

Curriculum Vitae

Youngwon Kim, Ph.D

Department of Health, Kinesiology and Recreation,
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Academic Positions

Assistant Professor

Department of Health, Kinesiology and Recreation, College of Health,
University of Utah, Salt Lake City, UT, USA
December, 2017 – present

Adjunct Assistant Professor

Division of Public Health, Department of Family and Preventive Medicine,
University of Utah, Salt Lake City, UT, USA
June, 2018 – present

Visiting Researcher

MRC Epidemiology Unit
University of Cambridge School of Clinical Medicine, Cambridge, UK
July, 2017 – present

Career Development Fellow (Post-doc)

MRC Epidemiology Unit
University of Cambridge School of Clinical Medicine, Cambridge, UK
June, 2015 – June 2017

Academic Background

Doctorate of Philosophy

Major: Kinesiology
Minor: Statistics
Department of Kinesiology, College of Human Sciences,
Iowa State University, Ames, IA, USA
May, 2015
Dissertation Title: “*Sedentary Lifestyle and Obesity in Adults*”
Committee members: Gregory J. Welk – Major Professor
Frederick O. Lorenz – Minor Professor
Duck-Chul Lee
Senlin Chen
Annette M. O'Connor

Master of Science

Major: Exercise Science
Department of Exercise Science, Arnold School of Public Health,
University of South Carolina, Columbia, SC, USA
May, 2011
Thesis Title: “*The effect of reintegrating accelerometer counts in preschool children:
Comparison using different epoch lengths*”
Committee members: Michael W. Beets – Major Professor
Russell R. Pate
Steven N. Blair

Bachelor of Science

Major: Business Administration

Hanyang University – ERICA, South Korea

August, 2009

Publications – Peer Reviewed Research Papers

1. **Kim, Y.**, White, T., Wijndaele, K., Westgate, K., Sharp, S.J., Helge, J.W., Wareham, N., & Brage, S. (in Press) The combination of cardiorespiratory fitness and muscle strength, and mortality risk. *European Journal of Epidemiology*
2. Byun, W., **Kim, Y.**, & Brusseau, T. (in Press) The use of a Fitbit device for assessing physical activity and sedentary behavior in preschoolers. *Journal of Pediatrics*
3. Jee, Y., **Kim, Y.**, Jee, S. H., & Ryu, M. (in Press) Exercise and cancer mortality in Korean men and women: a prospective cohort study. *BMC Public Health*
4. Byun, W., Lee, J.M., & **Kim, Y.** (in Press) Classification accuracy of a wearable tracker for assessing sedentary behavior and physical activity in 3 – 5 year-old children. *International Journal of Environmental Research and Public Health*
5. Boddy, L.M., Noonan, R., **Kim, Y.**, Rowlands, A.V., Welk, G.J., Knowles, Z.R., Fairclough, S.J. (in Press) Comparability of children's sedentary time estimates derived from wrist worn GENEActiv and 3 hip worn ActiGraph accelerometer threshold. *Journal of Science and Medicine in Sport*.
6. Byun, Y. H., Kim, S. Y., Mok, Y., **Kim, Y.**, & Jee, S. H. (2018) Heart rate recovery and cancer risk: prospective cohort study. *Asia Pacific Journal of Public Health*. 30(1):45-55
7. Dixon, P.M, Saint-Maurice, P.F., **Kim, Y.**, Hibbing, P., Bai, Y., & Welk, G.J. (2018) A primer on the use of equivalence testing for evaluating measurement agreement. *Medicine and Science in Sports and Exercise*. 50(4):837-845
8. **Kim, Y.**, Wijndaele, K., Lee, D.C., Sharp, S.J., Wareham, N., & Brage, S. (2017). Independent and joint associations of grip strength and adiposity with all-cause and cardiovascular disease mortality in 403,199 adults: The UK Biobank study. *The American Journal of Clinical Nutrition*. 106(3):773-782
9. **Kim, Y.**, White, T., Wijndaele, K., Sharp, S.J., Wareham, N., & Brage, S. (2017). Adiposity and grip strength as long-term predictors of objectively measured physical activity in 93,015 adults: the UK Biobank study. *International Journal of Obesity (Lond)*. 41(9): 1361-1368
10. **Kim, Y.**, Hibbing, P., Saint-Maurice, P.F., Ellingson, L.D., Hennessy, E., Wolff-Hughes, D.L., Perna, F.M., & Welk, G.J. (2017) Surveillance of youth physical activity and sedentary behavior with wrist accelerometry. *American Journal of Preventive Medicine*. 52(6): 872-879
11. **Kim, Y.**, & Welk, G.J. (2017) The accuracy of the 24-h activity recall method for assessing sedentary behaviour: the physical activity measurement survey (PAMS) project. *Journal of Sports Sciences*. 35(3): 255-261
12. Saint-Maurice, P.F., **Kim, Y.**, Hibbing, P., Oh, A., Perna, F.M., & Welk, G.J. (2017) Calibration, Validation, and Responsiveness of the Youth Activity Profile: the FLASHE study. *American Journal of Preventive Medicine*. 52(6): 880-887
13. Welk, G.J., **Kim, Y.**, Shook, R., Ellingson, L.D., & Lobelo, F. (2017) Validation of a Non-invasive, Disposable Activity Monitor for Clinical Applications. *Journal of Physical Activity and Health*. 14(7): 546-551
14. Saint-Maurice, P.F., **Kim, Y.**, & Welk, G.J. (2017) Evidence for Data Missing At Random in Youth Physical Activity Monitoring Research. *Journal of Sports Sciences*. 35(5): 484-490
15. An, H.S., **Kim, Y.**, Peters, B., & Lee, J.M (2017) Accuracy of inclinometer functions of the activPAL and ActiGraph GT3X+: A focus on physical activity. *Gait and Posture*. 51:174-180
16. Welk, G.J, Saint-Maurice, P.F., **Kim, Y.**, Ellingson, L.D., Hibbing, P., Wolff-Hughes, D.L., & Perna, F.M. (2017) Understanding and interpreting error in physical activity data: Insights from the FLASHE Study. *American Journal of Preventive Medicine*. 52(6): 836-838
17. Noonan, R.J., Boddy, L.M., **Kim, Y.**, Knowles, Z.R. & Fairclough, S.J. (2017) Comparison of children's free-living physical activity derived from wrist and hip raw accelerations during the segmented week. *Journal of Sports Sciences*. 35(21):2067-2072

