

Results of the 3rd NAK Doctoral Program Review (January 1, 2010 - December 31, 2014)

Presented at the:

National Academy of Kinesiology Annual Conference
Business Meeting, Philadelphia, PA

September 19, 2015



Note: when preparing these slides for dissemination we added information from the presentation in the notes sections of some, to add clarity.



OVERVIEW

- NAK President sent official invitations to Program Chairs and Graduate Deans in November 2014
- When Chairs submitted participation fees they received Information Packets and Data Spreadsheets
- Data were submitted by March 2, 2015, including
 - Bibliographies of faculty publications
 - Confirmation by Budget Administrator of research expenditures
- Analyses
 - Random sample selected to confirm publications
 - All data reviewed for potential outliers and omissions
 - Data analyzed and rank ordered, evaluation instrument analyzed
- Reports
 - Shared during 2015 NAK meeting
 - Sent to Program Chairs and Graduate Deans, posted on NAK website (post meeting)
 - Full manuscript published in *Kinesiology Review*, 2016

Variables & Weightings: Faculty = 66%

Productivity = 30%

- Journal Publications 20%
- Books 5%
- Presentations 5%

Funding = 26%

- Federal Research Funds Expended 15%
- Non-Federal Funds Expended 8%
- Internal Grant Funds Received 3%

Visibility = 10%

- Editorial Boards 6%
- National Academy Membership 2%
- National Fellows 2%



Variables & Weightings: Students = 34%

Admissions = 12%

- Selectivity - 2%
- GRE Verbal - 5%
- GRE Quantitative - 5%

Graduate Assistant Support = 13%

Doctoral Publications = 2%

Employment = 7%

- Postdocs - 4%
- Employment in the Field - 3%



Analyses

○ Norm-referenced system

- z-scores created
- T-scores created
- Weights applied

○ Unadjusted

○ Adjusted

- Faculty size
- z-score truncated to ± 2.58





Results

52 Programs Participated (77 invited)

36 Last Round (68 invited)

Net ↑ = 16, 44%



Descriptive Statistics for Faculty Indices by Total T-Score Category - Adjusted for Faculty Size

Categories of total T-scores		Publications	Books	Presentations	Federal Funding	Nonfederal Funding	Internal Funding	Editors	Academy Fellows (all disciplines)	National Fellows (all disciplines)
<40 (N = 7)	M	7.3	.1	12.6	\$67,725	\$55,529	\$15,123	.7	.1	.3
	S D	4.0	.1	6.3	\$71,088	\$53,279	\$22,365	.5	.1	.2
40-49 (N = 18)	M	15.9	.3	20.6	\$179,222	\$102,779	\$72,721	1.1	.1	.4
	S D	5.0	.2	5.1	\$180,844	\$87,139	\$208,214	.7	.1	.3
50-59 (N = 16)	M	18.5	.4	29.1	\$397,621	\$169,477	\$30,180	1.6	.4	.6
	S D	4.1	.3	6.8	\$296,087	\$177,387	\$24,749	.7	.9	.3
≥60 (N = 11)	M	27.6	.7	37.8	\$461,149	\$237,327	\$93,128	2.3	.9	1.0
	S D	5.8	.4	21.3	\$333,423	\$174,693	\$108,337	.6	1.3	.4
Total (N = 52)	M	18.0	.4	25.8	\$291,051	\$145,403	\$56,194	1.5	.4	.6
	S D	7.7	.3	13.6	\$283,093	\$147,844	\$133,513	.8	.8	.4

Descriptive Statistics for Faculty Indices by Total T-Score Categories – Unadjusted for Faculty Size

