

TIMOTHY S. MCHALE, Ph. D.

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Social Sciences Department
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RESEARCH INTERESTS

Behavioral neuroendocrinological perspectives on middle childhood; hormone mediators of physical and psychological stressors of competition; hominin evolution; life-history theory; psychobiology; health; sports physiology; Hong Kongese children; electronic sports (eSports); ontogeny of in- and out-group bias

EDUCATION

2017 - University of Nevada, Las Vegas

Ph.D. – Biological Anthropology

Advisors: Drs. Peter Gray, Alyssa Crittenden, Pierre Liénard, William Jankowiak, and Erin Hannon

2011 - Durham University (United Kingdom)

M.Sc. – Evolutionary Anthropology

2007 - University of Central Florida

B.S. – Biology; B.A. – Philosophy

MEDICAL CERTIFICATIONS

2011 – University of Incarnate Word

Clinical Allergy Specialist

ACADEMIC & RESEARCH APPOINTMENTS

California Polytechnic State University
Winter 2021 – Present

Lecturer

Social Sciences Department

Boston University
Summer 2019 – Present

Postdoctoral Research Associate

Dr. Carolyn Hodges-Simeon's Lab; Anthropology Dept.

Central Washington University
Fall 2018 – Present

Lecturer

Department of Anthropology and Museum Studies

College of the Canyons (Santa Clarita, CA)
Fall 2017 – Summer 2018

Adjunct Faculty

Department of Anthropology

University of Hong Kong
August 2016 – January 2017

Honorary Research Associate

School of Modern Languages and Cultures

University of Nevada, Las Vegas
Spring 2013 – Spring 2017

Lecturer, Lab Instructor, Graduate Teaching Assistant

Department of Anthropology

PUBLICATIONS (N = 12)

Ratings

h-index: 5, Citations: 160 (Google Scholar)

Peer-reviewed published articles, with student authors underlined:

1. Hodges-Simeon, C. R., Richardson, G. B., Albert, G., **McHale, T. S.**, Weinberg, S., Gurven, M., & Gaulin, S. 2021. Was facial width-to-height ratio a product of sexual selection? A life course approach. *PLOS ONE*, 16(3): e0240284. <https://doi.org/10.1371/journal.pone.0240284>
2. **McHale, T. S.**, Gray, P. B., Hodges-Simeon, C. R., Zava, D. T., Albert, G., Chan, K., & Chee, W. 2020. Juvenile children's salivary aldosterone and cortisone decrease during informal math and table-tennis competitions. *Adaptive Human Behavior and Physiology*, 6(4), 413-435. <https://doi.org/10.1007/s40750-020-00146-0>
3. **McHale, T. S.**, Chee, W., Hodges-Simeon, C. R., Zava, D. T., Albert, G., Chan, K., & Gray, P. B. 2020. Salivary aldosterone and cortisone respond differently to high- and low-psychologically stressful soccer competitions. *Sports Sciences*, 38(23), 2688-2697. <https://doi.org/10.1080/02640414.2020.1796164>
4. Hodges-Simeon, C. R., Grail, G., Albert, G., Landry, N., Ortiz, T. L., Carré, J. M., **McHale, T. S.**, & Arnocky, S. A. 2020. Testosterone, cortisol, and secretory immunoglobulin-A within a single day and across two sequential days among *trans*- and *cis*-gender men. *Steroids*, 160, 108640. <https://doi.org/10.1016/j.steroids.2020.108640>
5. Gray, P.B., Straftis, A., Bird, B., **McHale, T. S.**, & S. Zilioli. 2019. Human reproductive behavior, life history, and the Challenge Hypothesis: A 30-year review, retrospective and future directions. *Hormones and Behavior*, 123, 104530. <https://doi.org/10.1016/j.yhbeh.2019.04.017>
6. **McHale, T. S.**, Gray, P. B., Chan, K., Zava, D. T., & Chee, W. 2018. Hong Kongese juvenile boys' salivary steroid hormone responses during a dyadic athletic competition. *American Journal of Human Biology*, e23190. <https://doi.org/10.1002/ajhb.23190>
7. **McHale, T. S.**, Chee, W., Chan, K., Zava, D. T., & Gray, P. B. 2018. Coalitional physical competition: acute salivary steroid hormone responses among juvenile male soccer players in Hong Kong. *Human Nature*, 29(3), 245-267. <https://doi.org/10.1007/s12110-018-9321-7>
8. **McHale, T. S.**, Gray, P. B., Chan, K., Zava, D. T., & Chee, W. 2018. Acute salivary steroid hormone responses in juvenile boys and girls to non-physical team competition. *Adaptive Human Behavior and Physiology*, 4(3), 223-247. <https://doi.org/10.1007/s40750-018-0089-0>
9. Gray, P. B., Vuong, J., Zava, D., & **McHale, T. S.** 2018. Testing men's hormone responses to playing League of Legends: No change in testosterone, cortisol, DHEA or androstenedione but a decrease in aldosterone. *Computers in Human Behavior*, 83, 230-234. <https://doi.org/10.1016/j.chb.2018.02.004>
10. Gray, P. B., **McHale, T. S.**, & Carré, J. M. 2017. A review of human male field studies of hormones and behavioral reproductive effort. *Hormones and Behavior*, 91, 52-67. <https://doi.org/10.1016/j.yhbeh.2016.07.004>
11. **McHale, T. S.**, Zava, D. T., Hales, D., & Gray, P. B. 2016. Physical competition increases dehydroepiandrosterone (DHEA) and androstenedione rather than testosterone among juvenile boy soccer players. *Adaptive Human Behavior and Physiology*, 2(1), 44-56. <https://doi.org/10.1007/s40750-015-0030-8>