18. Welk, G.J., Beyler, N.K., **Kim, Y.**, & Matthews, C.E. (2017) Calibration of Self-Report Measures of Physical Activity and Sedentary Behavior. *Medicine and Science in Sports and Exercise*. 49(7):1473-1481
19. Ellingson, L.D., Hibbing, P., **Kim, Y.**, Frey-Law, L., Saint-Maurice, P., and Welk, G.J. (2017) Lab-based validation of different data processing methods for wrist-worn ActiGraph accelerometers in young adults. *Physiological Measurement*. 83(6): 1045-1060
20. Song, M., Dieckmann, N.F., Stoyles, S., **Kim, Y.**, & Lumeng, J.C. (2017) Associations between mother's and children's moderate-to-vigorous physical activity and sedentary time in the family context. *Preventive Medicine Reports*. 1(8):197-203
21. **Kim, Y.**, Crouter, S.E., Lee, J.M., Dixon, P.M., Gaesser, G.A., & Welk, G.J. (2016) Comparisons of prediction equations for estimating energy expenditure in youth. *Journal of Science and Medicine in Sport*. 19(1): 35-40
22. Lee, J.M., **Kim, Y.**, Bai Y., Gaesser, G.A., & Welk, G.J. (2016) Validation of the SenseWear Mini Armband in Children during Semi-Structure Activity Settings. *Journal of Science and Medicine in Sport*. 19(1): 41-45
23. Saint-Maurice, P.F., **Kim, Y.**, Welk, G.J., & Gaesser, G.A. (2016) Kids are not little adults: What MET threshold captures sedentary behavior in children? *European Journal of Applied Physiology*. 116(1): 29-38
24. Hibbing, P., **Kim, Y.**, Saint-Maurice, P.F., & Welk, G.J. (2016) Impact of activity outcome and measurement instrument on estimates of youth compliance with physical activity guidelines: a cross-sectional study. *BMC Public Health*. 16(1): 223
25. Ellingson, L.D., Schwabacher, I.J., **Kim, Y.**, Welk, G.J. & Cook, D.B. (2016) Validity of an integrative method for processing physical activity data. *Medicine and Science in Sports and Exercise*. 48(8): 1629-38.
26. Lee, J.M., Saint-Maurice, P.F., **Kim, Y.**, Welk, G.J. & Gaesser, G.A. (2016) Activity Energy Expenditure in Youth: Sex, Age, and Body Size Patterns. *Journal of Physical Activity and Health*. 6 Supplement 1: S62-S70
27. Tucker, J., Welk, G.J., Beyler, N., & **Kim, Y.** (2016) Associations Between Physical Activity and Metabolic Syndrome: Comparison Between Self-Report and Accelerometry. *American Journal of Health Promotion*. 30(3): 155-62
28. Bai, Y., Chen, S., Laurson, K., **Kim, Y.**, Saint-Maurice, P., & Welk, G.J. (2016) The Associations of Youth Physical Activity and Screen Time with Fatness and Fitness- the 2012 NHANES National Youth Fitness Survey. *PLoS ONE* 11(1): e0148038. doi:10.1371/journal.pone.0148038
29. Bai, Y., Welk G.J., Nam, Y.H., Lee, J.A., Lee, J.M., **Kim, Y.**, Meier, N.F., & Dixon, P.M. (2016). Comparison of consumer and research monitors under semi-structured settings. *Medicine & Science in Sports & Exercise*. 48(1): 151-8
30. **Kim, Y.**, & Welk, G.J. (2015) Criterion validity of competing accelerometry-based activity monitoring devices. *Medicine and Science in Sports and Exercise*. 47(11): 2456-63
31. **Kim, Y.**, & Welk, G.J. (2015) Characterizing the context of sedentary lifestyles in a representative sample of adults: the Physical Activity Measurement Survey (PAMS) project. *BMC Public Health*. 15(1): 1218
32. Calabró, M.A., **Kim, Y.***, Franke, W.D., Stewart, J.M., & Welk, G.J. (2015) Objective and subjective measurement of energy expenditure in older adults: A doubly-labeled water study. *European Journal of Clinical Nutrition*. 69(7): 850-5
(* indicates corresponding author)
33. Welk, G.J., & **Kim, Y.** (2015) The Context of Physical Activity in a Representative Sample of Adults. *Medicine and Science in Sports and Exercise*. 47(10): 2102-10
34. Chen, S., Zhu, X., Welk, G. J. & **Kim, Y.** (2015). Tracking energy balance in adolescents: Levels of compliance, energy flux, and learning. *Journal of Exercise Science and Fitness*. 13(1): 35-41
35. Chen, S., Zhu, X., **Kim, Y.**, Welk, G.J., & Lanningham-Foster, L. (2015). Enhancing energy balance education through physical education and self-monitoring technology. *European Physical Education Review*. 22(2): 137-149.
36. Lee, J.M., **Kim, Y.**, Kwon, Y.S., Derrick, T.R., & Welk, G.J. (2015) Feasibility of calibration smartphone to assess physical activity. *The Korean Journal of Measurement and Evaluation in Physical Education and Sport Science*. 17(3): 1-10
37. **Kim, Y.**, Lee, J.M., Peters, B.P., Gaesser, G.A., & Welk, G.J. (2014). Examination of different accelerometer cut-points for assessing sedentary behaviors in children. *PLoS ONE*. 9(4): e90630.

