

## **Jemal Emina Gishe, Ph.D.**

Department of Public Health, Health Administration and Health Sciences  
College of Public Health • Tennessee State University  
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### **Background:**

Dr. Jemal Gishe is an assistant professor in the department of Public Health, Health Administration and Health Sciences at Tennessee State University, in Nashville, TN. Prior to this appointment, he was a biostatistician at Momentum Research Inc. in Durham, N.C. and an assistant professor at Western Kentucky University. He earned B.Sc. and M.Sc. from Addis Ababa University and Advanced Diploma from International Center for Theoretical Physics (ICTP), Trieste in Italy. He received Ph.D. in mathematics and biostatistics from University of South Florida. He was a recipient of German Academic Exchange Scholarship (DAAD) and UNESCO funded scholarship at ICTP.

As a Biostatistician, he has experience working in the area of clinical trials for a Contract Research Organization, Momentum Research Inc., Durham, North Carolina. He has the expertise, experience and interest on applications of statistical methodologies: categorical, survival and longitudinal data analysis, exploratory and confirmatory factor analysis and generalized linear mixed models. He collaborate in the area of Public Health, Agriculture, Sports and Nutrition and also has interest in health disparity studies, prostate cancer, obesity and community driven interventions.

He authored, coauthored research articles in peer reviewed journals, technical reports and a book chapter. He consult and advise in the area of study designs, statistical methods and data analysis. He is a user of many statistical application soft wares such as R, SAS and SPSS.

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### **Education:**

- 2014 Ph.D. and ABD, from Department of Mathematics, and Department of Epidemiology and Biostatistics, University of South Florida  
Dissertation: "A finite family of q-orthogonal polynomials and resultants of Chebyshev polynomials";  
Advisor: Mourad Ismail, Ph.D.
  - 2001 Graduate Diploma in Mathematics, Abdus Salaam ICTP, Trieste, Italy
  - 2000 M.Sc., Department of Mathematics, Addis Ababa University, Ethiopia
  - 1995 B.Sc., Addis Ababa University, Ethiopia  
Major: Mathematics; Minor: Physics
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### **Technical Skills:**

**Statistics:** Generalized Linear Mixed Models, Longitudinal Data Analysis, Survival

Analysis, Categorical Data Analysis, Zero Inflated Models, Exploratory and Confirmatory Factor Analysis, Imputation and Propensity Score Matching

**Statistical Softwares:**

SAS, R, SPSS, STATA, SPlus, and WINBUGS

**Text Formatting and Office Computing:** LaTeX, Word, Excel, and Power Point

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**Teaching Experience :**

2015 - Present **Tennessee State University, Nashville, TN**

**Courses taught:** Principles of Epidemiology (Graduate Course), Introduction to Biostatistics, Introduction to Epidemiology, Research Methods, Health Economics, Health Promotion and Disease Prevention, and Intro to Health Care Organizations.

2011 - 2014 **University of South Florida, Tampa, FL**

**Courses taught:** Biostatistics in Society, Biostatistics I and II (Graduate level, web based and in class )

2007 - 2011 **Western Kentucky University, Bowling Green, KY**

**Courses taught:** Real Analysis I (Graduate level), Introduction to Real Analysis, Complex Variable, Calculus I, II and III, Advanced Engineering Mathematics, Trigonometry, College Algebra

2006 - 2007 **William Penn University, Oskaloosa, IA**

**Courses taught:** Introduction to Statistics, Probability I, Introduction to Real Analysis, Differential Equation, Calculus I and II

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**Research and Consultation Experience:**

2015 - Present Assistant Professor, TSU, Nashville, TN:

publications in peer reviewed journals, grant proposals, collaborative work, and consultation on study designs, statistical methods, data analysis and report writing.

2014 - 2015 Biostatistician, Momentum Research Inc., Durham, NC:

manuscripts, study designs, statistical analysis plan, statistical analysis for clinical trials, and report writing.

2011- 2014 Research Assistant, University of South Florida, Tampa, FL:

peer reviewed articles, data management, data analysis, and report writing for variety of research programs in the College of Public Health

2011- 2015 Consultant (Statistical), University of South Florida, Tampa, FL:

assist in research planning (statistical methodology), data management, analysis, and report writing

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**Publications**

**Peer Reviewed Publications:**

1. Patel, K., **Gishe, J.**, Liu, J. et al. J. Racial and Ethnic Health Disparities **2020** 7: 129. <https://doi.org/10.1007/s40615-019-00642-4>.