Categories of total T-scores		Publications	Books	Presents	Federal Funding	Nonfederal Funding	Internal Funding	Editors	Academy Fellows (all disciplines)	National Fellows (all disciplines)
<40 (N = 6)	<i>M</i>	85.0	1.2	162.2	\$707,383	\$768,933	\$111,703	6.3	0.2	2.7
	<i>SD</i>	45.8	1.2	72.4	\$951,839	\$861,492	\$211,780	3.8	0.4	1.4
40-49 (N = 24)	<i>M</i>	195.5	3.5	267.0	\$2,312,715	\$1,197,791	\$986,783	14.0	3.8	6.0
	<i>SD</i>	61.0	2.7	91.5	\$2,660,620	\$957,254	\$2,731,653	8.3	5.4	3.5
50-59 (N = 13)	<i>M</i>	293.8	8.4	449.5	\$6,412,818	\$2,502,559	\$483,975	28.2	2.5	9.9
	<i>SD</i>	102.1	5.9	171.3	\$4,678,666	\$2,497,582	\$383,120	13.2	2.0	3.8
≥60 (N = 9)	<i>M</i>	491.9	12.0	609.4	\$11,062,548	\$5,912,189	\$1,314,105	48.1	6.1	15.7
	<i>SD</i>	153.0	8.5	159.6	\$4,819,424	\$5,304,709	\$1,592,032	14.7	4.3	5.4
Total (N = 52)	<i>M</i>	258.6	5.9	359.8	\$4,666,904	\$2,290,453	\$816,762	22.6	3.4	8.3
	<i>SD</i>	152.8	6.0	192.1	\$4,952,090	\$3,086,792	\$1,986,369	17.2	4.4	5.5



**Total Funding Reported for All Faculty in the NAK 2015
 Doctoral Program Review
 (Summary of funding procured by 762 faculty members from
 2010 through 2014)**

	N	Minimum	Maximum	Sum	M	SD
Federal funding	52	\$0	\$18,073,107	\$242,679,035	\$4,666,905	\$4,952,091
External nonfederal funding	52	\$107,497	\$18,725,523	\$119,103,542	\$2,290,453	\$3,086,792
Internal Funding	52	\$0	\$13,485,128	\$42,471,632	\$816,762	\$1,986,369



Faculty Indices Correlated with Total T-Score

Index	Adjusted	Unadjusted
Publications (20%)	.78**	.88**
Books (5%)	.50**	.62**
Presentations (5%)	.64**	.82**
Federal funding (15%)	.62**	.78**
External funding (Nonfed) (8%)	.50**	.61**
Internal funding (3%)	.20	.09
Editorial boards (6%)	.63**	.79**
National Academy members (2%)	.35*	.29*
National Fellows (2%)	.57**	.71**

Student Indices Correlated with Total T-Score

Index	Adjusted	Unadjusted
Average GRE – V (5%)	.47**	.37**
Average GRE – Q (5%)	.30*	.26
Assistantships (FTE) (13%)	.39**	.43**
Selectivity (2%)	.26	.18
Doctoral publications (2%)	.64**	.76**
Postdoctoral positions (4%)	.63**	.81**
Positions in field (3%)	.34*	.48**

*p < .05; **p < .01



Final Rank and Total T-Score, Adjusted & Unadjusted for Faculty Size

ADJUSTED for Faculty Size			UNADJUSTED for Faculty Size		
RANK*	UNIVERSITY	SCORE	RANK*	UNIVERSITY	SCORE
1	University of South Carolina	73	1	University of Illinois at Urbana-Champaign	75
2	University of Texas at Austin	71	2	University of Texas at Austin	73
3	University of Illinois at Urbana-Champaign	65	3	Penn State University	71
4	Teachers College, Columbia University	64	3	University of Michigan	71
4	University of Florida	64	3	University of South Carolina	71
6	Ohio State University	62	6	Ohio State University	62
6	University of Central Florida	62	7	Texas A&M - College Station	61
6	University of Minnesota	62	7	University of Florida	61
9	Penn State University	61	9	University of Minnesota	60
9	University of Connecticut	61	10	University of Southern California	59
9	University of Virginia	61	11	University of Georgia	57
12	Texas A&M - College Station	59	11	University of North Carolina at Chapel Hill	57
13	University of Michigan	57	13	University of Delaware	55
14	University of Illinois Chicago	56	14	Auburn University	54
15	University of Southern California	55	15	Arizona State	53
16	East Carolina University	54	15	Indiana University	53
16	University of Delaware	54	17	East Carolina University	52