38. **Kim, Y.**, Lee, J.M., Laurson, K., Bai, Y., Gaesser, G.A., & Welk, G.J. (2014). Accuracy of neck circumference in classifying overweight and obese US children. *ISRN Obesity*. vol. 2014
39. Welk, G.J., **Kim, Y.**, Stanfill, B., Osthus, D.A., Calabro, M.A., Nusser, S., & Carriquiry, A. (2014) Validity of the 24-h Physical Activity Recall: Physical Activity Measurement Survey. *Medicine and Science in Sports and Exercise*. 46(10): 2014-24.
40. Lee, J.M., **Kim, Y.**, & Welk, G.J. (2014). Validity of consumer-based physical activity monitors. *Medicine and Science in Sports and Exercise*. 46(9): 1840-8
41. Chen, S., **Kim, Y.**, & Gao, Z. (2014). The contributing role of physical education in youth's daily physical activity and sedentary behavior. *BMC Public Health*. 14: 110
42. Chen, S., Zhu, X., Welk, G.J., **Kim, Y.**, Lee, J., & Meier, N.F. (2013). Using Sensewear armband and diet journal to promote adolescents' energy balance knowledge and motivation. *Journal of Sport and Health Science*. 3(4): 326-332
43. **Kim, Y.**, Beets, M.W., Pate, R.R., & Blair, S.N. (2013). The effect of reintegrating accelerometer counts in preschool children: comparison using different epoch lengths. *Journal of Science and Medicine in Sport*. 16(2): 129-34
44. **Kim, Y.**, Beets, M.W., & Welk, G.J. (2012). Everything you wanted to know about selecting the "right" Actigraph accelerometer cut-points for youth, but...: A systematic review. *Journal of Science and Medicine in Sport*. 15(4): 311-21
45. Beets, M. W., Tilley, F., **Kim, Y.**, & Webster, C. (2011). Nutritional Policies and Standards for Snacks Served in Afterschool Programs: A Review. *Public Health Nutrition*. (10): 1882-90

Publications – Book Chapters

46. Welk, G. J., & **Kim, Y.** (2017). Sedentary behavior in children. (Chapter 18; pp. 221-235, 395-400) In W. Zhu & N. Owen (Eds.). *Sedentary behavior and health concepts, assessments, and interventions*. Champaign, IL: Human Kinetics.

Publications – Non-peer Reviewed Research Papers

47. Lee, J.M., **Kim, Y.**, & Welk, G.J. (2014). Validity and utility of consumer based physical activity monitors. *ACSM's Health & Fitness Journal*. 18 (4): 16-21

Publications – Research Papers Under Review

48. **Kim, Y.**, Lotta, L., Sharp, S.J., Wijndaele, K., Day, F., Perry, J.R.B, Wareham, N., & Brage, S. (in Review) Genetic risk, physical fitness and incident coronary heart disease.
49. **Kim, Y.**, Sharp, S.J., Hwang, S., & Jee, S.H. (in Review) Exercise and incidence of myocardial infarction, stroke, hypertension, type 2 diabetes and site-specific cancers.
50. **Kim, Y.**, Lee, D.C., & Welk, G.J. (in Review; Dissertation Study) Independent and joint associations of sedentary behavior and moderate-to-vigorous physical activity with obesity: A comparison of subjective versus objective measures from the Physical Activity Measurement Survey (PAMS).
51. Kang, S.K., Byun, W., **Kim, Y.**, Suk, J., Lee, J.M. (in Review) Validity and Reliability of Wearable and Research Monitors for Classifying Physical Activity in 8-12-years-old Children.
52. Matthews, C.E., Berrigan, D., Fischer, B., Gomersall, S.R., Hillreiner, A., **Kim, Y.**, Leitzmann, M.F., Saint-Maurice, P.F., Olds, T.S., & Welk, G.J (in Review) Previous-day (24-hour) physical activity recalls: A time-use approach for estimating physical activity and sedentary behavior in epidemiologic studies

Publications – Papers in Preparation

- Kim, Y.**, et al. Favorable levels of physical activity and sedentary time attenuate increased genetic risk for incident coronary heart disease: The UK Biobank study
- Kim, Y.**, et al. Associations between physical activity and mortality in UK Biobank adults: the application and implication of measurement error correction modelling: The UK Biobank study
- Kim, Y.**, et al. Physical activity, sedentary behaviour and sleep, and their changes as long-term predictors of objectively measured physical activity in 92,065 adults: the UK Biobank study

Kim, Y., Lee, J.M., Gaesser, G.A., & Welk, G.J. Criterion validity of multiple accelerometer-based activity monitors for estimating activity time and energy expenditure in youth.
Saint-Maurice, P.F., **Kim, Y.**, & Welk, G.J. Examining the accuracy of the Actigraph non-wear time algorithms for children.
Lee, J.M., **Kim, Y.**, & Welk, G.J. Daily and seasonal variation in free-living physical activity: Descriptive results from the Physical Activity Measurement Study (PAMS) project

Publications – Conference Abstracts (Oral)

