

BIOGRAPHICAL SKETCH

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NAME: Wambach, Karen

eRA COMMONS USER NAME (credential, e.g., agency login): KWAMBACH

POSITION TITLE: Professor of Nursing; Co-coordinator of BSN Honors Program; Director of Nursing PhD Program

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of Minnesota	BSN	12/1981	Nursing
University of Arizona	MS	05/1989	Maternal/Newborn Nursing
University of Arizona	PhD	12/1993	Clinical Nursing Research

A. Personal Statement

The focus of my research career has been on describing influential factors in decision-making and outcomes related to breastfeeding. My early research focused on describing childbearing women’s breastfeeding experiences in efforts to identify psychosocial, physical, and process factors and events leading to premature cessation of breastfeeding. My research trajectory ultimately shifted to a focus on intervening to promote and support breastfeeding, mainly among vulnerable childbearing populations, notably adolescent mothers. I designed, led, and disseminated results of the first U.S. randomized trial of breastfeeding education/support for adolescent mothers, demonstrating that developmentally appropriate professional and lay support led to longer breastfeeding duration (NIH-R01 NR07773). Strong theoretical and empirical evidence-based grounding has contributed to the strength of the research methods used and provided rationale for the various avenues and foci of individual studies that contribute to the whole of my research program. Consistent with my educator role students and junior faculty participated in my research and are demarcated in citations with an *.

Wambach, K., Aaronson, L., Breedlove, G.*, Domian, E.*, Rojjanasrirat, W.*, & Yeh, H. (2011). A randomized controlled trial of breastfeeding support and education for adolescent mothers. *Western Journal of Nursing Research*, 33,486-505. PMID: 20876551. PMCID: Not Applicable.

Wambach, K.A. & Cohen, S.M.* (2009). Breastfeeding experiences of urban adolescent mothers. *Journal of Pediatric Nursing* 24, 244-254.

Wambach, K. & Koehn, M.* (2004). Experiences of infant feeding decision-making among urban economically disadvantaged pregnant adolescents. *Journal of Advanced Nursing*, 48, 361-370.

Wambach, K. A. (1998). Maternal fatigue in breastfeeding primiparae during the first nine weeks postpartum. *Journal of Human Lactation*, 14(3), 219-29.

Wambach, K.A. (1997). Breastfeeding intention and outcome: A test of the theory of planned behavior. *Research in Nursing & Health*, 20, 51-59.

B. Positions and Honors

Professional Positions

- 1982 - 1989 Registered nurse staff positions in medical/surgical and obstetric nursing.
- 1989 - 1991 Research Associate, University of Arizona College of Nursing
- 1992 - 1993 Clinical Instructor, University of Kansas School of Nursing, Kansas City, KS

1994 - 2000 Clinical Assistant Professor, University of Kansas School of Nursing, Kansas City, KS
 2000 - 2005 Assistant Professor, University of Kansas School of Nursing, Kansas City, KS
 2005 - 2014 Associate Professor (tenured), University of Kansas, School of Nursing, Kansas City, KS
 2014 - Professor (tenured), University of Kansas, School of Nursing, Kansas City, KS
 2014 – Coordinator, BSN Honors Program
 2016 - Director, PhD Program in Nursing, University of Kansas, School of Nursing, Kansas City, KS
 8/18 – 2/2019 Interim Associate Dean for Research, University of Kansas, School of Nursing, Kansas City, KS

Honors

1989 -1991 National Research Service Award, Institutional Pre-doctoral Fellowship. Instrumentation in Nursing Research, University of AZ. College of Nursing, Sponsor: Sandra Ferketich, Ph.D.
 1991-1993 National Research Service Award, Individual Pre-Doctoral Fellowship, National Center for Nursing Research. Sponsor, Elaine Jones, R.N., Ph.D., University of Arizona
 2001 University of Kansas Chancellor's Distinguished Teaching Award.
 2003 - 2004 Midwest Nursing Research Society, Child Bearing Related Research Section, Chair
 2003 - 2007 NIH-NINR, Ad hoc Nursing Study Section Reviewer, Nursing Science: Children and Family
 2004 University of Kansas Medical Center Distinguished Researcher Award
 2004 Sigma Theta Tau International Pinnacle Award for Computer-Based Professional Education Technology Award for Region 3: Web-based Nurse Educator Certificate.
 2004 American Journal of Nursing Award for *Breastfeeding and Human Lactation* 3rd edition.
 2004 - 2006 International Lactation Consultants Association, Chair of International Research Committee
 2008 Midwest Nursing Research Society - Honor a Researcher Award
 2008 CDC Special Emphasis Panel 2008 on Breastfeeding. Grant Reviewer
 2009 - 2012 International Lactation Consultants Association, Board of Directors, Director Research.
 2010 Phyllis Keeney Lawrence Teaching Award. University of Kansas School of Nursing.
 2011 - Founding group - Kansas High 5 for Mom and Baby, Hospital Care that Supports Breastfeeding.
 2011 - 2016 Qualitative Research Consulting Editor, *Journal of Human Lactation*.
 2012 - Fellow, International Lactation Consultant Association
 2014-2017 Chair, Mother & Child Health Coalition, Greater Kansas City, Breastfeeding Collaborative
 2015 - Fellow, American Academy of Nursing, member of Breastfeeding Expert Panel
 2017 - 2020 Chancellor's Club Teaching Professor, University of Kansas
 2019 Honorary Alumnus, University of Kansas Nursing Alumni Association