***For tied ranks, programs were listed alphabetically.**

Final Rank and Total T-Score, Adjusted & Unadjusted for Faculty Size

ADJUSTED for Faculty Size			UNADJUSTED for Faculty Size		
RANK*	UNIVERSITY	SCORE	RANK*	UNIVERSITY	SCORE
16	University of Maryland	54	17	Georgia State University	52
16	University of North Carolina at Chapel Hill	54	17	University of Maryland	52
20	Colorado State University	52	20	Oregon State University	51
20	Syracuse University	52	21	University of Illinois Chicago	50
22	Michigan State University	51	21	University of North Carolina Greensboro	50
23	Auburn University	50	23	Michigan State University	49
23	Baylor University	50	23	University of Massachusetts Amherst	49
23	Indiana University	50	23	University of Wisconsin-Madison	49
23	University of Georgia	50	26	Colorado State University	48
23	University of North Carolina Greensboro	50	26	Iowa State University	48
28	University of Massachusetts Amherst	49	26	University of Tennessee, Knoxville	48
28	University of Utah	49	26	University of Virginia	48
30	Georgia State University	48	30	University of Connecticut	47
31	Kansas State University	47	31	Middle Tennessee State University	46
31	University of Houston	47	31	University of Houston	46
31	University of Wisconsin-Madison	47	31	University of Utah	46
34	Oregon State University	46	34	Teachers College, Columbia University	45

Final Rank and Total T-Score, Adjusted & Unadjusted for Faculty Size

ADJUSTED for Faculty Size			UNADJUSTED for Faculty Size		
RANK*	UNIVERSITY	SCORE	RANK*	UNIVERSITY	SCORE
34	University of Oklahoma	46	34	University of Nebraska at Omaha	45
34	University of Tennessee, Knoxville	46	34	West Virginia University	45
37	Arizona State	45	37	Baylor University	44
37	Iowa State University	45	37	University of Oklahoma	44
39	Florida State University	44	39	Louisiana State University	43
39	University of Arkansas	44	40	Kansas State University	42
39	West Virginia University	44	40	Syracuse University	42
42	University of Mississippi	42	40	University of Central Florida	42
42	Wayne State University	42	43	University of Mississippi	41
44	University of Nebraska at Omaha	40	44	Purdue University	40
44	Middle Tennessee State University	40	44	Temple University	40
46	Louisiana State University	39	44	Wayne State University	40
47	University of Wisconsin-Milwaukee	37	47	Florida State University	39
48	Purdue University	36	47	University of Arkansas	39
49	Temple University	35	47	University of Wisconsin-Milwaukee	39
50	University of Southern Mississippi	34	50	University of Southern Mississippi	38
51	Virginia Commonwealth University	32	51	Virginia Commonwealth University	36
52	Springfield College	25	52	Springfield College	31

Total T-Score Results for Faculty Indices – Adjusted for Faculty Size

University	Publications	Books	Presentations	Federal Funding	Nonfederal Funding	Internal Funding	Editors	Academy Fellows	National Fellows
Arizona State	49	52	46	44	43	46	59	47	45
Auburn University	52	54	55	46	46	48	48	47	46
Baylor University	56	62	57	40	44	47	50	48	59
Colorado State University	48	38	52	62	48	50	50	47	52
East Carolina University	45	49	48	64	48	53	43	46	38
Florida State University	49	48	55	40	43	46	50	46	57
Georgia State University	35	67	43	49	60	47	43	46	43
Indiana University	44	62	47	44	68	49	56	48	49
Iowa State University	48	51	45	46	46	49	38	48	42
Kansas State University	55	38	50	49	46	47	65	47	45
Louisiana State University	46	40	43	40	43	46	51	46	41
Michigan State University	55	40	56	50	45	48	51	49	53
Middle Tennessee State University	34	50	41	40	48	46	46	46	46
Ohio State University	58	55	62	50	62	49	66	46	63
Oregon State University	49	48	44	51	41	47	42	46	49
Penn State University	56	75	48	56	46	48	57	49	46
Purdue University	36	40	42	41	42	50	39	47	51
Springfield College	29	38	37	40	41	46	40	46	38
Syracuse University	61	61	53	43	42	47	38	76	34
Teachers College, Columbia University	61	76	51	71	43	46	59	51	62
Temple University	33	40	33	43	46	46	38	49	46
Texas A&M - College Station	54	46	58	60	57	47	59	48	57
University of Arkansas	54	38	54	41	57	46	44	46	42
University of Central Florida	76	61	76	40	61	51	50	76	68
University of Connecticut	63	60	64	42	76	48	58	76	46
University of Delaware	43	54	50	69	50	46	43	46	52
University of Florida	54	59	50	67	48	70	57	49	48
University of Georgia	53	66	47	46	46	46	49	48	51
University of Houston	45	43	46	62	43	48	37	46	36
University of Illinois at Urbana-Champaign	65	57	53	54	53	47	66	48	50