1. **Kim, Y.**, Lotta, L., Sharp, S.J., Wijndaele, K., Day, F., Perry, J.R.B, Wareham, N., & Brage, S. (Submitted) Genetic risk, physical fitness and incident coronary heart disease. Paper submitted for the 7th International Society for Physical Activity and Health Congress (ISPAH), London, UK
2. **Kim, Y.**, Lee, D.C., & Welk, G.J. (Accepted) Independent and joint associations of sedentary behavior and moderate-to-vigorous physical activity with obesity: A comparison of subjective versus objective measures from the Physical Activity Measurement Survey (PAMS). Paper accepted for the International Society of Behavioral Nutrition and Physical Activity (ISBNPA) 2018 Meeting, Hong Kong.
3. **Kim, Y.**, White, T., Sharp, S.J., Wijndaele, K., & Brage, S. (2017) Longitudinal associations of adiposity and grip strength with physical activity assessed with wrist-worn accelerometers in 84,779 adults: The UK Biobank study. Paper presented at the American College of Sports Medicine 64th Annual Meeting, Denver, CO, USA
4. **Kim, Y.**, Wijndaele, K., Wareham, N., & Brage, S. (2016). Hand grip strength and resting pulse rate are associated with all-cause mortality at all levels of body fatness in 439,059 UK Biobank adults. Paper presented at the 6th International Congress on Physical Activity and Public Health (ISPAH), Bangkok, Thailand
5. **Kim, Y.**, Hibbing P., Ellingson, L., Saint-Maurice, P.F., Hennessy, E., McClain J., & Welk, G.J. (2016). Comparison of outcomes between raw acceleration and counts-based methods for processing wrist-worn accelerometers: the FLASHE study. Paper presented at the American College of Sports Medicine 63th Annual Meeting, Boston, MA, USA
6. **Kim, Y.** (2016) Implications of hand grip strength in public health. Cheong-Ju World Martial Arts Masterships. Cheong-Ju, South Korea
7. **Kim, Y.**, Wijndaele, K., Wareham, N., & Brage, S. (2016). Hand grip strength is inversely related to arterial stiffness in 136,856 UK adults: The UK Biobank Project. Paper presented at the American Heart Association EPI/LIFESTYLE 2016 conference, Phoenix, AZ, USA
8. Ellingson, L.D., Schwabacher, I.J., **Kim, Y.**, & Welk, G.J. (2016). Integration of data from ActiGraph and activPAL monitors: Criterion validity of the SIP method. Paper presented at Society of Behavioral Medicine 37th Annual Meeting and Scientific Sessions, Washington, DC, USA.
9. **Kim, Y.**, Dixon, P.M., Lee, J.M., Gaesser, G.A., & Welk, G.J. (2015). Criterion validity of multiple objective monitors in estimating energy expenditure in youth. Paper presented at the American College of Sports Medicine 62th Annual Meeting, San Diego, CA, USA (Abstract presented by Glenn Gaesser on behalf of **Kim, Y**)
10. **Kim, Y.** (2015) Independent and joint associations of sedentary behavior and moderate-to-vigorous physical activity with obesity: Comparison between subjective and objective measurement tool. [3-minute thesis presentation] 2nd Annual Graduate and Professional Students Research Conference (GPSRC). Iowa State University, Ames, IA, USA
11. van Hees, V.T. & **Kim, Y.** (2015) R-package GGIR: an open analytical tool for processing multi-day raw accelerometer data. Paper presented at the International Society of Behavioral Nutrition and Physical Activity (ISBNPA) 2015 Meeting, Edinburgh, Scotland. (Abstract presented by **Kim, Y.** on behalf of van Hess, V.T)
12. **Kim, Y.**, & Welk, G.J (2014). Accuracy of activity monitors for estimating the energy expenditure of different intensity activities. Paper presented at the American College of Sports Medicine 61th Annual Meeting, Orlando, FL, USA
13. **Kim, Y.W.**, Crouter, S.E., Lee, J.M., Bai, Y., Gaesser, G.A., & Welk, G.J. (2013). Comparisons of prediction equations for estimating energy expenditure in youth. Paper presented at the American College of Sports Medicine 60th Annual Meeting, Indianapolis, IN, USA

14. Chen, S., **Kim, Y.**, Lee, J., & Welk, G. (2013) Living an energy-balanced life: A physical education based intervention attempt. (Round Table Discussion) Paper presented at the 2013 AERA annual meeting, San Francisco, CA, USA
15. Welk., G.J., Lee, J.M., & **Kim, Y.W.** (2012) Validity and utility of consumer-based activity monitors. Paper presented at the 24th International Sport Science Congress of KAHPERD, Mokpo, South Korea
16. **Kim, Y.W.**, Beets, M.W., McIver, K., & Dowda, M. (2011). The effect of reintegrating accelerometer counts in preschool children: comparison using different epoch lengths. Paper presented at the American College of Sports Medicine 58th Annual Meeting, Denver, CO, USA
17. **Kim, Y.W.**, Beets, M.W., McIver, K., & Dowda, M. (2011). Reintegration of accelerometer counts for preschool children: Comparison using different epoch lengths. Paper presented at the Annual Meeting for the Southeastern Chapter of the ACSM, Greenville, SC, USA
18. Beets, M. W., Tilley, F., **Kim, Y. W.**, & Webster, C. (2011). Nutritional Policies and Standards for Snacks Served in Afterschool Programs: A Review. Paper presented at the Healthy Eating in Context: The Role of Political, Physical, Economic, and Social Structures in Nutrition. University of South Carolina, Columbia SC, USA

Publications – Conference Abstracts (Poster)