Encyclopedia Publications:

12. **McHale, T. S.**, & Gray, P. B. 2015. Anatomy, Male. In P. Whelehan & A. Bolin (Eds.), *The International Encyclopedia of Human Sexuality*, 75-78. Chichester, West Sussex: Wiley-Blackwell. <https://doi.org/10.1002/9781118896877.wbiehs026>

MANUSCRIPTS UNDER REVIEW OR IN PREPARATION

1. Albert, G., Richardson, G. B., Arnocky, S., Bird, B., Fisher, M., Hlay, J., **McHale, T. S.**, & Hodges-Simeon, C. R. *Under review*. Psychometric Evaluation of the Intrasexual Competition Scale. *Journal of Social and Personal Relationships*.
2. Villmoare, B., Klein, D., Liénard, P., & **McHale, T. S.** *Under Review*. Time and the fitness landscape: modeling temporal factors in development and behavior. *Evolution and Human Behavior*.
3. Wyckoff, J. P., Sedlacek, A., **McHale, T. S.**, Albert, G., & Hodges-Simeon, C. R. *In Prep*. Gender differences in aggression tactics: Do self- and peer-reports converge? Intended for *Personality and Individual Differences*.
4. Hodges-Simeon, C. R., Arnocky, S., **McHale, T. S.**, Albert, G., Gurven, M., & Gaulin, S. C. *In Prep*. Lower voice pitch is associated with better immunocompetence. Intended for *Evolution and Human Behavior*.

