LANGSTON
UNIVERSITY

Rehabilitation Research and Training Center (RRTC)
on Research and Capacity Building for Minority Entities

# Factors Affecting Rehabilitation Research Productivity in Minority Serving Institutions

Fariborz Aref., Andre Washington, Jean Johnson, Dytisha Davis, and Kenyotta Cross

LU-RRTC State of the Science Conference Atlanta, Georgia
September 28-29, 2017

# Presentation Objectives

- Identify focus group perspectives on personal intrinsic, extrinsic, and systemic issues that influence rehabilitation research productivity in MSIs
- Identify the intrinsic and extrinsic factors at the individual and institutional level which could contribute to rehabilitation research productivity in MSIs
- Identify the barriers of rehabilitation research productivity at MSIs



Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

# Background

- Research productivity plays an important role in improving the quality of knowledge (Caminiti et al., 2015).
- Adequate research is a main factor in improving the rehabilitation, as well as health and community living needs of people with disabilities (White et al., 2010)
- Research productivity can be influenced by intrinsic and extrinsic factors related to the researcher (Webber, 2013).
- Limited mentorship, heavy teaching loads, and the lack of research opportunities have also been identified as critical components to research productivity at MSIs (Cramer, 2007).
- Despite the importance of research productivity, to date, relatively little research has examined faculty attitudes toward factors of rehabilitation research productivity at MSIs (Moore et al., 2016).



Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

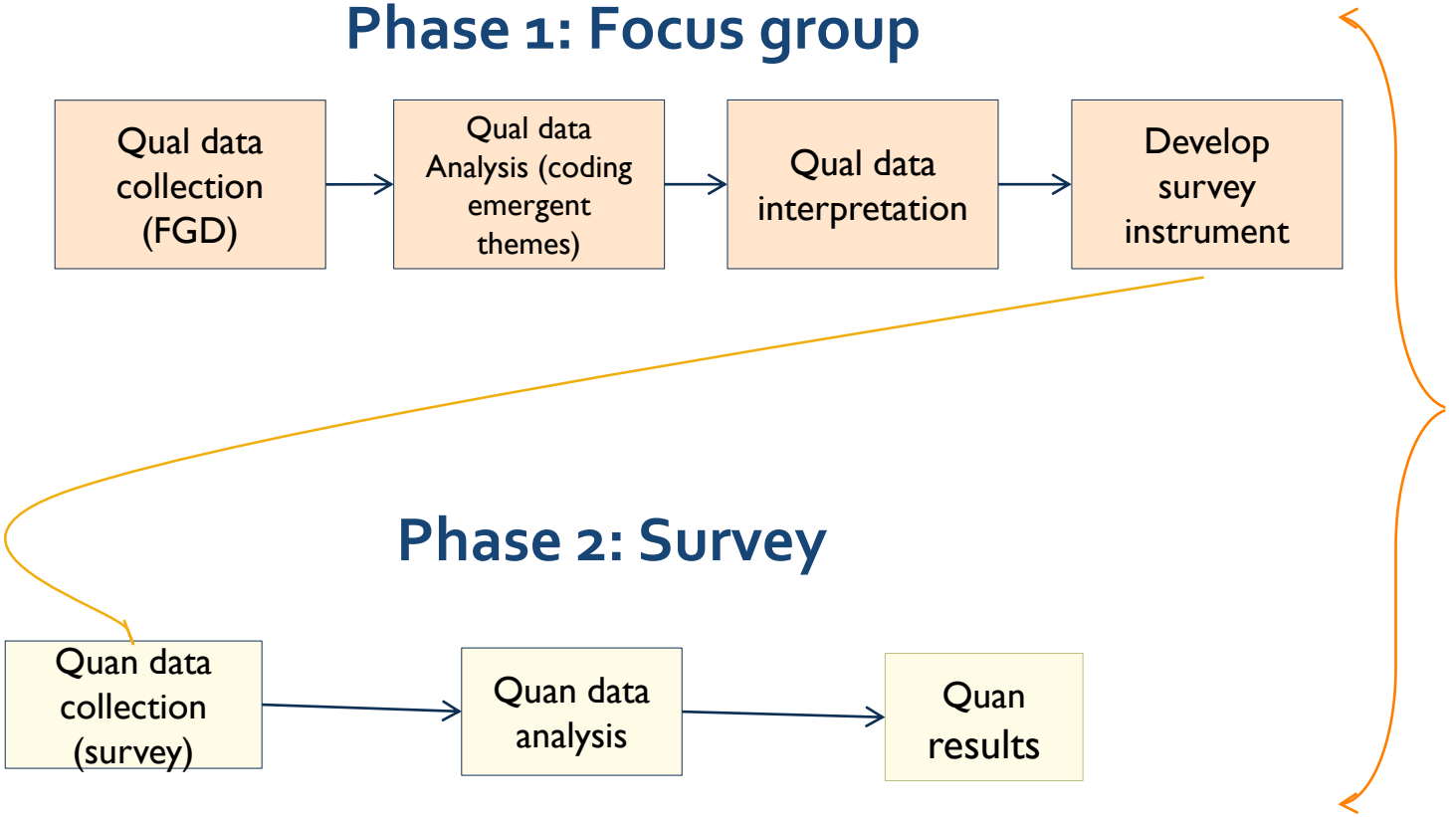
# Research Questions

- What intrinsic and extrinsic factors, and policy and systemic issues contribute to rehabilitation research productivity in MSIs?
- What institutional components can facilitate rehabilitation research productivity in MSIs?
- What have been the barriers to rehabilitation research productivity in MSIs?



Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

# Research Method







Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

# Phase 1: Qualitative Method

- This qualitative study utilized FGD in an attempt to understand rehabilitation research productivity factors
- The target population included MSIs' faculty who registered for the 2014 NAMRC conference
- Both purposive and convenience sampling were used to select 12 participants (4 Male and 8 Female).
- The FGD was in 1 group and duration lasted about 1 hour.
- The lead and a co-investigator facilitated the FGD. In conjunction with the FGD transcripts, the observer notes provided supplementary information
- Data were audio recorded and transcribed. An open coding approach was used to generate themes.



Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

# Instrument Development Model

| | Intrinsic | Extrinsic |
|---|---|---|
| Individual | • Self-Efficacy<br>• Wages<br>• Motivation<br>• Interest<br>• Educational attainment<br>• Research skills<br>• Family support<br>• Ranking<br>• Self-confidence | • Heavy teaching load<br>• Workload balance<br>• Lack of flexibility<br>• Working collaboratively<br>• Research atmosphere<br>• Travel funding<br>• Communication<br>• Grant writing<br>• Technical training |
| Institutional | • Administrative culture<br>• Lack of research culture<br>• Insufficient financial resources<br>• Insufficient equipment and technology<br>• Insufficient social science funding<br>• Offices of sponsored program | • Mentorship opportunities<br>• Institutional review board<br>• External funding<br>• Partnerships<br>• Networking opportunities<br>• External support |



Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

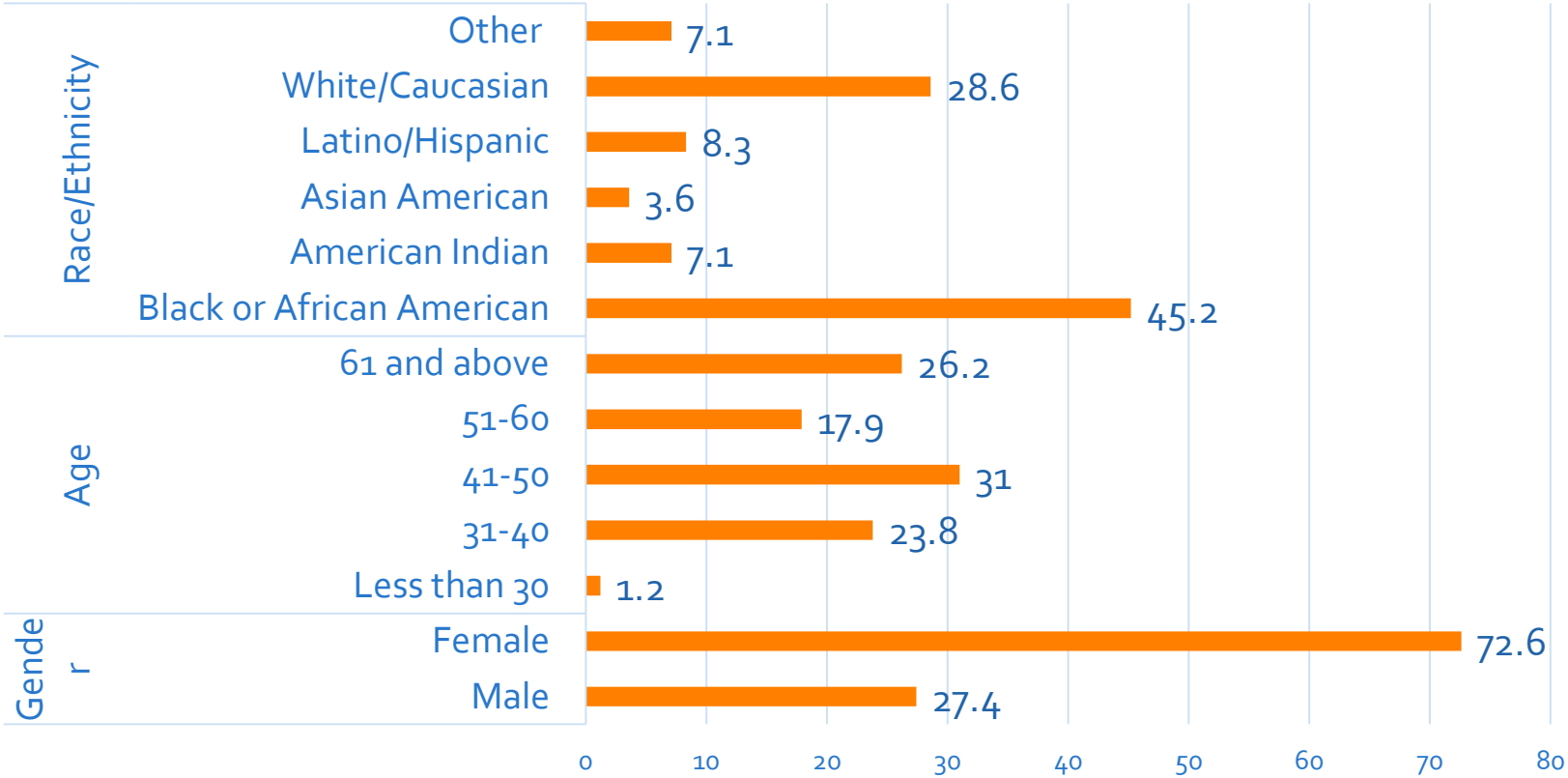
# Phase 2: Quantitative Method

- Online survey was used to collect the data. The survey instrument, which was developed from the FGD study, was pilot tested.
- Convenience sampling was also used to identify the participants from the MSIs (n=84).
- The final survey instrument consisted of three sections: i) demographic information, ii) research productivity factors and iii) the barriers
- Participants were asked to rate 45 statements on a 5-point Likert scale
- Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to describe the data.



Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

# Participants' Demographic Information

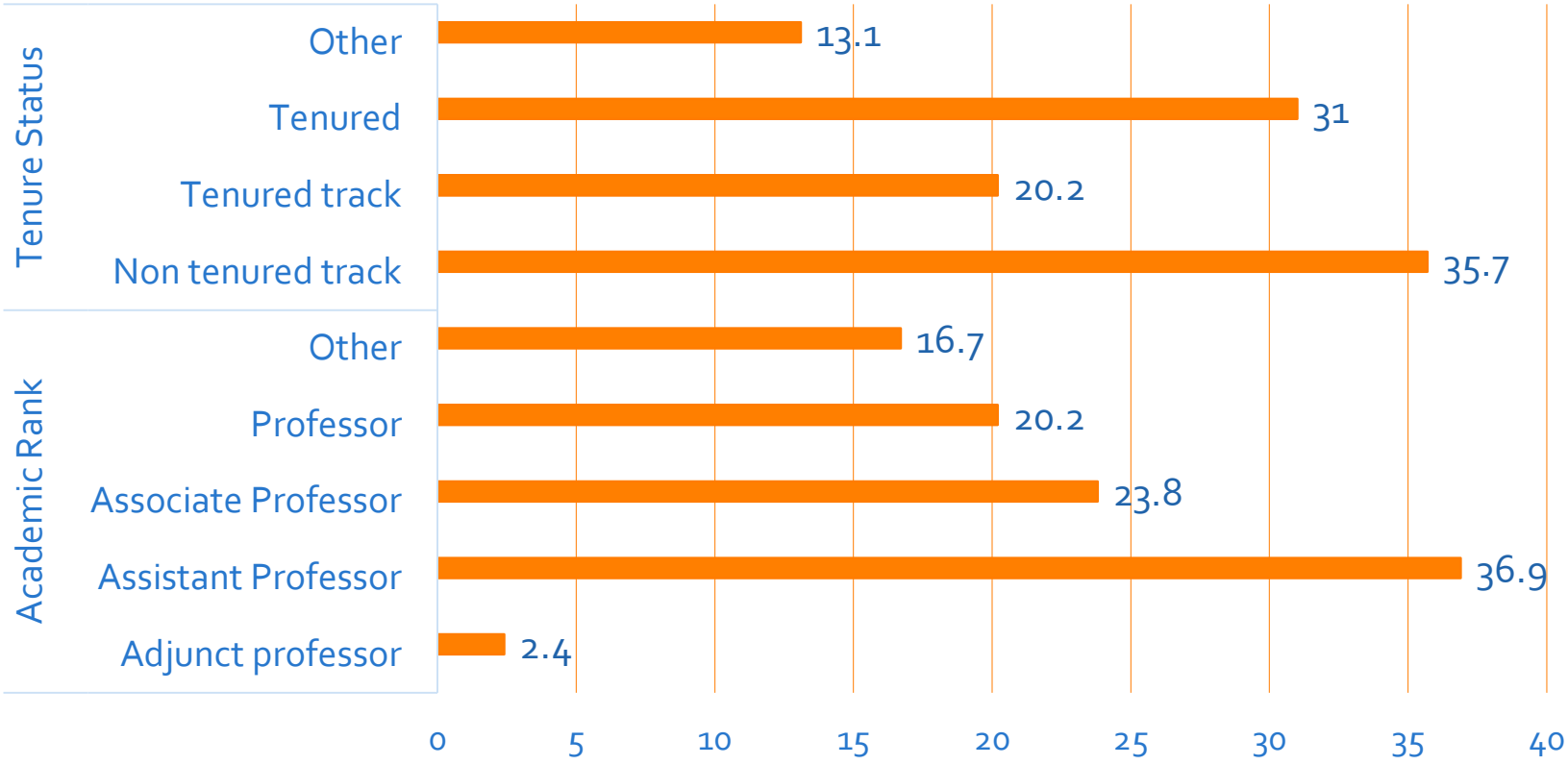




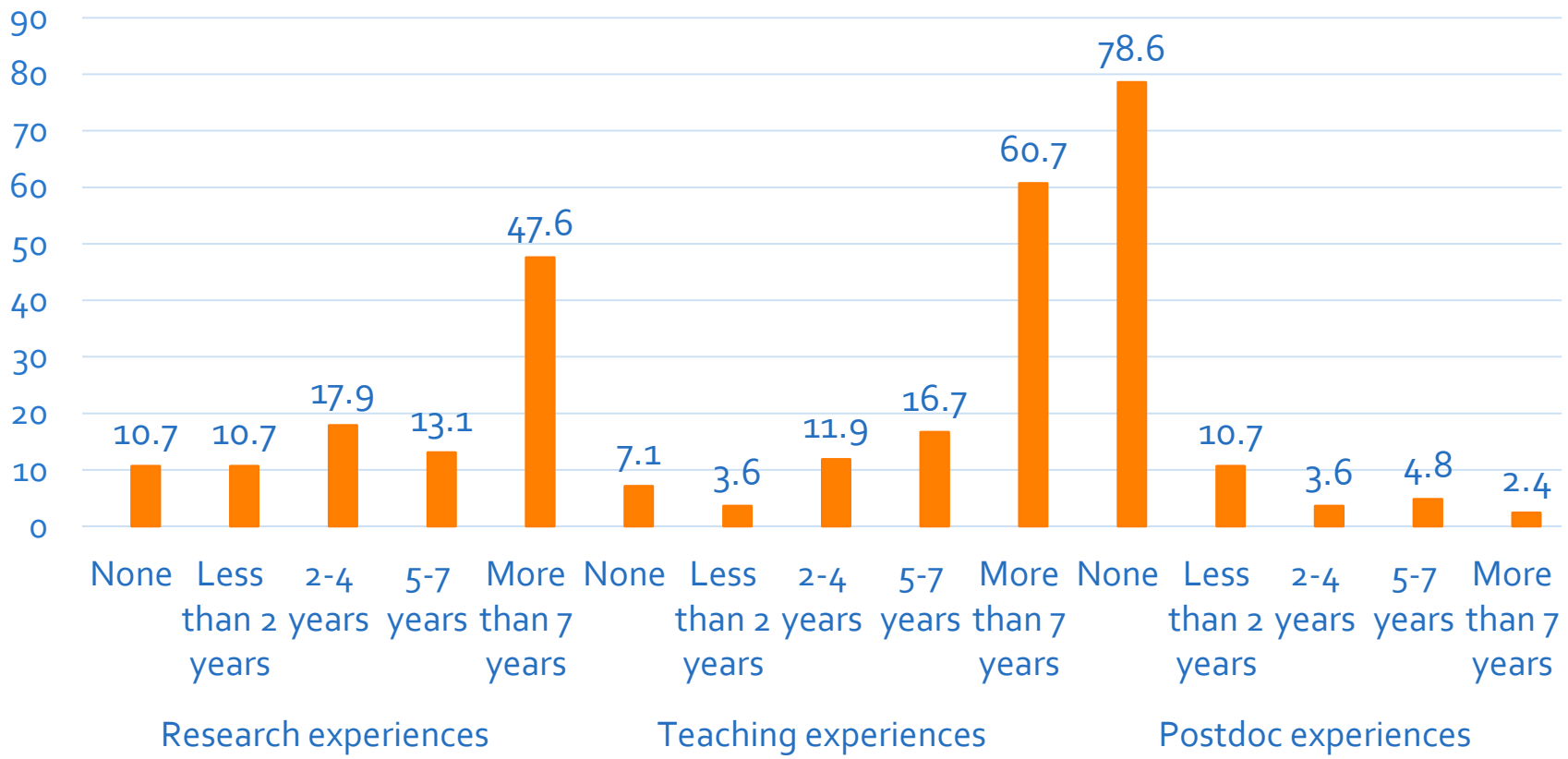


Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

# Participants' Demographic Information



# Participants' Research/Teaching and Postdoc Experiences

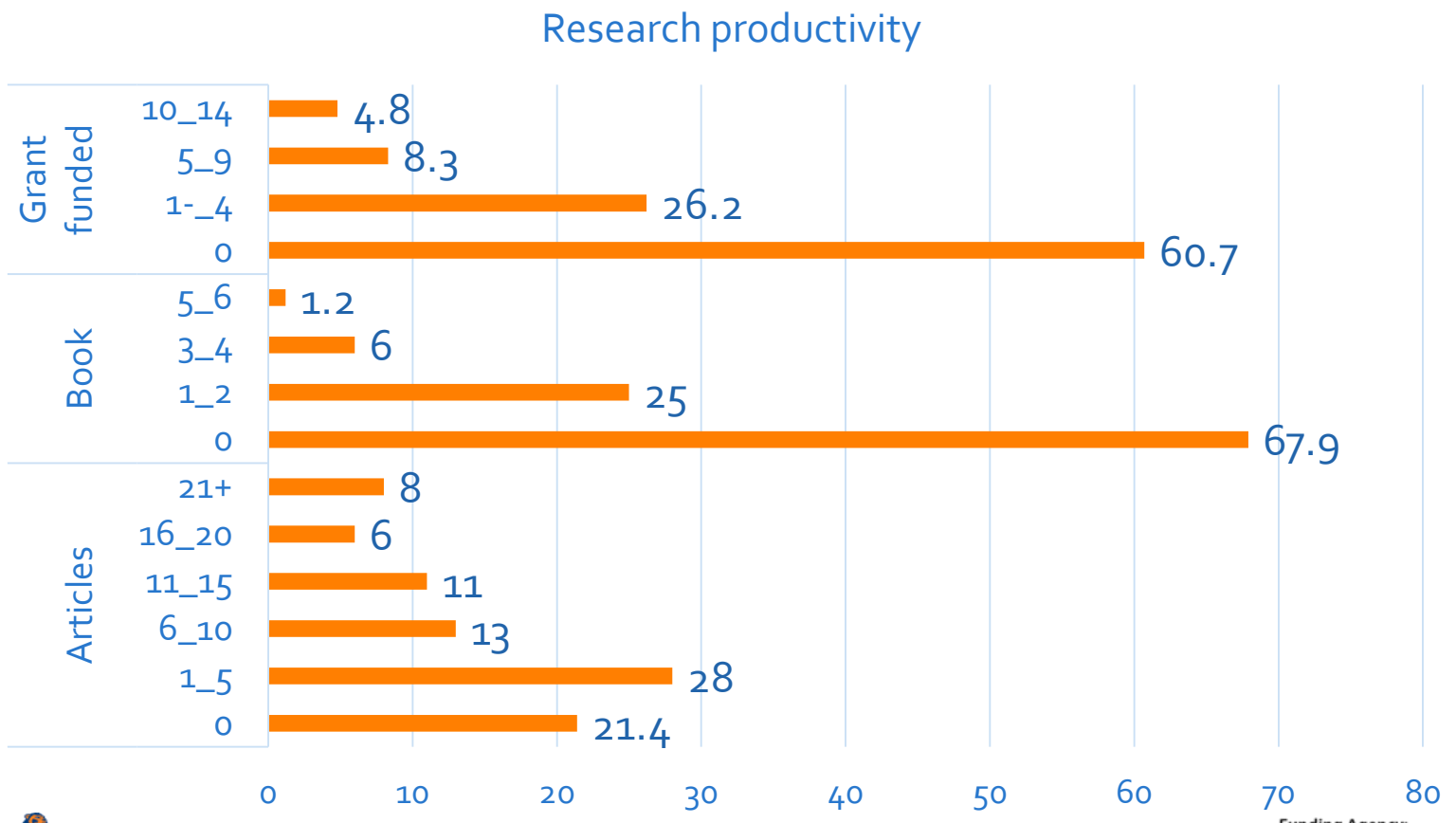



LANGSTON UNIVERSITY
Rehabilitation Research and Training Center (RRTC)

LU-RRTC State of the Science Conference
Atlanta, Georgia September 28-29, 2017

Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

# Participants' Research Productivity







Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

# Individual Intrinsic Factors

| Individual intrinsic factors/ M=3.44 | M | SD |
|---|---|---|
| research methods skills | 3.39 | 1.076 |
| writing skills | 4.19 | .736 |
| research grant-getting skills | 3.07 | 1.159 |
| research software skills | 3.01 | 1.167 |
| work independently | 4.00 | 1.018 |
| use software for data analysis | 3.24 | 1.115 |
| write a manuscript | 3.80 | 1.138 |
| getting tenure | 3.37 | 1.581 |
| getting promotion | 3.92 | 1.224 |
| salary increase | 3.50 | 1.410 |
| reduced teaching load | 3.00 | 1.529 |
| finding a better job | 2.75 | 1.544 |



Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

# Individual Extrinsic Factors

| Individual extrinsic factors/ M=2.90 | M | SD |
|---|---|---|
| training on research methods | 3.18 | 1.243 |
| research fellowship training opportunities | 2.65 | 1.285 |
| doctoral training opportunities | 2.71 | 1.436 |
| postdoctoral training opportunities | 2.35 | 1.331 |
| friendly atmosphere among faculty | 3.74 | 1.007 |
| sharing social knowledge with colleagues | 3.69 | 1.151 |
| established productive scholarly habits early on career | 3.58 | 1.174 |
| good level of research-related communication among colleagues | 2.83 | 1.118 |
| a large portion of faculty can be considered "productive researchers" | 2.74 | 1.318 |
| provide protected time to conduct research | 2.21 | 1.271 |
| time flexibility | 2.68 | 1.234 |
| appropriate competition between colleagues | 2.83 | 1.107 |
| institutions treats everyone equally | 2.44 | 1.176 |


Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

# Institutional Intrinsic Factors

| Institutional intrinsic factors/ M=2.70 | M | SD |
|---|---|---|
| adequate research support staff | 1.98 | .969 |
| clear strategic plan that promotes research capacity building | 2.45 | 1.186 |
| department head is highly regarded for his/her research: | 2.92 | 1.441 |
| supportive of my efforts in research: | 3.57 | 1.101 |
| reward system | 2.19 | 1.114 |
| emphasizes on research productivity during faculty hiring | 2.94 | 1.176 |
| formal research mentoring program | 2.17 | 1.107 |
| effective institution's IT management | 2.52 | 1.135 |
| effective sponsored programs office | 3.12 | 1.216 |
| allocates adequate resources | 2.30 | 1.073 |
| effective institution's IRB system | 3.35 | 1.058 |
| sufficient institution's library resources | 3.18 | 1.243 |
| sufficient access to journals, books, and other databases | 3.27 | 1.311 |
| access to research software through my institution's library | 3.15 | 1.167 |



Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

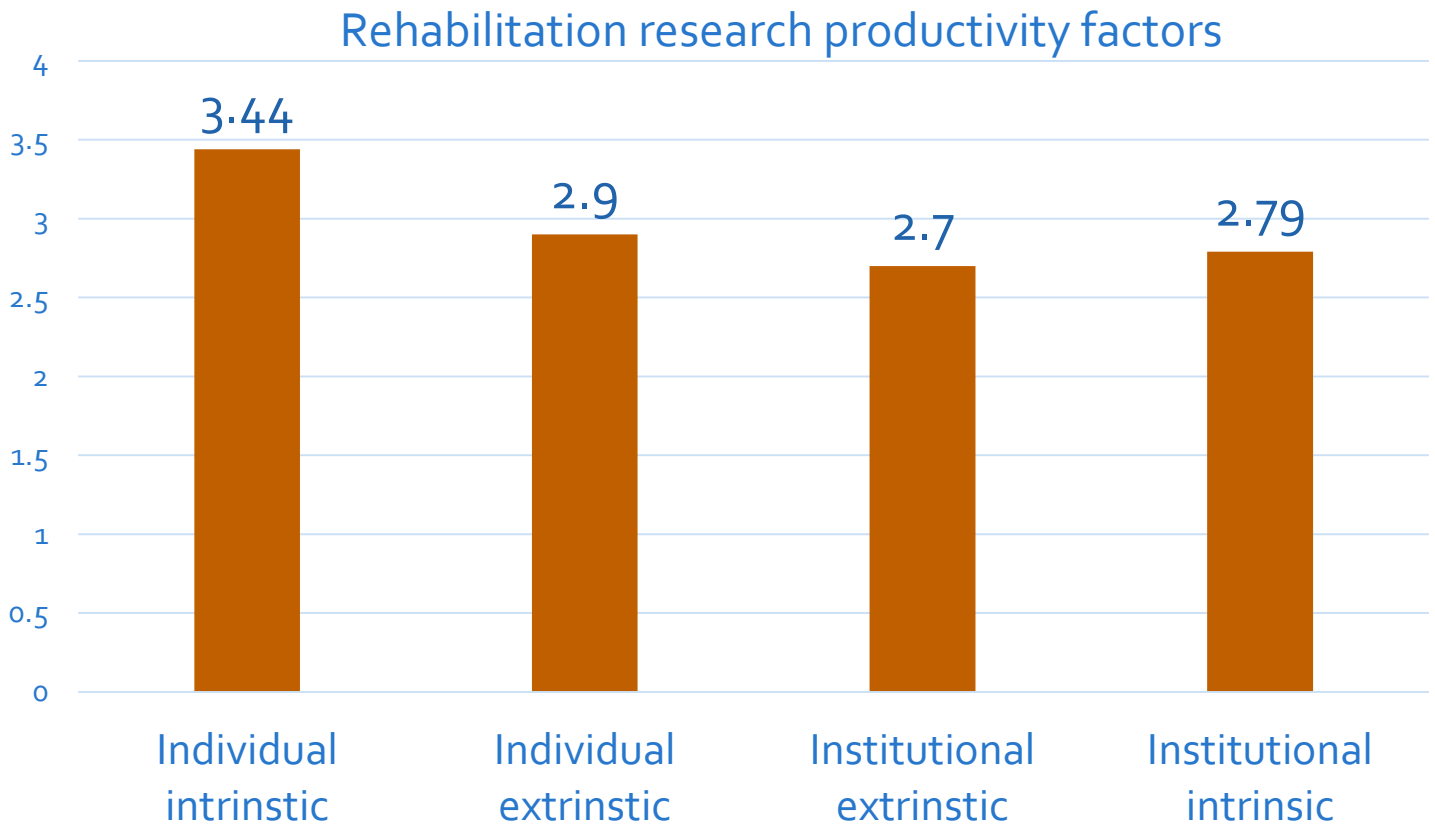
# Institutional Extrinsic Factors

| Institutional extrinsic factors/ M= 2.79 | M | SD |
|---|---|---|
| research partnerships with MSIs | 2.88 | 1.124 |
| research partnerships with international institutions | 2.43 | 1.122 |
| research partnership with traditional white institutions | 2.76 | 1.104 |
| institution receives private research funding | 2.56 | 1.090 |
| partnership with leading academic publishing | 2.51 | 1.177 |
| institution receives funding from non-profit organizations | 2.62 | 1.017 |
| institution receives federal research dollars | 3.56 | 1.090 |
| serve on federal research entity advisory committees | 2.42 | 1.122 |
| institution utilizes panel reviewers to evaluate research | 2.60 | 1.163 |



Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

# Rehabilitation Research Productivity Factors

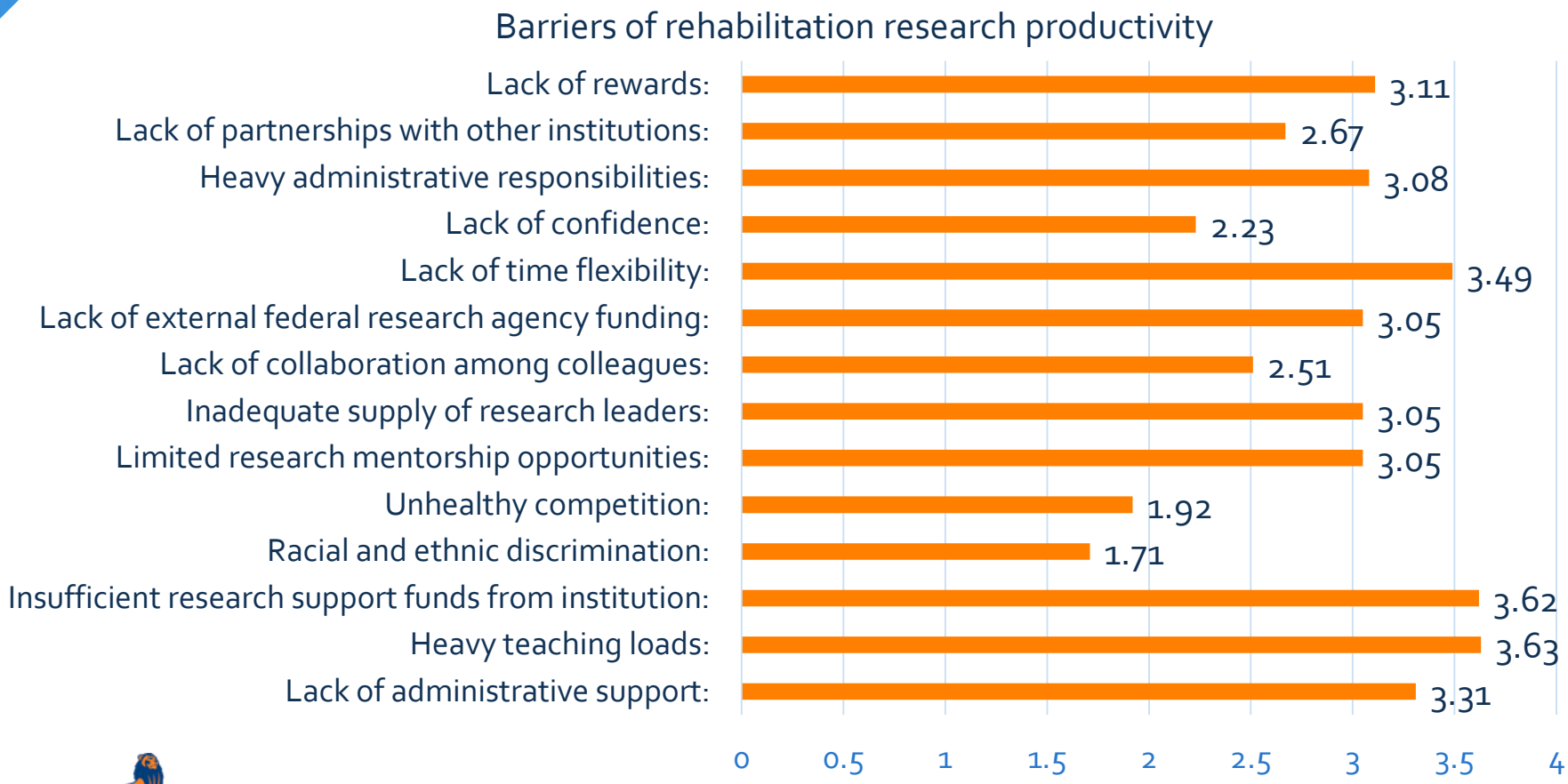



LANGSTON UNIVERSITY
Rehabilitation Research and Training Center (RRTC) on Research and Capacity Building for Minority Entities