19. Byun, W., Lee, J.M., **Kim, Y.**, & Brusseau, T. (Accepted) Classification Accuracy of a Wearable Activity Tracker for Assessing Sedentary Behavior and Physical Activity in 3 – 5 Year-Old Children. Paper accepted for the International Society of Behavioral Nutrition and Physical Activity (ISBNPA) 2018 Meeting, Hong Kong.
20. **Kim, Y.**, Wijndaele, K., Wareham, N., & Brage, S. (2015). Hand grip strength is inversely related to arterial stiffness in 136,856 UK adults: The UK Biobank Project. The Institute of Metabolic Science (IMS) Research Day, University of Cambridge, Cambridge, UK
21. **Kim, Y.**, & Welk, G.J. (2015). Investigating the accuracy of the 24-hour recall method in assessing sedentary behavior: Physical Activity Measurement Survey (PAMS) project. Paper presented at the International Conference on Ambulatory Monitoring of Physical Activity and Movement (ICAMPAM) 2015 Meeting, Limerick, Ireland.
22. **Kim, Y.**, & Welk, G.J. (2015). Characterizing the context of sedentary lifestyles in a representative sample of adults: The Physical Activity Measurement Survey (PAMS) project. Paper presented at the International Society of Behavioral Nutrition and Physical Activity (ISBNPA) 2015 Meeting, Edinburgh, Scotland.
23. Hibbing, P.R., **Kim, Y.**, Saint-Maurice, P.F., & Welk, G.J. (2015). Activity monitor agreement in assessing compliance with step and physical activity guidelines in youth. Paper presented at the American College of Sports Medicine 62th Annual Meeting, San Diego, CA, USA
24. Saint-Maurice, P.F., **Kim, Y.**, & Welk, G.J. (2015). The effect of weather variations on patterns of moderate-to-vigorous physical activity in youth. Paper presented at the International Society of Behavioral Nutrition and Physical Activity 2015 Meeting, Edinburgh, Scotland.
25. Lee, J.A., **Kim, Y.**, Saint-Maurice, P.F., & Welk, G.J. (2015). Associations between sedentary behaviors and obesity status in youth: Does device matter? Paper presented at the American College of Sports Medicine 62th Annual Meeting, San Diego, CA, USA
26. Byun, W., Redenius, N., & **Kim Y.** (2015). Validation of the Fitbit Activity Monitor in Free-Living Conditions. Paper presented at the American College of Sports Medicine 62nd Annual Meeting, San Diego, CA, USA
27. Motz, Z., Bai Y., **Kim Y.**, Dinkel, D., & Lee J.M. (2015). Validity of Wearable Activity Monitors for Estimation of Resting Energy Expenditure in Adults. Paper presented at the American College of Sports Medicine 62nd Annual Meeting, San Diego, CA, USA
28. Nam, Y., Bai Y., Lee J.A., **Kim Y.**, Lee J.M., Meier N.F., & Welk G.J. (2015). Validity of consumer-based physical activity monitors in semi free-living environment. Paper presented at the American College of Sports Medicine 62nd Annual Meeting, San Diego, CA, USA
29. Bai, Y., Saint-Maurice, P., **Kim, Y.**, Osthus, D., Mahar, M.T., & Welk, G.J. (2014) The impact of BMI on aerobic fitness achievement with both the One-mile run and PACER test. Paper presented at the American College of Sports Medicine 61th Annual Meeting, Orlando, FL, USA

30. Peters, B., **Kim, Y.**, & Welk, G.J. (2014) Accuracy of inclinometer output functions from of the ActivPal and Actigraph GT3X+: A focus on physical inactivity. Paper presented at the American College of Sports Medicine 61th Annual Meeting, Orlando, FL, USA
31. Byun, W., Redenius, M., Hilgers-Greterman, S., **Kim, Y.**, Larson, M., & Terbizan, D.J. (2014) Profiles of Physical Activity and Sedentary Behavior in Cancer Survivors: A 12-Week Community-Based Exercise Program. Paper presented at the American College of Sports Medicine 61th Annual Meeting, Orlando, FL, USA
32. Lee, J.M., Kwon, Y.S., **Kim, Y.**, Derrick, T.R., & Welk, G.J. (2014) Calibration of built-in accelerometers using a commercially Smartphone. Paper presented at the American College of Sports Medicine 61th Annual Meeting, Orlando, FL, USA
33. Lee, J.M., **Kim, Y.W.**, Nusser, S., Carriquiry, A., & Welk, G.J. (2013). Effect of seasonality and temperature on free-living physical activity: PAMS Project. Paper presented at the American College of Sports Medicine 60th Annual Meeting, Indianapolis, IN, USA
34. Peters, B., **Kim, Y.W.**, Welk, G.J., Nusser, S., Carriquiry, A., Calabró, A., & Lee, J.M. (2013). The context of physical activity in a representative sample of adults: Physical Activity Measurement Survey. Paper presented at the American College of Sports Medicine 60th Annual Meeting, Indianapolis, IN, USA
35. Chen, S., Lee, J., **Kim, Y.**, & Welk, G. (2013). Learning to live an energy-balanced life through technology. Paper presented at the 2013 AAHPERD national convention, Charlotte, NC, USA
36. **Kim, Y.W.**, Lee, J.M., Bai, Y., Gaesser, G.A., & Welk, G.J. (2012). Comparison between Sensewear Mini Armband and Actigraph accelerometers in classifying physical activity intensities in youth. Paper presented at the American College of Sports Medicine 59th Annual Meeting, San Francisco, CA, USA
37. Lee, J.M., **Kim, Y.W.**, Bai, Y., Gaesser, G.A., & Welk, G.J. (2012). Validation of new Sensewear Mini Armband algorithms (version 5.2) in children. Paper presented at the American College of Sports Medicine 59th Annual Meeting, San Francisco, CA, USA
38. Lee, J.M., **Kim, Y.W.**, & Welk, G.J. (2012) Daily and seasonal variation in free-living physical activity: Descriptive results from the Physical Activity Measurement Survey (PAMS) project. Paper presented at the 24th International Sport Science Congress of KAHPERD, Mokpo, South Korea
39. Welk, G.J., Nusser, S., Carriquiry, A., Calabró, A., & **Kim, Y.W.** (2012). Measurement Error in a 24 Hour Physical Activity Recall Instrument: Descriptive Results from the Physical Activity Measurement Survey (PAMS) project. Paper presented at the 8th International Conference on Diet and Activity Method in Rome, Italy.
40. Shah, R., Weaver, R., Tilley, F., Ajja, R., Rapp, A., **Kim, Y.W.**, Huberty, J., Beighle, A., & Beets, M.W. (2012). Compliance with physical activity guidelines for afterschool programs. Paper presented at the 140th APHA Annual Meeting (October 27 - October 31, 2012) in San Francisco, CA, USA