GRANTS, AWARDS, AND SCHOLARSHIPS

- **Project Title:** Learning to Game, Gaming to Learn: Investigating steroid hormone reactive changes, cognitive abilities and learning strategies in eSports athletes. Initiation Grant for Faculty Niche Research Areas at Hong Kong Baptist University. **Grant Amount: \$108,000; Under Review.**
Co-PIs: **Timothy McHale**, Boston University; Wai-chi Chee, Hong Kong Baptist University; Carolyn Hodges-Simeon, Boston University. Co-Is: Peter Gray, University of Nevada, Las Vegas; Yarrow Duhham, Yale University.
- UNLV Liberal Arts Summer Graduate Research Award. **Award Amount: \$3,000; 2017.**
- **Project Title:** Investigating Acute Steroid Hormone Change in Response to Competition among Hong Kong Juvenile Boys. The Wenner-Gren Foundation Dissertation Fieldwork Grant. **Grant Amount: \$11,473; 2016.**
Co-PIs: **Timothy McHale** & Peter Gray, University of Nevada, Las Vegas.
- UNLV College of Liberal Arts Faculty - PhD summer scholarship. **Award Amount: \$3,000; 2016.**
- UNLV Patricia J. Sastaunik Honors Scholarship. **Award Amount: \$2,500; 2016, 2017.**
- UNLV Anthropology Department Edwards & Olswang Scholarship. **Award Amount: \$2,000; 2016.**
- UNLV International Programs Scholarship for Graduate Research. **Award Amount: \$1,000; 2015.**

TEACHING EXPERIENCE (N = 40 courses)

California Polytechnic State University
Winter 2021 – Present

7 Lecture Courses (all online):

Culture and Health; Sex, Death, and Human Nature (3x);
Biological Anthropology (2x); Cultural Anthropology

Central Washington University
Fall 2018 – Present

14 Lecture Courses:

Exploring Biological Anthropology (10x total; 5x online),
Human Variation & Adaptation in Living Populations (3x),
Anthropology of Sport

College of the Canyons (Santa Clarita, CA)

10 Total Courses:

Fall 2017 – Summer 2018

Introduction to Physical Anthropology (6x), Physical Anthropology Lab (3x), Introduction to Cultural Anthro.

University of Nevada, Las Vegas
Spring 2017

1 Lecture Course:
Introduction to Cultural Anthropology

University of Nevada, Las Vegas
Fall 2013 – Spring 2016

8 Lab Courses:
Introduction to Physical Anthropology Lab

University of Nevada, Las Vegas
Spring 2013 – Spring 2016

Graduate Teaching Assistant:
Introduction to Physical Anthropology, Ethnographic Field Methods, Male Studies (online course), Evolution of Everything, and Primate Evolution

STUDENT MENTORSHIP

Boston University
Fall 2019 – present

Anthropology Department
Mentored a PhD student's directed study on Research Methods in Biological Anthropology and co-authored three publications with another PhD student in the department.

University of Hong Kong
Summer 2016 – Fall 2017

School of Modern Languages and Cultures
Mentored a master's student at the University of Hong Kong who aided my field research, data collection and manuscript editing, culminating in five co-authored publications.

University of Nevada, Las Vegas
Summer 2016 – Spring 2017

Anthropology Department
Mentored a freshman undergraduate student who gained participant recruitment, data collection and manuscript writing experience, resulting in their first co-authored publication in *Computers and Human Behavior*.

CONFERENCE PRESENTATIONS & INVITED TALKS

Podium Presentation
May 2019
Boston University

Human Behavior and Evolution Society
Human reproductive behavior, life history, and the Challenge Hypothesis: A 30-year review, retrospective and future directions

Podium Presentation
April 2018
Austin, TX

American Association of Physical Anthropologists
Acute salivary steroid hormone responses in juvenile boys and girls to non-physical team competition

Podium Presentation
February 2018
University of Nevada, Las Vegas

Society for Cross-Cultural Research
Acute salivary steroid hormone responses in juvenile boys and girls to non-physical team competition

Podium Presentation
November 2017
University of San Diego

Southwestern Association of Biological Anthropologists
Acute salivary steroid hormone responses in juvenile boys and girls to non-physical team competition

Podium Presentation
May 2017
Boise State University

Human Behavior and Evolution Society
*Ontogeny and mechanisms of coalitional competition:
Acute hormone responses among juvenile boy soccer
players in Hong Kong*

Invited Talk
October 2016
University of Hong Kong

School of Modern Languages and Cultures
*A Cross-Cultural and Evolutionary Examination of
Prepubescent Children's Hormone Responses to Physical
and Non-Physical Forms of Competition*

Poster Presentation
March 2015
St. Louis, MO

Human Biology Association
*Investigating Steroid Hormone Change in Response to
Competition in Juvenile Boys*

RESEARCH HIGHLIGHTS

Boston University; Hong Kong Baptist University
Spring 2020

Anthropology Department; Dept. of Education Studies
Designed and conducted a study investigating how competing in an online, formal, FIFA soccer tournament is related to pre- and post-match stress, motivation, appraisal of competitor type and competitive drive among 40 Hong Kongese eSports gamers.