University of Illinois Chicago	58	43	50	70	52	47	48	48	55
University of Maryland	47	49	47	47	46	49	69	50	60
University of Massachusetts Amherst	47	53	46	50	49	49	44	50	54
University of Michigan	47	50	52	60	76	47	57	48	44
University of Minnesota	58	67	50	45	44	54	76	52	76
University of Mississippi	58	41	43	40	43	47	40	46	39
University of Nebraska at Omaha	41	40	46	45	41	76	39	47	38
University of North Carolina at Chapel Hill	53	40	66	49	65	49	59	48	44
University of North Carolina Greensboro	46	45	49	43	42	50	65	52	64
University of Oklahoma	54	49	45	41	41	46	48	47	44
University of South Carolina	74	45	53	75	63	47	48	57	65
University of Southern California	48	46	51	68	41	47	45	46	53
University of Southern Mississippi	34	46	37	43	41	46	35	46	41
University of Tennessee, Knoxville	48	44	45	40	43	49	57	46	48
University of Texas at Austin	55	45	50	62	70	54	63	49	59
University of Utah	54	49	48	44	51	46	53	47	54
University of Virginia	67	55	65	53	49	66	59	48	76
University of Wisconsin-Madison	42	43	41	58	48	55	37	48	41
University of Wisconsin-Milwaukee	38	41	47	47	51	49	44	46	41
Virginia Commonwealth University	36	41	43	41	42	46	35	47	40
Wayne State University	45	41	49	48	56	48	49	47	62
West Virginia University	44	53	45	40	49	46	36	46	42

Note: Ranks for any school on any index may be obtained by simple sorting of T-scores for any index that is paired with column 1, University identity.

T-Score Results for Faculty Indices- Unadjusted for Faculty Size

University	Publications	Books	Pres.	Federal Funding	Non-federal Funding	Internal Funding	Editors	Academy Fellows	National Fellows
Arizona State	61	58	58	47	46	47	68	47	53
Auburn University	57	57	64	48	48	48	51	47	50
Baylor University	46	52	48	41	44	46	44	47	50
Colorado State University	46	40	49	56	47	49	47	44	50
East Carolina University	46	49	48	60	48	53	44	44	39
Florida State University	40	44	41	41	43	46	42	42	44
Georgia State University	40	65	44	49	58	48	45	44	44
Indiana University	50	65	53	45	68	50	58	49	53
Iowa State University	51	52	48	47	47	50	42	49	44
Kansas State University	47	40	45	46	45	46	53	44	42
Louisiana State University	49	42	46	41	45	46	53	44	42
Michigan State University	52	42	54	48	46	48	49	51	51
Middle Tennessee State University	42	55	47	41	52	46	52	44	53
Ohio State University	61	57	70	51	61	50	65	44	70
Oregon State University	56	52	51	54	43	47	47	44	55
Penn State University	71	92	62	65	50	50	68	60	55
Purdue University	40	42	41	42	44	49	42	47	50
Springfield College	34	40	34	41	43	46	40	42	37
Syracuse University	40	45	38	41	43	46	38	76	35
Teachers College, Columbia University	42	52	38	50	43	46	43	47	44
Temple University	37	42	34	43	47	46	41	51	46
Texas A&M - College Station	60	49	68	63	58	48	61	49	64
University of Arkansas	43	40	42	41	48	46	41	42	39
University of Central Florida	43	45	51	41	47	47	40	76	44
University of Connecticut	46	49	47	42	56	47	46	90	40
University of Delaware	47	55	54	69	51	46	46	42	55
University of Florida	55	58	53	66	49	72	56	51	50
University of Georgia	63	75	57	48	49	46	55	54	60
University of Houston	45	44	45	57	44	48	40	42	37
University of Illinois at Urbana-Champaign	85	68	73	63	59	48	80	54	64