Invited Speech

1. **Kim, Y.** (2018) Genetic risk and physical activity in prevention of coronary heart disease. Department of Physical Education, Seoul National University, Seoul, South Korea
2. **Kim, Y.** (2017) Using genetic data in behavioral epidemiology research. Frontier Research Institute of Convergence Sports Science, Yonsei University, Seoul, South Korea
3. **Kim, Y.** (2017) Behavioral and health aspects of physical activity. Gyeongsang Institute of Health Sciences, Gyeongsang National University School of Medicine, Jinju, South Korea
4. **Kim, Y.** (2016) Behavioral and health aspects of physical activity. Department of Physical Education, Seoul National University, Seoul, South Korea
5. **Kim, Y.** (2016) Behavioral and health aspects of physical activity. Frontier Research Institute of Convergence Sports Science, Yonsei University, Seoul, South Korea
6. **Kim, Y.** (2016) Behavioral and health aspects of physical activity. Graduate School of Public Health, Hanyang University, Seoul, South Korea
7. **Kim, Y.** (2016) Implications of hand grip strength in public health. Cheong-Ju World Martial Arts Masterships. Cheong-Ju, South Korea

8. **Kim, Y., & Welk., G.J.** (2014) Investigation of an innovative activity tracking device: Advancing the science of wearable activity monitors. 2014 Incheon Asian Games International Sport Science Congress – In Commemoration of the 1988 Seoul Olympic Games, Incheon, South Korea
9. Welk., G.J., Lee, J.M., & **Kim, Y.W.** (2012) Validity and utility of consumer-based activity monitors. Paper presented at the 24th International Sport Science Congress of KAHPERD, Mokpo, South Korea

Grants

College of Health Research Pilot Grant

Title: Validation of Wearable Activity Monitors in Children and Youth

Funding source: College of Health, University of Utah

Amount: \$9,997

Funding period: January 1st, 2018 – January 1st, 2019

Principal Investigator: Dr. Wonwoo Byun

Co-investigator: Dr. **Youngwon Kim**

Description: The goal of this project is to determine the validity of various wearable activity monitors in children and youth under simulated and true free-living conditions.

NIH RO1 (in Review)

Title: Obesity, Radiation, Genetics and Cancer Late Effects (ORACLE)

Funding source: National Cancer Institute (NCI)

Proposed Date: 04/01/2019 – 03/30/2024

Grant number: R01 CA224111

Role: Consultant

Principal Investigator: Dr. Mia Hashibe

Consultants: Drs. **Youngwon Kim**, et al.

Description: The aims are to investigate the role of cancer treatment vs. obesity in increased long term disease risks, assess whether genetic variants in DNA repair genes are associated with radiation-related late effects risks, and to develop risk prediction models to quantify the risk of long-term disease risks among endometrial cancer survivors.

NIH RO1 (in Review)

Title: Wearables for Kids (W4K): Validity and Utility of Consumer-based Wearable Fitness Trackers to Monitor Physical Activity and Sleep in Children 3 to 12 years-old

Funding source: National Institutes of Health (NIH)

Role: Consultant

Principal Investigator: Dr. Michael Beets

Co-investigators: Drs. R. Glenn Weaver, Mark Sarzynski and Brent Hutto

Consultants: Drs. **Youngwon Kim**, Gregory Welk, Stewart Trost, Shawn Youngstedt, Dylan Cliff, and Jessica Chandler

Description: The primary goal of this project is to validate wearable fitness tracker device output of physical activity and heart rate compared to gold standards (e.g., direct observation, indirect calorimetry, electrocardiogram) as well as research-grade motion sensors in 3-12yrs old children.

Travel Grant (2016)

Funding source: MRC Epidemiology Unit, University of Cambridge, UK

Descriptions: American Heart Association EPI/LIFESTYLE 2016 conference, Phoenix, AZ, USA

Amount: \$2,027 (= £1,429)

Travel Grant (2016)

Funding source: Research grant of Dr. Gregory Welk, Iowa State University, USA

Descriptions: American College of Sports Medicine (ACSM) 63th Annual Meeting, Boston, MA, USA

Amount: \$3,731

Travel Grant (2015)

Funding source: Research grant of Dr. Gregory Welk, Iowa State University, USA

Descriptions: International Society for Behavioral Nutrition and Physical Activity (ISBNPA), Edinburgh, Scotland

- Amount: \$819
- Travel Grant (2015)
 Funding source: Research grant of Dr. Gregory Welk, Iowa State University, USA
 Descriptions: 4th International Conference on Ambulatory Monitoring of Physical Activity and Movement (ICAMPAM), Limerick, Ireland
 Amount: \$1,028
- Predoctoral Fellowship (2015) (Rejected – Overall Percentile: 26.6%)
 Title: A multi-method approach for advancing understanding of sedentary lifestyles and obesity in youth
 Funding source: American Heart Association (AHA)
 Proposed Date: 01/2015 – 12/2016
 Amount: \$52,000
 Principal Investigator: Dr. **Youngwon Kim**
 Main Sponsor: Dr. Gregory Welk
 Collaborators: Drs. Charles Matthews and Alicia Carriquiry
 Consultant: Dr. Duck-Chul Lee
 Description: The primary goal of this project is to obtain comprehensive insights about underlying patterns and relationships of sedentary behavior in relation to obesity in adolescents. Both an objective and a subjective method will be used to obtain more accurate estimates and contextual information of sedentary behavior, respectively.
- Travel Grant (2014)
 Funding source: Research grant of Dr. Gregory Welk, Iowa State University, USA
 Descriptions: American College of Sports Medicine 61th Annual Meeting, Orlando, FL
 Amount: \$1,065
- Travel Grant (2013)
 Funding source: Department of Kinesiology and GPSS, Iowa State University, USA
 Descriptions: American College of Sports Medicine 60th Annual Meeting, Indianapolis, IN
 Amount: \$472
- Travel Grant (2012)
 Funding source: Department of Kinesiology (Dr. Gregory Welk), Iowa State University, USA
 Descriptions: 24th International Sport Science Congress of KAHPERD, Mokpo, South Korea
 Amount: \$1,745
- Travel Grant (2012)
 Funding source: Department of Kinesiology and GPSS, Iowa State University, USA
 Descriptions: American College of Sports Medicine 59th Annual Meeting, San Francisco, CA
 Amount: \$600
- Travel Grant (2011)
 Funding source: Department of Exercise Science, University of South Carolina, USA
 Descriptions: Annual Meeting for the Southeastern Chapter of the ACSM, Greenville, SC
 Amount: \$120