2. Patel, Kushal; Smith, Jonathon; **Gishe, Jemal** Kanu, Mohamed; Theriot, Rosemary; Liu, Jianguo; Zhou, Yuan; and Hargreaves, Margaret **2018**. Factors influencing Healthy Eating Habits among Low-Income African Americans in Tennessee. *Journal of Health Disparities Research and Practice*: Vol. 11 : Iss. 4 , Article 10. Available at: <https://digitalscholarship.unlv.edu/jhdrp/vol11/iss4/10>
3. Aregawi WG, Agga GE, **Gishe J**, Abdi RD, Seroprevalence and participatory epidemiology of camelpox in Afar region of Ethiopia, *Preventive Veterinary Medicine* **2018**, <https://doi.org/10.1016/j.prevetmed.2018.10.003>.
4. Patel K, Inman W, **Gishe J**, Johnson O, Elizabeth B, Kanu M, Theriot R, Sanderson M, Hull P, Hargreaves M. A community-driven intervention for improving bio-specimen donation in African American communities. *Journal of Racial and Ethnic Health Disparities* **Issue No: Vol. 5, No. 1 (2018)** , DOI: 10.1007/s40615-017-0336-2
5. Barney D, Pleban FT and **Gishe J**. The effects of music in enhancing the elementary physical education environment, *International Journal of Physical Education*, Volume LIII, Issue 4, 4th Quarter **2016**, pp. 23 – 32.
6. Carubelli Valentina, Cotter Gad, Davison Beth, **Gishe Jemal**, Senger Stefanie, Bonadei Ivano, Gorga Elio, Lazzarini Valentina, Lombardi Carlo, Metra Marco, In-hospital worsening heart failure in patients admitted for acute heart failure, *International Journal of Cardiology* (**2016**), DOI:10.1016/j.ijcard.2016.10.002
7. Sultan DH, Stenback J, Walker JR, Diana Castillo-Carranza D, **Gishe J**, Hanciles A, African American, Latino, and Older Patients in a Comprehensive Cancer Center. *Atlas of Science*. **June 4, 2016**. Available at <http://atlasofscience.org/african-american-latino-and-older-patients-in-a-comprehensive-cancer-center/more-14471>
8. Dawood H. Sultan, **Jemal Gishe**, Angella Hanciles, Meg. M. Comins, Claire M. Norris, Minority use of a National Cancer Institute-designated Comprehensive Cancer Center and non-specialty hospitals in two Florida regions. *Journal of Racial and Ethnic Health Disparities*, (**2015**) DOI: 10.1007/s40615-015-0084-0
9. **Jemal Gishe**, and Ferenc Toókos, On the Sturm comparison and convexity theorem for difference and q-difference equations, *Acta Sci. Math.* (Szeged), 78 (**2012**), 529–540
10. **J. E. Gishe**, and M. E. H. Ismail, Resultants of Chebyshev polynomials, *Z. Anal. Anwendungen*, Volume 27, Issue 4, **2008**, pp. 499 – 508.

#### Submitted Articles in Peer Reviewed Journals:

- Barney D, Pleban FT and **Gishe J**. Effects of Music on Mood During Basketball Play in Junior High School Physical Education, *Journal of Sport, Education and*

Society, under review **2020**.

- **Gishe J**, Dagne G, Kanu M, Patel K, Briggs R, Odedina F. Prostate Cancer: Social, Economic and Demographic Correlates of Non Use of Supplemental Diets among Black Men, Journal of Health Care for the Poor and Underserved, under review **2019**.

#### Manuscripts in Progress:

- Patel K, **Gishe J**, Brown E and Margaret Hargreaves M. Factors Influencing Recommended Cancer Screening in Low-Income African American Women in Tennessee, **2018**.

#### Technical Reports:

- Debra Mowery, Linda Callejas, Wei Wang, Thomas Burrus, **Jemal Gishe**, and Mario Hernandez, Arizona's Children's System of Care Practice Review Fiscal Year 2012 Statewide Report.
- Debra Mowery, Linda Callejas, Wei Wang, Thomas Burrus, **Jemal Gishe**, and Mario Hernandez, Arizona's Children's System of Care Practice Review Fiscal Year 2011 Statewide Report.

