

# The Experimental Study of the Influences of Music Preference In Exercise Duration. As an Example of the Cardovascular...

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## ABSTRACT

The purpose of this study is to investigate the influence of music preference in exercise duration. According to recent studies (Karageorghis and Terry, 1997), listening to music while exercising can effect peoples' exercise duration. But little attention has been given to the point that whether music preference is considered as the important factor in exercise duration. The criterion of within-subjects design is adopted in this study, and the experiment is based on the F.I.T.T. principle. The study applied these concepts to select suitable subjects for the implementation of this experiment. The experimental condition can be classified into three main groups including group without music, group with background music and group under the treatment of music preference. The main findings of this research were concluded as the followings: 1. The majority of the subjects prefer listening to popular music with faster tempo. 2. Different types of music had significant different effect in the exercise duration.

Keywords : music preference, exercise duration, cardiovascular fitness.

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## REFERENCES

- 一、中文部份 1.方進隆(1990),不同體能狀況者之心肺耐力訓練,中華體育,4(2),103-110。2.方進隆(1997a),提升體適能的策略與展望,教師體適能手冊,9-21。3.方進隆(1997b),有氧運動,教師體適能手冊,105-118。4.李彩華,方進隆(1998),十二週體能訓練對婦女健康體能與血脂肪之影響,體育學報,26,145-152。5.李彩華,方進隆(1998),台北市國中學生身體活動量及其影響因6.素研究,體育學報,14,139-148。7.李維靈,郭世和,張利中(2004),音樂偏好與情緒智力之相關研究 - 以某立大學休閒系一年級學生為例之初探,大葉學報,13(2),39-47。8.宋婉萍(1998),大學生音樂偏好,人格特徵與創造力之相關研究,國立師範大學教育心理與輔導學系未出版之碩士論文。9.宋惠娟(2006),音樂治療在失智症老人躁動行為處置的運用,護理雜誌,53(5),58-62。10.何權峰(1998),音樂的魔法:22種最有效的音樂療法,台北:世茂。11.卓俊辰(2001),大學生的健康體適能,台北:華泰書局。12.卓俊辰(2001),體適能與運動處方。體適能指導手冊,3版,中華民國有氧體適能運動協會,131-166。13.卓俊辰(1987),論運動強度、頻數與持續時間對改變心肺適能的相互影響,中華體育,4,64-74。14.林建宏(2001),社會階層與流行音樂消費關係探究,中國文化大學新聞系未出版之碩士論文。15.林清山(1992),心理與教育統計學,台北:東華書局。16.武為瓊(2004),環境溫度對運動員表現及血液生化值之影響,國立體育學院未出版之碩士論文。17.柯惠玲(2003),青少年運動行為與痛經現況及其相關因素之研究,國立台北護理學院護理所未出版之碩士論文。18.郭世和(2005),應用音樂探索活動增進大學生情緒智力之研究 - 以大葉大學休閒系一年級學生為例,大葉大學休閒事業管理學系未出版之碩士論文。19.許芳菱(2004),十二週連續性及間歇性有氧運動對健康體適能及運動態度之差異比較,國立臺灣師範大學體育學系在職進修碩士班未出版之碩士論文。20.陳南琦(2000),青少年休閒無聊感與休閒阻礙、休閒參與及休閒滿意度之相關研究,國立體育學院未出版之碩士論文。21.許建民(2001),國小學童休閒內在動機、休閒知覺自由與休閒無聊感關係之研究,體育學報,31