Honors/ Awards/ Scholarships

1. Early Investigator Travel Award (2016)
 American Heart Association (AHA) EPI/Lifestyle 2016 Scientific Sessions, Phoenix, Arizona.
 (A financial award of \$1,000 received)
 American Heart Association, USA
2. American Kinesiology Association (AKA) Graduate Student Writing Award (2015)
 (To recognize students who have demonstrated exceptional ability to conduct and disseminate research that has the potential for making a significant impact in the field of kinesiology)
 American Kinesiology Association, USA
3. Zaffarano Prize Honorable Mention (2015)
 (To recognize superior performance in publishable research by an ISU graduate Student; Award established by Dr. Daniel Zaffarano, a former vice president for research at Iowa State University)

- (A certificate and financial award of \$500 received)
Graduate College, Iowa State University, USA
4. Kinesiology Doctoral Research Award (2015)
(To recognize outstanding dissertation research)
Department of Kinesiology, Iowa State University, USA
 5. Graduate and Professional Student Senate Peer Research Award (2015)
Graduate and Professional Student Senate (GPSS), Iowa State University, USA
 6. Iowa State University Research Excellence Award (2014)
(To recognize doctoral students for outstanding research)
(Honor cord and Certificate received from the president)
(A financial award of \$200 from the Department of Kinesiology)
Iowa State University, USA
 7. Print and Grace Powers Hudson Scholarship in Human Sciences (\$500) (2014)
(To support research and travel expenses of outstanding Kinesiology graduate students)
College of Human Sciences, Iowa State University, USA
 8. College of Human Sciences Graduate Merit Scholarship (\$600) (2014)
College of Human Sciences, Iowa State University, USA
 9. College of Human Sciences Graduate Merit Scholarship (\$1,250) (2012)
College of Human Sciences, Iowa State University, USA
 10. Elizabeth Beveridge Memorial Endowment (\$750) (2012)
College of Human Sciences, Iowa State University, USA
 11. Barbara Forker Graduate Scholarship (\$3,000) (2011)
(Provided to an outstanding newly coming doctoral student)
Department of Kinesiology, Iowa State University, USA
 12. Presidential Award for Excellent Academic Achievement (2009)
Hanyang University, South Korea

Research Projects Involved

- 09/17-10/17 Title: Economic burden of smoking
Funding source: Korea Institute of Public Finance, South Korea
Role: Consultant
Descriptions: This project evaluated the economic burden of smoking on health care expenditure.
- 06/15-06/17 Title: UK Biobank project
Funding source: MRC Epidemiology unit, UK
Role: Data analyses
Descriptions: This project was aimed at examining the relationships of muscular fitness and aerobic fitness with health outcomes using data from the UK Biobank project with >500,000 adults. My post-doc work was focused on 1) establishing analytical platforms for processing ECG data obtained from sub-maximal bike tests and 2) generating prediction models to estimate maximal oxygen consumption in about 80,000 participants.
- 06/15-06/16 Title: University of Michigan accelerometer processing project
Funding source: Dr. Min-Kyoung Song through University of Michigan, USA
Role: Consultant
Descriptions: I served as a paid consultant (\$3,700) on the University of Michigan's project, which is aimed at understanding differences and patterns of physical activity and sedentary behavior in dyads of children and mothers. My specific roles are to process hip-worn Actigraph data collected from both children and mothers and to assist the research team in conceptualizing research papers and performing statistical analyses for planned papers.
- 04/15-06/17 Title: Validation of consumer based activity monitors in adults
Funding source: Iowa State University, USA
Primary Investigator: Yang Bai/ Gregory Welk

Role: Consultant

Descriptions: We evaluated comparative accuracy of various consumer-based activity monitors (e.g., Apple Watch, Fitbit Charge HR, Garmin Vivosmart, Jawbone Up3, Basis Peak) and four research monitors (Actigraph at wrist, Actigraph at hip, SenseWear Armband Core, activPal) relative to a portable gas analyzer (i.e. indirect calorimetry) under three different semi-structured settings.

04/14-06/17

Title: The FLASHE project

Funding source: National Cancer Institute/ WeStat, USA

Primary Investigator: Erin Hennessy/ Gregory Welk

Role: Consultant / Data management and analyses

Descriptions: The FLASHE study was a cross-sectional surveillance study funded by the NCI to examine youth/family behaviors related to cancer prevention. Some of the specific goals were to develop calibration models for a self-report method relative to wrist-worn Actigraphs, and to improve the understanding of differences and comparability between raw data and activity counts data collected from the wrist-worn Actigraphs. On this project, I served as a data analyst during my doctoral study at Iowa State University, and since graduation, I have served as a paid consultant (\$6,000).

04/14-05/15

Title: Youth Physical Activity Measurement Study

Funding source: National Cancer Institute/ WeStat, USA

Primary Investigator: Gregory Welk

Role: Data management and analyses

Descriptions: We evaluated the agreement among the Actigraph accelerometer, Armband monitor and the Youth Activity Profile across three seasons during both school and non-school time periods.

09/14-05/15

Title: Calibration of the Online Youth Activity Profile for School-Based Evaluations

Funding source: National Institutes of Health (R21), USA

Primary Investigator: Gregory Welk

Project Number: 1R21CA188641-01A1

Role: Data management and analyses

Descriptions: This study systematically evaluated the utility of the web-based formats of the Youth Activity Profile (YAP) for school-based research on PA and SB.

06/13-03/14

Title: Validating a set of novel activity monitors in adults

Funding source: Body Media, Inc., USA

Primary Investigator: Gregory Welk

Role: Project director

Descriptions: We examined the validity of a newly developed activity monitor (Body Media Core2) relative to a criterion measure (i.e. indirect calorimetry). The Core2 was compared with existing activity monitors (Core1, activPAL, Actigraph).