#### Book Chapter:

- Ridda I, Mansoor S, Briggs R, **Gishe J**. Preparedness for mass gathering; the case of Hajj and Umrah attendees. The Springer 2018; under review

#### Unpublished Manuscripts:

1. **J. E. Gishe**, and M.E.H. Ismail, A finite family of  $q$ -orthogonal polynomials, submitted to Journal of Approximation Theory.
  2. **Jemal Gishe**, and Dominic Lanphier, A new Integral Representation of Hypergeometric Series and Jacobi Polynomials, with Dominic Lanphier.
  3. Marsha Black, **Jemal Gishe**, Kirsten Ellingsen, Wei Wang, and Mario Hernandez, Parent Involvement in Home Literacy and Community Educational Activities Home Instructional Program for Preschool Youngsters.
  4. B. Benedict, **J. Gishe**, M. Hyungchu, R. Martel, R. Strain, and B. Tate, Energy consumption and interference in the BART system, NC State University
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### Conference and Other Presentations:

- 2019 **Gishe J**, Kanu M. Historical Perspective and Implications of Health Policies in Africa. Invited Speaker. 2nd International Conference on Inclusive Policy and Implementation Strategy for Sustainable Peace and Development in Africa. Arsi University (March 2 – 3 2019, As-sella, Ethiopia).
- 2018 Aregawi WG, Agga GE, **Gishe J**, Abdi RD. Epidemiology of camelpox in Afar region of Ethiopi, 99th Conference of Research Workers in Animal Diseases, (Dec. 2 – Dec. 4, Chicago, Illinois).
- 2018 Patel K, **Gishe J**, Brown E and Margaret Hargreaves M. Factors Influencing Recommended Cancer Screening in Low-Income African American Women in Tennessee, Poster Presentation, TPHA, (Sep. 12 – Sep 14, Cool Springs, Tennessee).
- 2018 College of Health Sciences Research Day; The Clinical Bottom Line: Research Summaries in the Health Sciences. TSU (April 4, 2018, Nashville, Tennessee).
- 2017 Demographic characteristics of black men with no supplemental diet usage protective against prostate cancer, APHA 2017 Annual Meeting and Expo (Nov. 4 - Nov. 8, Atlanta, Georgia, USA)
- 2017 Patel K, Smith J, **Gishe J**, Brown E, Liu J, Zhou Y, Jackson C, Hargreaves M. Factors influencing healthy eating habits in low-income African Americans in Tennessee. Poster Presentation, TPHA, (Sep. 13 – Sep 15, Cool Springs, Tennessee).
- 2016 Higginson K, Barney D, Griffiths R, Pleban FT, **Gishe J**. The effects of music on elementary students Enjoyment in physical education, 2016 SHAPE America national Convention and Exposition (April 5 - April 8, Minneapolis, Minnesota)
- 2014 Cabral Ibrahim D, Dagne G, and **Gishe, J**, Colorectal Cancer Risk Perception in African American Men, Poster Presentation at African-Caribbean Cancer Consortium meeting, Philadelphia, PA
- 2013 Sultan DH, **Gishe, J**, Hancile A and Jahan N, Under-representation of Minority and Older Patients in the Cancer Patient Population of an NCI-Designated Comprehensive Cancer Center at Mid-South Sociological Association, (October 23 - 26, 2013 Atlanta, Georgia)
- 2010 Resultants of Chebyshev Polynomials, AMS and MAA Annual Joint Meeting, San Francisco, CA
- 2009 Continuous  $q$ -Jacobi Polynomials, AMS and MAA Annual Joint Meeting, Washington, DC
- 2008 Continuous  $q$ -Jacobi Polynomials, AMS Sectional meeting, Huntsville (Alabama)

- 2008 Basics of  $q$  polynomials, WKU Differential Equation Seminar, WKU
  - 2006 Resultants of Chebyshev Polynomials, AMS-MAA joint meeting, San Antonio (Texas)
  - 2006 Continuous  $q$ -Jacobi Polynomials, Tougaloo College, Jackson (Mississippi)
  - 2004 Wronskian determinant for orthogonal polynomials, U. of S. Florida, Tampa
  - 2003 Recovery of entire functions from special values, U. of S. Florida, Tampa
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**Grant Proposals (Unfunded):**

- 2017 A grant proposal on Mitigating Antimicrobial Resistance by Promoting the Prudent Use of Antimicrobial on Farms: a system based Approach Submitted to USDA-AFRI Food Safety Challenge Area, with Dr. DeGo and others from University of Tennessee and Dr. Aga from USDA.
  - 2016 A grant proposal on Youth Enjoy Science Research Education Program to expose middle school students to cancer and cancer research as strategies to increase diversity in STEM careers submitted to IMPACT-4-Cancer Research, National Cancer Institute with Dr. Williams and others from PHHAHS, Tennessee State University and others from Meharry Medical College.
  - 2016 A grant proposal (SF 424) on Improving Informed Decision Making in African Americans with regard to Tumor Tissue Donations submitted to National Institute of Health with Dr. Kushal Patel of PHHAHA, at Tennessee State University.
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**Professional and University Service:**