LU-RRTC State of the Science Conference
Atlanta, Georgia September 28-29, 2017

Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

# Barriers of Rehabilitation Research Productivity




LANGSTON UNIVERSITY

Rehabilitation Research and Training Center (RRTC) on Research and Capacity Building for Minority Entities

LU-RRTC State of the Science Conference
Atlanta, Georgia September 28-29, 2017

Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

# The Study Limitations

- The first limitation is using only one focus group to identify faculty's perspectives. With the addition of one or more focus groups, it is possible that other themes may have emerged to provide an even richer understanding of the phenomena.
- The second limitation of the study was using convenience sampling technique in phase 2. Therefore, we cannot generalize the findings to the population of all MSIs.



Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

# Recommendations

- The findings provided key constituencies with additional insights on issues that can be perhaps considered for manipulation in order to bring about transformative and sustained change in minority serving institution scientific disability and health productivity context.
- There may be a need for minority serving institution to do more in terms of network development to enhance research collaborations.
- address the need for capable mentorship, NIDILRR and other federal agencies should consider expanding current mentorship efforts that aim to increase the number of minority serving institution, faculty scholar, and student participants.
- Minority serving institution leaders should consider doing more to facilitate an adequate research and administrative culture, while staying true to their teaching and/or service missions.

# Deliverables

- Aref F, Manyibe E, Washington A, Johnson J, Davis D, Cross K, & Moore C. (2017) Research Productivity in Rehabilitation, Disability, and Allied Health Programs: A Focus Group Perspective on Minority Serving Institutions, *Rehabilitation Research, Policy, and Education 31(3).*

- Aref, F, Washington A, Lewis A, & Moore C (2017) Factors Affecting Rehabilitation Research Productivity in Minority Serving Institutions, unpublished (under progress)

- Moore CL, Aref F, Manyibe E, & Davis E (2016) Minority Entity Disability, Health, Independent Living, and Rehabilitation Research Productivity Facilitators: A Review and Synthesis of the Literature and Policy, *Rehabilitation Counseling Bulletin* 59(2), 2016.

- Aref, F and Washington A, (2014) *Barriers to rehabilitation research productivity among minority entity faculty scholar*s, National Association of Multicultural Rehabilitation Concerns, Saint Louis, Missouri, July 24-26



Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

# References


Caminiti, C., Iezzi, E., Ghetti, C., Angelis, G. D., & Ferrari, C. (2015). A method for measuring individual research productivity in hospitals: Development and feasibility. BMC Health Services Research, 15, 468. doi: 10.1186/s12913-015-1130-7

Cramer, D. P. (2007). *Factors that facilitate practitioner publication: A grounded theory analysis.* (Doctoral thesis), Indiana University, IN.

Moore, C. L., Aref, F., Manyibe, E., & Davis, E. (2016). Minority entity disability, health, independent living, and rehabilitation research productivity facilitators: A review and synthesis of the literature and policy. *Rehabilitation Counseling Bulle*tin, 59(2), 97-107. doi:10.1177/0034355214568527

Webber, K. L. (2013). Research productivity of science and engineering faculty at us universities: The contribution of foreign vs. US-born status. The Journal of the Professoriate, 7(1), 51-84.

White, G. W., Simpson, J. L., Gonda, C., Ravesloot, C., & Coble, Z. (2010). Moving from independence to interdependence: a conceptual model for better understanding community participation of centers for independent living consumers. Journal of Disability Policy Studies, 20(4), 233-240.





Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

# Acknowledgement

The contents of this presentation were developed under a grant from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR grant number 90AR5029-01-00). NIDILRR is a Center within the Administration for Community Living (ACL), Department of Health and Human Services (HHS). The contents of this presentation do not necessarily represent the policy of NIDILRR, ACL, HHS, and you should not assume endorsement by the Federal Government.

NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH

NIDILRR

LANGSTON UNIVERSITY

Rehabilitation Research and Training Center (RRTC) on Research and Capacity Building for Minority Entities

LU-RRTC State of the Science Conference Atlanta, Georgia
September 28-29, 2017

Funding Agency:
NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH
NIDILRR

# Contact information


LU-RRTC

On Research and Capacity Building for Minority Entities

6700 N. Martin Luther King Avenue

Oklahoma City, Ok. 73111

Phone: (855) 497-5598 toll free

Fax: (405)962-1638

RRTC email: capacitybuildingrrtc@langston.edu

ARRT Website: www.langston.edu/capacitybuilding-arrt



LU-RRTC State of the Science Conference Atlanta, Georgia
September 28-29, 2017


LANGSTON UNIVERSITY

Rehabilitation Research and Training Center (RRTC) on Research and Capacity Building for Minority Entities


Funding Agency:

NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH

NIDILRR