University of Illinois Chicago	52	44	48	61	50	47	46	47	51
University of Maryland	48	49	47	47	46	49	61	54	59
University of Massachusetts Amherst	47	52	46	49	49	49	45	54	53
University of Michigan	61	58	74	72	103	48	69	54	53
University of Minnesota	59	65	53	45	46	54	71	60	81
University of Mississippi	50	42	40	41	44	46	41	42	39
University of Nebraska at Omaha	44	42	48	45	43	114	42	47	39
University of North Carolina at Chapel Hill	58	42	78	51	65	51	61	49	48
University of North Carolina Greensboro	47	45	49	43	44	50	58	58	62
University of Oklahoma	48	47	42	42	43	46	45	44	42
University of South Carolina	76	47	59	77	62	47	51	78	71
University of Southern California	54	49	59	73	43	48	49	44	60
University of Southern Mississippi	38	45	36	43	43	46	39	42	40
University of Tennessee, Knoxville	50	45	47	41	45	50	56	44	50
University of Texas at Austin	58	47	55	64	68	56	63	54	64
University of Utah	48	47	44	43	48	46	48	44	50
University of Virginia	51	49	53	47	46	58	49	47	62
University of Wisconsin-Madison	47	45	44	58	49	56	41	51	42
University of Wisconsin-Milwaukee	40	42	44	46	49	49	44	42	40
Virginia Commonwealth University	37	42	39	41	44	46	38	44	39
Wayne State University	42	42	44	45	50	48	45	44	53
West Virginia University	46	52	45	41	49	46	40	44	42