**Tennessee State University, 2015 - Present:**

- 2019 - Present Tenure Track Faculty Search Committee Chair
- 2018 - Present Faculty Senator
- 2015 - Present Consultation work for faculty and graduate students in the area of study designs and statistical analyses
- 2015 - Present Member of Honors College Faculty
- 2018 Participated in the commencement ceremony, May 5th, 2018
- 2018 Participated in the Honors Convocation, March 20, 2018
- 2018 - Present College of Health Sciences Curriculum Committee member
- 2017 - 2018 College of Health Sciences (COHS) Research committee
- 2016 - 2017 College of Health Sciences Curriculum Committee member
- 2018 - Present Chair of the department of Public Health, Health Administration and Health Sciences (PHHAHS) Curriculum committee
- 2018 - Present Health Science Academic Audit committee

- 2017 Conducted SAS Workshop for graduate students and faculty from department of PHHAHS
- 2015 - Present Chair of the department of PHHAHS Website Committee
- 2015 - Present Graduate Comprehensive Exam Committee
- 2015 - Present Undergraduate Comprehensive Exam Committee
- 2015 - Present Advisor to Oromo Community in the state of Kentucky for civic engagement.
- 2016 - Present Serving as a member of International Oromo Advocacy Group (Advocated for the passage of House Resolution 128, Supporting respect for human rights and encouraging inclusive governance in Ethiopia, April 10, 2018)
- 2015 - 2017 Serve as a volunteer for the State Cup Soccer Competition for the Southern Kentucky Soccer Club (SKYSOCCER) Program
- 2015 - Present Coaching recreational soccer for young children for the betterment of their physical and mental growth at SKYSOCCER.

**Western Kentucky University, 2007 - 2011:**

- Chair of the Organizing Committee of The 30th Annual Mathematics Symposium
- Planning and Organizing Committee of The 27th, 28th and 29th Annual Mathematics Symposium
- Chair of The Colloquium/Symposium Committee, The Undergraduate Studies Committee, The Graduate Studies Committee, Scholarship/Award Committee, Calculus I & II review ad-hoc committee, The General Education Committee and Chair of The Computer Lab Committee
- Coaching high school and Gatton academy students for The American Regions Math League competitions.
- 2008 - 2011 Coach/Assistant Coach for young children at Southern Kentucky Soccer Club (SKYSOCCER)
- 2008 - 2011, Advisor of Oromo Community of Kentucky

**Journal Reviewer:**

- MAA (Mathematics Magazine)

**Thesis and Dissertation Committees:**

- 2017 Sarah Iriogbe-Efionayi, An Examination of Early Childhood Teachers' Knowledge of Self-Regulation, TSU, Tennessee
- 2010 David Sekora, Continued Fractions, WKU, Kentucky
- 2008 William Bucklew, How to Speed Up Your Car, Minimizing Damage to Automobile Motors, WKU, Kentucky
- 2007 Andrew Stevens, Investigating the discrete wavelet transform and the fast Fourier Transform for implementing in software-radios, William penn University, Iowa
- 2007 Andrew P. Stangeland, Feasibility study of relativistic, antimatter rocket propulsion, William Penn University, Iowa

**Grants, Awards and Memberships:**

- 2017 -Present American Public Health Association
  - 2005 - present Oromo Study Association
  - 2017 Internal grant to attend and present at conferences, TSU (Tennessee)
  - 2011 - 2016 American Society of Tropical Medicine and Hygiene
  - 2001 - 2011 American Mathematical Society
  - 2011 NSF-RUMC grant to organize Annual Mathematics Symposium at WKU (Kentucky)
  - 2011 Internal grant to invite Scholar in Residence, WKU (Kentucky)
  - 2007 - 2011 Internal grant to attend conferences, WKU (Kentucky)
  - 2008 Internal grant to invite Scholar in Residence, WKU (Kentucky)
  - 2006 - 2007 Internal grant to attend conferences, William Penn University (Iowa)
  - 2002 - 2003 NSF summer research assistantship support, USF (Florida)
  - 2001 - 2006 Fred and Helen M Tharp End Scholarship, U. of S. Florida
  - 2000 - 2001 UNESCO funded scholarship at International Center for Theoretical Physics (Trieste, Italy)
  - 1998 - 2000 DAAD (German Academic Exchange Scholarship), AAU (Ethiopia)
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