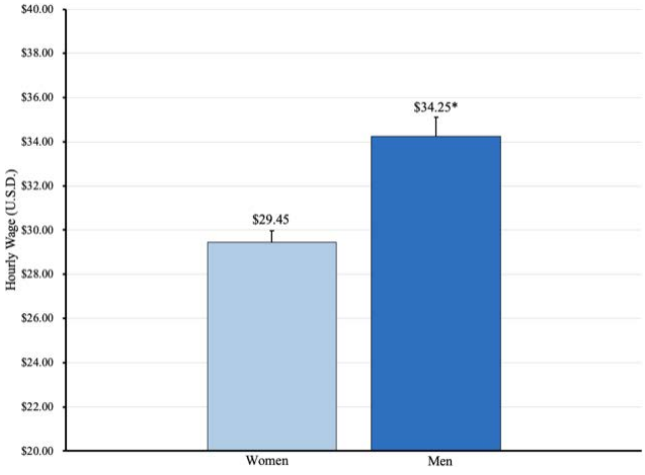

FIGURE 3. Mean hourly wage, stratified by sex, and adjusted for years of work experience and academic degree. *P <0.001.

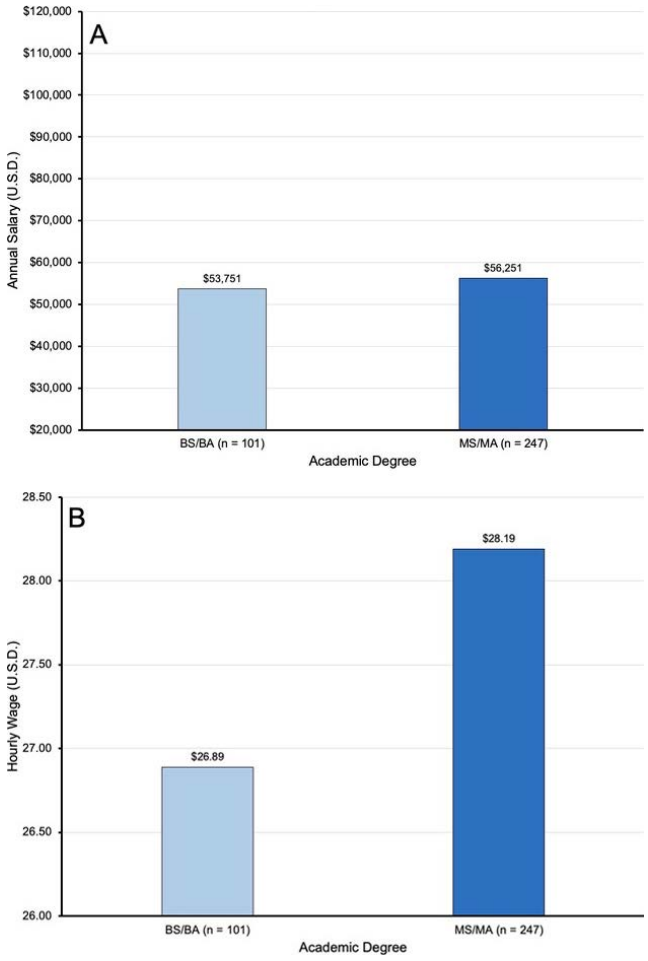

FIGURE 4. Median annual salary (A) and hourly wage (B), stratified by sex, among respondents who reported working primarily in the setting of cardiac rehabilitation.

Additionally, this survey reports a significant lack of racial diversity in practicing CEPs.

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