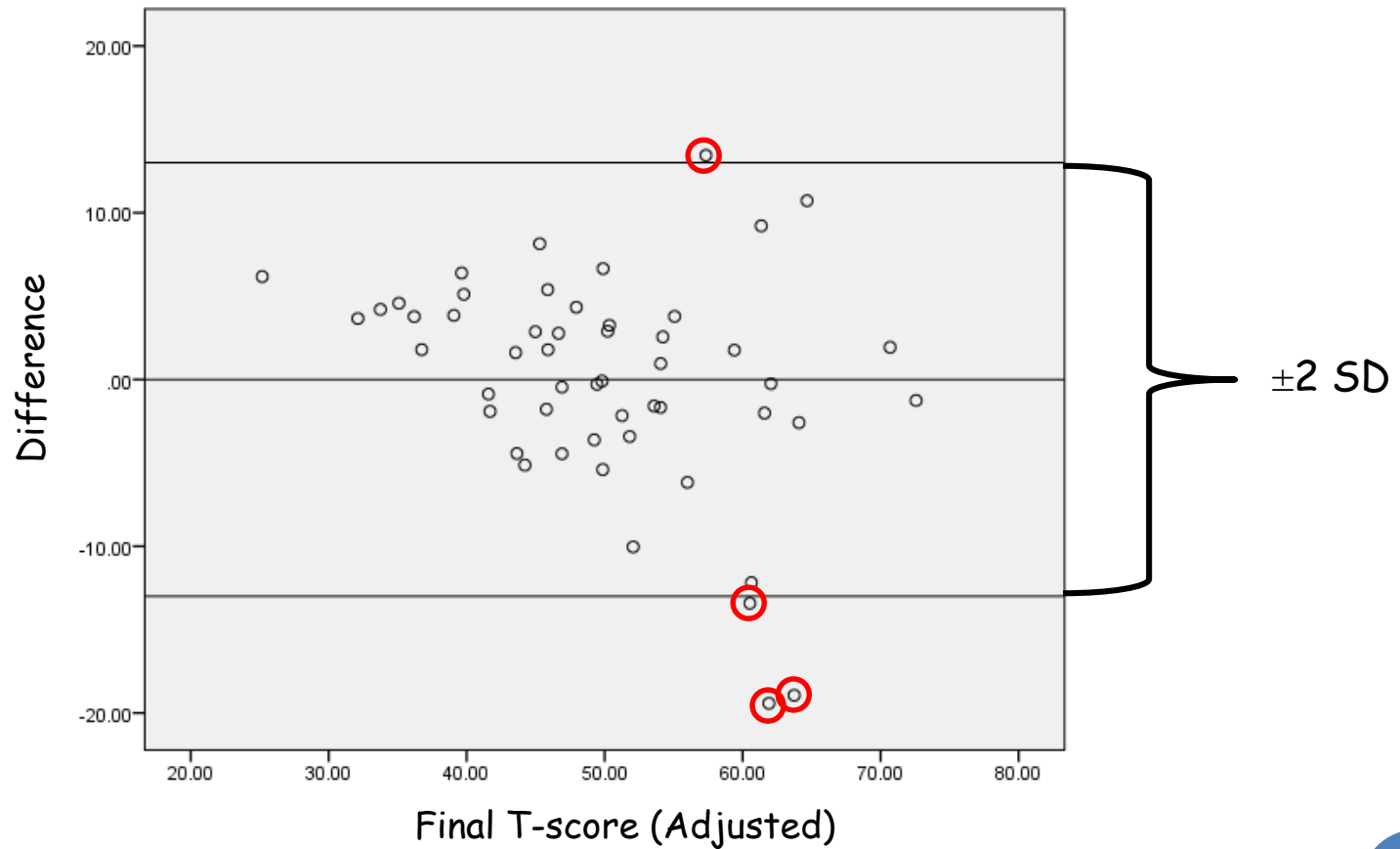
Note: Ranks for any school on any index may be obtained by simple sorting of T-scores for any index that is paired with column 1, university identity.

Total T-Score Results for Student Indices

University	GRE-V	GRE-Q	Assistantships (FTE)	Selectivity	Doctoral Publications	Postdocs	Employed in Field
Arizona State	47	45	46	41	48	52	47
Auburn University	44	42	53	44	46	65	61
Baylor University	49	54	51	61	39	39	42
Colorado State University	62	53	49	24	52	57	38
East Carolina University	64	54	56	58	42	49	44
Florida State University	47	45	47	40	44	47	45
Georgia State University	40	34	76	46	40	44	43
Indiana University	44	45	47	50	76	52	58
Iowa State University	55	63	44	55	44	46	44
Kansas State University	59	28	44	38	50	41	41
Louisiana State University	39	38	48	45	44	49	46
Michigan State University	48	44	50	53	51	44	71
Middle Tennessee State University	32	34	65	34	45	43	74
Ohio State University	59	48	53	53	57	57	65
Oregon State University	51	42	49	56	51	46	50
Penn State University	66	63	45	59	74	73	53
Purdue University	26	71	45	57	45	46	48
Springfield College	35	30	41	24	38	39	40
Syracuse University	55	76	46	46	43	43	40
Teachers College, Columbia University	70	54	45	59	43	41	47
Temple University	55	45	46	54	44	44	47
Texas A&M - College Station	44	45	64	44	51	49	44
University of Arkansas	47	42	42	50	41	43	44
University of Central Florida	43	53	47	54	44	41	38
University of Connecticut	55	48	48	47	55	49	47
University of Delaware	51	66	52	62	44	44	44
University of Florida	62	60	53	54	59	59	60
University of Georgia	45	43	47	52	56	54	64
University of Houston	53	54	46	53	49	54	40
University of Illinois at Urbana-Champaign	47	52	57	30	69	76	61