C. Contribution to Science

I have spent my career building breastfeeding science and synthesizing evidence for use in lactation clinical care, maternal and provider education, breastfeeding promotion and support efforts, and breastfeeding advocacy. I am a seasoned researcher (approximately 30 years), measurement expert, nurse educator, board certified lactation consultant, and program evaluator.

1. Breastfeeding and lactation science, especially among vulnerable populations.
 Breastfeeding and the use of human milk is recognized as the optimal source of nutritional and immunological sustenance of infants and children. In the U.S., improving breastfeeding rates is a public health imperative due to the benefits of breastfeeding/human milk and because disparities exist in breastfeeding rates (initiation and/or continuation) for young women, ethnic/racial groups, and employed mothers. In addition, early breastfeeding problems and behavioral, cultural, and social factors influence breastfeeding initiation, continuation, and duration. I have contributed evidence throughout my research career to build the science through description of factors that impact breastfeeding and interventions to promote, support, and educate mothers. I designed, led, and disseminated results of the first U.S. RCT of breastfeeding education/support for adolescent mothers, demonstrating developmentally appropriate professional and lay support led to longer breastfeeding duration (NIH-1R01 NR07773-01A2). Currently I lead an NICHD funded R-21 to pilot test a multi-behavior intervention for pregnant and parenting teens.
 - a. Jacobson, L., Hade, E., Collins, T., Margolis, K., Waring, M. E., Van Horn, L. V., Silver, B., Sittari, M. E., Bird, C., Kimminau, K., **Wambach, K.**, Steffanick, M. (2018). Breastfeeding history and risk of stroke among parous post-menopausal women in the Women's Health Initiative. *JAHA: Journal of the American Heart Association*, 7:e008739. DOI: 10.1161/JAHA.118.008739

- b. **Wambach, K.**, Domian, E., Page-Goertz, S., Wurtz, H.* , & Hoffman, K.* (2016). Experiences of exclusive breastfeeding among Mexican-American women. *Journal of Human Lactation*, 2, 103-111. doi: 10.1177/0890334415599400.
- c. Linares, A.M., **Wambach, K.**, Rayens, M.,K., Wiggins, A., Coleman, E., & Dignan, M.B. (2016). Modeling the influence of early skin-to-skin contact on exclusive breastfeeding in a sample of Hispanic immigrant women. *Journal of Immigrant and Minority Health*, DOI 10.1007/s10903-016-0380-8.
- d. Spencer, B.* , **Wambach, K.**, & Domian, E. (2015). African American women's breastfeeding experiences: Cultural, personal, and political voices. *Qualitative Research*, 25(7), 974-87. doi: 10.1177/1049732314554097. PMID: 25288408

2. Multiple Maternal Health Behavior Change (MHBC) and Technology-Based Intervention

MHBC interventions promote two or more health behaviors and generally include an interprofessional team such as the one I am part of with Drs. Ann Davis and Eve Lynn Nelson. Currently, our team is completing a NICHD funded R-21 pilot test to evaluate a MHBC technology-enhanced intervention (iPad) focused on breastfeeding promotion/support, healthy eating/active living, and depression prevention for pregnant adolescents (age 15-19 years, final N = 50). The field of MHBC is relatively new with most research conducted in cardiovascular risk behaviors such as smoking, diet, and exercise. Only one investigator has conducted MHBC research with pregnant women, thus our research will add to the MHBC evidence base. My role in this research has been as expert breastfeeding researcher and specifically in intervention research with vulnerable mothers, such as adolescent mothers. In addition, I have been a co-investigator in studies using technology to assess and support early breastfeeding in the home setting.