09/12-06/13

Title: Validation of a newly developed activity monitor

Funding source: Body Media, Inc., USA

Primary Investigator: Gregory Welk

Role: Project director

Descriptions: We validated a newly developed disposable adhesive activity monitor, called Patch, in measuring energy expenditure in relation to a gas analyzer (i.e. indirect calorimetry) in adults.

09/11-05/15

Title: Physical Activity Measurement Study (PAMS) project

Funding Source: National Institutes of Health (R01), USA

Project Number: R01 HL91024-01A1

Primary Investigator: Gregory Welk

Role: Data management and analyses

- Descriptions: We developed a model to estimate measurement errors of a self-report method (i.e. 1-day physical activity recall) in relation to a criterion measure (i.e. armbands) in a representative sample of adults in Iowa.
- 09/11- 6/12 Title: Validating speed and distance functions in novel activity monitors
 Funding source: Body Media, Inc., USA
 Primary Investigator: Gregory Welk
 Role: Project director
 Descriptions: We validated speed and distance functions of physical activity monitors (i.e. armbands) in relation to a criterion measure in adults.
- 06/11 – 08/12 Title: A wireless, multimode artificial neural network-based physical activity monitor
 Funding Source: National Institutes of Health (R01) by Arizona State University, USA
 Primary Investigator: Glenn Gaesser and Gregory Welk
 Project Number: R01 HL091006
 Role: Data collection/management and analyses
 Descriptions: We validated a neural network-based physical activity monitor for youth in both lab-based and free-living physical activity settings in children.
- 09/10 – 05/11 Health promotion programs in afterschool settings
 Primary Investigator: Michael Beets
 Role: Data collection/management and analyses
 Descriptions: This project was to improve the quality of physical activity and snacks provided to children in afterschool programs in South Carolina.

Services

- 2017 – present Committee member for developing and organizing graduate-level core classes. Department of Health, Kinesiology and Recreation, University of Utah, USA

Ad Hoc Reviewer for Journal Papers

Medicine and Science in Sports and Exercise
 International Journal of Obesity
 PLoS ONE
 International Journal of Behavioral Nutrition and Physical Activity
 Journal of Physical Activity and Health
 BMC Pediatrics
 BMC Public Health
 Journal of Science and Medicine in Sport
 Physiological Measurement
 Research Quarterly for Exercise and Sport
 Journal of Sports Sciences
 Measurement in Physical Education and Exercise Science
 Journal for the Measurement of Physical Behaviour
 International SportMed Journal
 Journal of Sport and Health Science

Ad Hoc Reviewer for Conference Abstracts

- 2018 The 7th International Society for Physical Activity and Health Congress (ISPAH), London, UK
 2016 The 6th International Society for Physical Activity and Health Congress (ISPAH), Bangkok, Thailand

Assistantships

- 2011 - 2015 Research Assistant, Department of Kinesiology, Iowa State University, Ames, USA
 2011 - 2013 Teaching Assistant, Department of Kinesiology, Iowa State University, Ames, USA
 2008 - 2009 Research Assistant, Department of Exercise Science, University of South Carolina, Columbia, USA

Teaching Experience

- Spring, 2017 Physical Activity and Health (MPhil Physical Activity Course), University of Cambridge, UK
Role: Instructor
- Spring, 2016 Physical Activity and Health (MPhil Physical Activity Course), University of Cambridge, UK
Role: Instructor
- Fall, 2014 Community Health Program Development (HS430), Iowa State University, USA
Role: Instructor
- Spring, 2013 Concepts of Fitness and Wellness (KIN 210x), Iowa State University, USA
Instructor: Gregory Welk
Role: Teaching assistant
- Fall, 2012 Concepts of Fitness and Wellness (KIN 210x), Iowa State University, USA
Instructor: Gregory Welk
Role: Teaching assistant
- Spring, 2012 Concepts of Fitness and Wellness (KIN 210x), Iowa State University, USA
Instructor: Gregory Welk
Role: Teaching assistant
- Spring, 2012 Tennis (KIN 158) and Soccer (KIN 185), Iowa State University, USA
Role: Instructor
- Fall, 2011 Pocket Billiards (KIN126) and Soccer (KIN128), Iowa State University, USA
Role: Instructor

Fee-for-services

- 2013 - 2014 Actigraph data processing from pilot/intervention studies
Funding source: University of Arkansas for Medical Sciences (Judith L. Weber)
Amount: \$3,000
Role: Data processing and analyses

Dissertation Committee

Christel van Loo (University of Wollongong, Australia)

Undergraduate Students Supervised

Paul Hibbing
Amanda Bries
Sydney Reeves
Kenyanna Williams
Rachel Devick
Cassie Weickert
Mollie Mortenson
Jordan Albright

Training and Certificate Received

- 2016 Handling Media Interviews, MRC Epidemiology Unit, University of Cambridge, UK
- 2016 Supervising graduate students, University of Cambridge, UK
- 2016 Supervising undergraduate students, University of Cambridge, UK
- 2016 Lecturing performance, University of Cambridge, UK
- 2016 Communication Skills Advanced: "Was it something I said?", University of Cambridge, UK
- 2016 Communication Skills Introduction: "Are you receiving me?", University of Cambridge, UK
- 2016 Voice and Presentation (One-to-One), University of Cambridge, UK
- 2015 3-Day MRC PostDoc Symposium, Cambridge, UK
- 2014 Research Experiences for Undergraduates (REU) Mentor Training Workshop, Iowa State University, USA

Professional Membership

American College of Sports Medicine (ACSM)

American Heart Association (AHA)

The International Society for Behavioral Nutrition and Physical Activity (ISBNPA)

International Society for the Measurement of Physical Behaviour (ISMPB)

Korean Alliance for Health, Physical Education, Recreation and Dance (KAPHERD)

Military Service

2005 - 2007 Republic of Korea Army, South Korea