University of Illinois Chicago	44	43	46	45	49	57	39
University of Maryland	62	60	51	62	53	64	50
University of Massachusetts Amherst	59	51	50	57	53	54	44
University of Michigan	55	60	44	55	63	56	51
University of Minnesota	59	54	53	57	57	59	76
University of Mississippi	33	54	42	56	44	41	45
University of Nebraska at Omaha	47	54	43	52	38	47	41
University of North Carolina at Chapel Hill	52	53	46	59	50	46	50
University of North Carolina Greensboro	59	51	57	59	43	46	52
University of Oklahoma	47	42	53	38	64	41	51
University of South Carolina	47	45	53	51	76	76	57
University of Southern California	61	72	45	57	54	59	44
University of Southern Mississippi	51	51	42	51	42	39	48
University of Tennessee, Knoxville	44	57	45	58	55	54	69
University of Texas at Austin	58	54	76	53	61	67	68
University of Utah	51	39	49	51	51	52	50
University of Virginia	44	48	46	55	52	43	53
University of Wisconsin-Madison	73	54	43	57	46	49	42
University of Wisconsin-Milwaukee	46	48	40	24	37	39	37
Virginia Commonwealth University	43	44	42	51	38	41	42
Wayne State University	29	42	43	57	41	39	40
West Virginia University	44	48	57	59	43	39	61