University of Hong Kong; University of Nevada,
Las Vegas
Summer 2016 – Fall 2017

School of Modern Languages and Cultures; Anth. Dept.
Designed and executed three independent field studies, coordinated and led an international research team to investigate how soccer, table-tennis and math competitions are associated with acute steroid hormone changes and performance among Hong Kongese juvenile children, which resulted in five lead-author publications.

University of Nevada, Las Vegas
Summer 2016 – Spring 2017

Anthropology Department
Designed and completed a research project titled, *Testing men's hormone responses to playing League of Legends: No change in testosterone, cortisol, DHEA or androstenedione but decrease in aldosterone*. This project required the recruitment of 30 eSports competitors (aged 18-25) from the 8-bit gaming club at UNLV, hormone collection, data analysis and which resulted in a lead-author publication for *Computers in Human Behavior*.

University of Nevada, Las Vegas
Spring 2014 – Spring 2015

Anthropology Department
Led an original research project titled, *Physical competition increases dehydroepiandrosterone (DHEA) and androstenedione rather than testosterone among juvenile boy soccer players*. This project required the recruitment of six juvenile boy soccer teams, salivary hormone collection and statistical analysis, which produced a lead-author publication in *Adaptive Human Behavior and Physiology*.

Durham University (United Kingdom)

Anthropology Department

Dec. 2009 – Sept. 2010

Designed and conducted the research project titled, *The Evolution of Male Same-Sex Sexual Behavior: investigating a potential functional correlation between fraternal birth order, sexual orientation, dispersal, and personality traits*. This study consisted of the recruitment of 258 male participants, statistical analysis and a scientific report.

MEDICAL EXPERIENCE

United Allergy Services
May 2012 – January 2013
Nationwide

Physician Orientation Specialist

Provided a 1.5-hour physician orientation presentation to medical providers, medical directors, and staff who recently partnered with United Allergy Services. The purpose was to educate the staff on insurance coverage, clinical processes and procedures regarding allergy testing and administration of allergen immunotherapy.

United Allergy Services
August 2011 – May 2012
Texas, Oklahoma, Louisiana territories

Quality Assurance Specialist

Responsible for the quality assurance activities of United Allergy Services, which included reviewing lab clinician practices related to established clinical protocols, policy, and procedures across three state territories.

United Allergy Services; Lifetime Family Medicine
January 2011 – August 2011
Flower Mound, Texas

Clinical Allergy Specialist

Offered specialized allergy related diagnosis and management tools to patients suffering from allergies. Administered allergy tests, created custom allergy immunotherapy serum medication and instructed patients how to use custom-designed antigen therapies to patients.

SERVICE TO THE DISCIPLINE

- Spring 2021: Reviewer for *Hormones and Behavior*
- Spring 2020: Reviewer for *Evolutionary Psychological Science*
- Spring 2019: Co-reviewer for *PLOS ONE*
- Summer 2017: Reviewer for *Psychoneuroendocrinology*
- Spring 2017: Reviewer for *Evolutionary Psychology*
- Spring 2017: Co-reviewer for *PLOS ONE*
- Spring 2015: Co-reviewer for a book chapter in *Springer*
- Spring 2014: Co-reviewer for *The Journal of Gerontology: Social Sciences*

PROFESSIONAL AFFILIATIONS

- Society for Cross-cultural Research (since 2017)
- Human Behavior and Evolution Society (since 2017)
- American Association of Physical Anthropologists (since 2016)
- Human Biology Association (since 2015)