- a. **Wambach, K.**, Davis, A.M., & Nelson, E. (2017). The momHealth Feasibility Study. Poster presentation. Midwest Nursing Research Society Annual Conference. Minneapolis, MN.
- b. Davis, AM, **Wambach, K.**, Nelson, E., Odar, C.* , Lillis, T.* , McKinley, A.* , & Gallagher, M.* (2014). Health behavior change in pregnant women: A two phase pilot study. *Telemedicine and e-Health*, 20, 1165-1169. DOI: 10.1089/tmj.2013.0374. Not NIH Funded.
- c. Davis, A.M., Gallagher, K., Taylor, M., Canter, K., Dreyer Gillette, M., **Wambach, K.**, Nelson, E.L. (2013). An in-home intervention to improve nutrition, physical activity and knowledge among low-income teen mothers and their children: Results from a pilot study. *Journal of Developmental and Behavioral Pediatrics*, 34, 609-615. PMID: PMC3835487.
- d. Rojjanasrirat, W.* , **Wambach, K.**, & Nelson, E. (2012). A pilot study of home-based videoconferencing for breastfeeding support. *Journal of Human Lactation*, 28, 464-467. Not NIH Funded.

3. Maternal Employment and Breastfeeding Program Evaluation and Research

Paid maternal employment is a factor contributing to shortened breastfeeding duration and consequently diminishing health benefits to mother and child. Employers can provide accommodations to support continued breastfeeding efforts within their workplace with benefits construed to mothers, infants, and the business. The Business Case for Breastfeeding is a federally funded program carried out by the Office on Women's Health to support the movement for improved workplace support of breastfeeding. I was the lead evaluator for this program in Kansas from 2009-2013. At the same time, I was instrumental in developing the lactation support program at the University of Kansas Medical Center and evaluated that program one year after its development. In 2015, with a BSN Honors student, we conducted a study of registered nurses' experiences in continued breastfeeding after return to work in the hospital setting.

- a. **Wambach, K.**, & Britt, E.* (2018). Breastfeeding support experiences of registered nurses in a large children's hospital system. *JOGNN*, 47(5), 632–640. DOI: <https://doi.org/10.1016/j.jogn.2018.07.007>
- b. **Wambach, K.**, Prusia, V.* , Britt, C.* , & Murray, L.* (2014). Supporting breastfeeding: Evaluation of the University of Kansas Medical Center Express Stations. ILCA Conference, Phoenix, AZ., July 25, 2014.
- c. **Wambach, K.**, Rojjanasrirat, W., & Bandy, B. (2014). Grassroots to the treetops: Program evaluation for the Kansas Business Case for Breastfeeding. ILCA Conference, Phoenix, AZ., July 25, 2014.

4. Measurement in Maternal/Infant Health and Breastfeeding Research.
Based in my knowledge of measurement in research, garnered in a pre-doctoral fellowship in instrumentation at the University of Arizona, I developed the Breastfeeding Experience Scale (BES) to quantify early breastfeeding problems that impact breastfeeding duration. I refined the BES during multiple studies and it has been translated to Chinese, Thai, and most recently, Farsi, for international research. I co-lead the development of the perinatal staffing indicator for the National Database of Nursing Quality Indicators - NDNQI®, including lactation consultant staffing, making it possible for inpatient perinatal units to track and benchmark staffing levels against other NDNQI® hospitals. Currently I am in the item development phase for a measure of intentions for human milk donation based in a recent descriptive study. Over the years I have mentored PhD nursing students and junior faculty in measure development and evaluation, thereby contributing to the continued development/refinement of measures for research and science.
- Wambach, K.**, Bateson, T.*, Matheny, P.*, & Easter, K. (2019). A descriptive study of the attitudes, perceptions, and experiences of human milk donation. *Advances in Neonatal Care*, 19(6), 441-451. doi: 10.1097/ANC.0000000000000659
 - Mortazavi, F., Mousavi, S.A., Chaman, R., **Wambach, K.A.**, Mortazavi, S.S., & Khosravi, A. (2015). Breastfeeding practices during the first month postpartum and associated factors: Impact on breastfeeding survival. *Iranian Red Crescent Medical Journal*, 17(4):e27814. doi: 10.5812/ircmj.17(4)2015.27814. eCollection 2015 Apr. PMID:26023352. PMCID:PMC4443393
 - Rojjanasrirat, W.*, **Wambach, K.**, Sousa, V., & Gajewski, B. (2010). Psychometric evaluation of the Employer Support for Breastfeeding Questionnaire (ESBQ). *Journal of Human Lactation*, 26, 286-296.