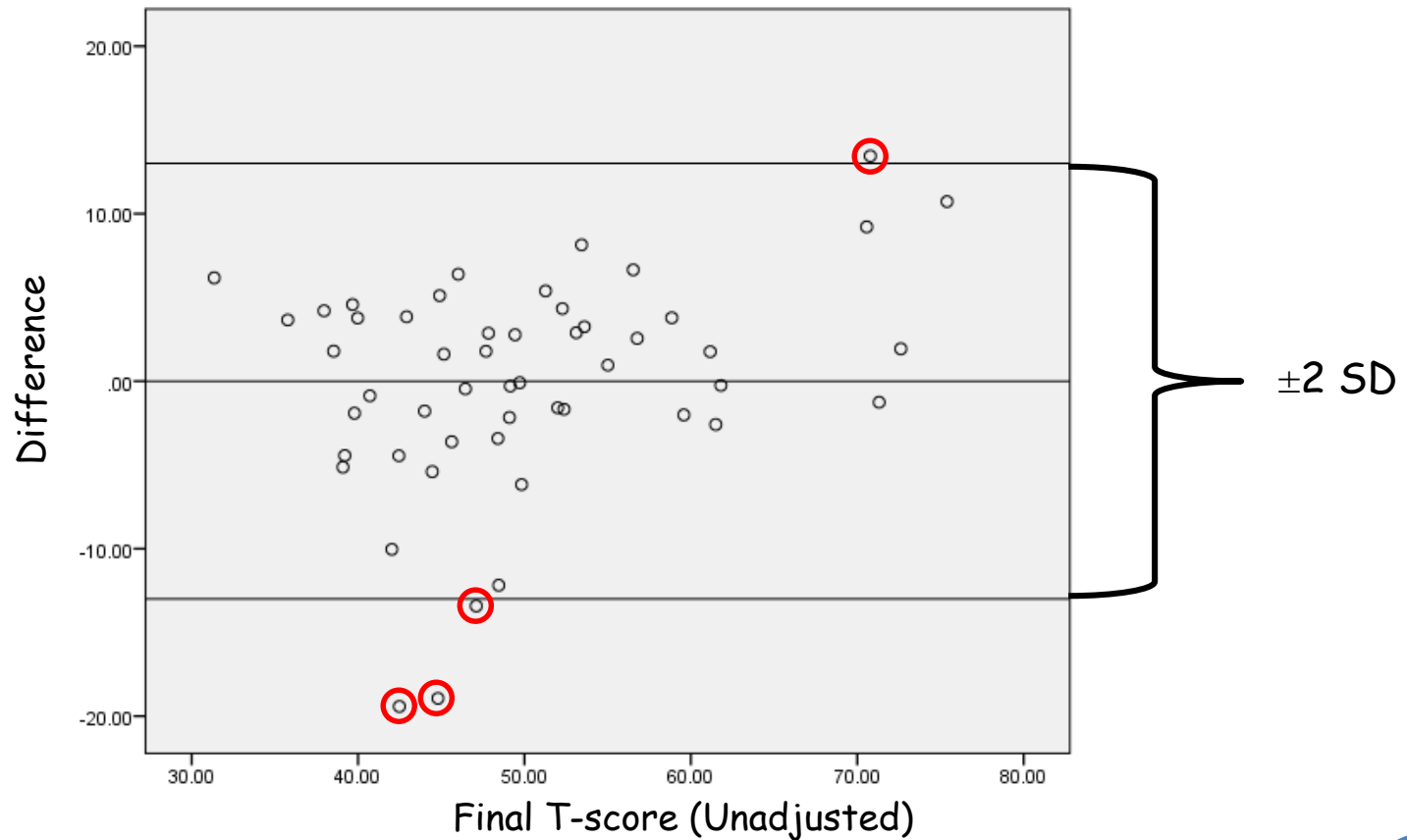
Methods Comparison



Comparison of adjusted final T-score and the difference in final T-score between methods of calculation



Methods Comparison



Comparison of unadjusted final T-score and the difference in final T-score between methods of calculation



Doctoral Student Data (number & percent) for Race, by Year

(Note: Data from 31 of 52 programs were included)

RACE	2010	2011	2012	2013	2014
American Indians or Alaska Natives	2 (.3%)	2 (.3%)	2 (.3%)	3 (.4%)	3 (.4%)
Asians	87 (13.9%)	88 (13.5%)	91 (13.6%)	91 (13.4%)	91 (12.4%)
Native Hawaiians or Other Pacific Islanders	0 (0%)	0 (0%)	1 (.1%)	1 (.1%)	1 (.1%)
Blacks or African Americans	29 (4.6%)	32 (4.9%)	35 (5.2%)	35 (5.2%)	44 (6.0%)
Whites	458 (73.0%)	459 (70.6%)	473 (70.8%)	478 (70.5%)	522 (71.0%)
More than one Race	5 (.8%)	6 (.9%)	7 (1.0%)	11 (1.6%)	13 (1.8%)
Unknown or Not Reported	46 (7.3%)	63 (9.7%)	59 (8.8%)	59 (8.7%)	61 (8.3%)
Total	627	650	668	678	735

Comparison of Kinesiology Doctoral Students, 2010 - 2014 to all Doctorates Earned in 2010 in the US, 2010 on Variable: Race

Race	US 2010 ^a	%	NAK 2010	%	NAK 2011	%	NAK 2012	%	NAK 2013	%	NAK 2014	%
American Indians or Alaska Natives	122	0.4	2	0.3	2	0.3	2	0.3	3	0.4	3	0.4
Asian	2828	9.0	87	13.9	88	13.5	91	13.6	91	13.4	91	12.3
Native Hawaiian or Other Pacific Islander	55	0.2	0	0.0	0	0.0	1	0.1	1	0.1	1	0.1
Black	2002	6.3	29	4.6	32	4.9	35	5.2	35	5.2	44	5.9
Hispanic	1850	5.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
White	23508	74.5	458	73.0	459	70.6	473	70.5	478	70.5	522	70.4
More than one Race	670	2.1	5	0.8	6	0.9	6	0.9	11	1.6	19	2.6
Unknown or Not Reported	538	1.7	46	7.3	63	9.7	63	9.4	59	8.7	61	8.2
Total	31573	100	627	100	650	100	671	100	678	100	741	100

^aThese data indicate number of doctorates awarded by race, whereas NAK data are number of doctoral students enrolled.

Source: Fiegener, MK. Number of doctorates awarded in the United States declined in 2010. InfoBrief: National Center for Science and Engineering Statistics. 2011.

Follow up ...

1. PowerPoint shared with directors of all participating programs (and Deans) within one week of conference
2. PowerPoint posted on NAK website after sharing with programs
3. Manuscript published in *Kinesiology Review* in 2016, with more detailed data.