5. Lactation/breastfeeding Evidence-Based Practice Guidance.

As researcher and educator in a clinical science area, I support evidence-based-practice and translational science. I have gained expertise in synthesizing evidence to support clinical practice and education. I am lead editor of the 6th edition of the textbook *Breastfeeding and Human Lactation*, a valued resource for breastfeeding clinicians and students around the English-speaking world since 1993. I contributed eight chapters to the book. I also led the 3rd revision of the International Lactation Consultant Association's (ILCA) *Clinical Guidelines for Establishment of Exclusive Breastfeeding*, a major practice document for lactation consultants and nurses worldwide. Furthermore, I contributed a chapter on physical health and breastfeeding to a new resource for interdisciplinary lactation care. I have maintained an active academic-clinical partnership with The University of Kansas Health System (TKUHS) since 1994, and recently supported the hospital's Baby Friendly Hospital designation through education of maternity staff RNs.

- Wambach, K.** (2019). Physical health and breastfeeding. In Campbell, S., Lauwers, J., Mannel, R., & Spencer, B. *Core Curriculum for Interdisciplinary Lactation Care*. Boston: Jones and Bartlett Learning.
- Wambach, K.**, & Spencer, B. (2021). *Breastfeeding and Human Lactation (6th edition)*. Boston: Jones & Bartlett Learning.
- Wambach, K.**, & Spangler, A. (2014). *International Lactation Consultant Association Clinical Guidelines for Establishment of Exclusive Breastfeeding. 3rd Edition*.
- Wambach, K.**, Campbell, S., Gill, S.L., Dodgson, J.E., Abiona, T.C., & Heinig, M.J. (2005). Clinical lactation practice: Twenty years of evidence. *Journal of Human Lactation*, 21, 245-258.

Complete Listing of Publications:

<https://www.ncbi.nlm.nih.gov/myncbi/karen.wambach.1/bibliography/public/>

D. Research Support

Ongoing Research Support

RO1 HS026134-01A1

Park (PI)

7/1/19-7/30/22

Agency for Health Care Research and Quality

Effects of Patient Turnover on Nursing Care and Patient Outcomes in Acute Care Hospital Settings

Major Goals: To assess patient turnover by types of inpatient units and hospitals and examine the impact of patient turnover on nursing work conditions and practice environments and on patient and nurse outcomes at the hospital and unit level.

Role: Co-Investigator

Completed Research Support

5R21HD088913 Wambach, Davis, Nelson (Co-PIs) 9/1/17 – 8/31/20

National Institute of Child Health and Development

momHealth: Multiple Health Behavior Change in Pregnant and Parenting Teens Using Mobile Technology.

Description: RCT pilot of an innovative education and support program to promote the health of pregnant and parenting adolescent mothers in three behavioral health areas simultaneously: breastfeeding, healthy eating and active living, and depression prevention.

Role: PI

Frontiers Lauren Aaronson Trailblazer Award Wambach (PI) 9/20/18 – 6/30/19

NIH Clinical and Translational Science Award UL1TR002366-02

momHealth: Mobile Multiple Health Behavior Change in Teen Pregnancy & Parenting.

Description: This award supplements our R21 above in funding for a research assistant.

Role: PI

MacArthur Interprofessional Collaboration Award Wambach, Davis, Nelson (Co-PIs) 1/1/16 – 5/31/17

momHealth Pilot: An Interprofessional Approach to Evaluate a Multiple Health Behavior Change Intervention with Pregnant and Parenting Teens Using Mobile Technology

Description: The purpose was to assess the feasibility of a multiple health behavior intervention with pregnant teens focused on breastfeeding, healthy eating/active living, and depression prevention.

University of KS, Faculty Research Award Wambach (PI) 3/17/16 – 5/16/17

Experiences of Human Milk Donation

Description: Descriptive research study to explore and describe the experience of human milk donation.

1R03HD081730 Gibbs, H. (PI) 8/1/14 – 7/31/16

National Institute Child Health and Development

Adaptation and Validation of a Nutrition Literacy Assessment Instrument

Description: The purpose was to produce an effective tool for measuring nutrition literacy among primary care patients with chronic illness, and to identify the relationship of nutrition literacy and diet quality.

Role: Measurement Consultant

University of Kansas Medical Center Wambach (PI) 2/1/15 – 12/31/15

Breastfeeding Support Experiences of Registered Nurses Returning to Work

Description: The purpose was to identify the experiences of breastfeeding support among registered nurses (RNs) returning to work in hospital settings, and how experiences differ across hospital nursing units.

Frontiers Pilot & Collaborative Studies Funding Program Jacobson (PI) 3/1/14 – 2/28/15

Wichita Center for Graduate and Medical Education – Kansas Bioscience Authority (WCGME-KBA)

Stroke Risk and Breastfeeding History among a Racially Diverse Group of Women

Description: This project examined the association of lifetime duration of breastfeeding with stroke in a longitudinal U.S. dataset (Women's Health Initiative - WHI).

Role: Co-Investigator/Mentor provided expertise on breastfeeding among vulnerable populations.