, 115-124。 22.陳龍弘 , 盧俊宏 , 楊明磊(2005) , 音樂於運動心理的應用 , 輔導季刊 , 41(1) , 58-64。 23.教育部(1997) , 教師體適能指導手冊 , 教育部 , 52-55。 24.楊忠祥 , 林正常(1999) , 運動強度和持續時間對恢復期能量消耗的影響 , 體育學報 , 27 , 99-108。 25.楊忠祥 , 林正常(1999) , 運動強度和持續時間對恢復期能量消耗的影響 , 體育學報 , 27 , 99-108。 26.黃坤得(2001) , 淺談有氧舞蹈與減肥 , 中華體育季刊 , 57 , 124-130。 27.張剛 , 李韻葳(2005) , 淺談舞蹈與音樂的關係 , 阿?師範高等學院學報 , 22(2) , 127-128。 28.殷玉瑾(1995) , 多元化音樂欣賞對高中生音樂行為心理影響之研究 , 國立師範大學音樂學系未出版之碩士論文。 29.鐘昌宏(1997) , 安寧療護之音樂治療 , 安寧療護 , 4 , 33-35。 30.蘇郁惠(2005) , 青少年流行音樂偏好、態度與音樂環境之相關研究 , 國立新竹師範學院音樂系未出版之碩士論文。 二、英文部分  
1. Atomi, Y., & Miyashita M. (1980). Effect of training intensity in adult females on aerobic power, related to lean body mass. European Journal of Applied Physiology, 44, 109-116. 2. American college of Sports Medicine. (1978). The recommended quantity and quality of exercise for developing and maintaining fitness in healthy adults. Medicine and Science Sport, 10(3), 7-10. 3. Boreham, C. C., & Twisk, J., & Savage, M. J. (1997). Physical activity , sport participation, and risk factors in adolescents. Medicine and Science Sport and exercise, 29, 788-793. 4. Boutcher, S. H., & Trense, M. (1990). The effects of sensory deprivation and music on perceived exertion and affect during exercise. Journal of Sport and Exercise Psychology, 12, 167-176. 5. Copeland, B. L., & Frank, B. D. (1991). Effects of types and intensities of background music on treadmill endurance. The Journal Of Sports Medicine And Physical Fitness, 15, 100-103. 6. Casperson, C. J., Powell, K. E., & Christenson, G. M. (1985). Physical activity, exercise, and physical fitness: Definitions and distinctions for health-related research. Public Health Reports, 100(2), 126-131. 7. Domey, L., Goh, E. K. M., & Lee, C. (1992). The impact of music and imagery on physical performance and arousal: Studies of coordination and endurance. Journal of Sport Behavior, 15, 21-33. 8. Evans, D. (2002). The effectiveness of music as an intervention for hospital patients: A systematic review. Journal of Advanced Nursing, 37(1), 8-18. 9. Finnas, L. (1989). How can musical preference be modified? Bulletin of the council for research in Music Education. 102, 1-58. 10. Fitts RH, Booth FW, Winder WW, Holloszy JO. (1975). Skeletal muscle respiratory capacity, endurance, and glycogen utilization. American Journal of Physiology ,228:1029-1033. 11. Goldstein, A. (1980). Thrills in response to music and other stimuli. Physiological Psychology, 8(1), 126-129. 12. Geiwitz, P. J. (1966). Structure of boredom. Journal of personality and social psychology, 3, 592-600. 13. Hamilton, J. A. (1981). Attention personality, and the self-regulation of mood: Absorbing interest and boredom. Progress in experimental Personality Research, 10, 281-315. 14. Holloszy, J. O. & Coyle, E. F. (1984). Adaptations of skeletal muscle to endurance exercise and their metabolic consequences. Journal of Applied Physiology, 56(4), 931-838. 15. Lai, H. L. (2004). Music Preference and Relaxation in Taiwanese Elderly People. Geriatric Nursing. 25(5), 286-291. 16. Iso-Ahola, S. E., & Weissinger, E. (1987). Leisure and Boredom. Journal of social and clinical psychology, 5(3), 356-364. 17. Katch, V., Weltman, A., Sady, S., & Freedson, P. (1978). Validity of the relative percent concept for equating training in intensities. European Journal of Applied Physiology, 39, 219-227. 18. Karageorghis, C. I., & Terry , P. C. (1997). The psychophysical effects of music in sport and exercise: A review. Journal of Sport Behavior, 20, 54-68. 19. Kari, K. (2002). Reading news from a pocket computer in a distracting environment: effects of the tempo of background music. Computer in Human Behavior, 18, 537-551. 20. LeBlanc, A. (1980). Outline of a proposed model of sources of variation in musical taste. Journal of Research in Music Education, 61, 29-34. 21. LeBlanc, A. (1982). An interactive theory of music preference. Journal of Music Therapy, 19, 28-45. 22. LeBlanc, A. (1987). The development of music preference in children. In J. C. Peery, I. W. Peery, & T. W. Draper (Eds), Music and children development, 137-157. New York: Springer-Verlag. 23. LeBlanc, A. & McCrary, J. (1983). Effect of tempo on children ' s musical preference. Journal of Research in Music Education, 31, 283-294. 24. Miller, R. F. (1992). Affective response. In R. Colwell(Ed), Handbook of research on music teaching and learning, New work: Schirmer, 414-436. 25. Melzack, R., & Wall, P. D. (1965). Pain mechanisms: A new theory. Science, 150, 971-979. 26. Pollock, M. L. (1973). The quantification of endurance training programs. Exercise and Sport Science Reviews, 1, 158-188. 27. Raitakari, O. T., Taimela, S., Porkka, K. V. R. (1997). Associations between physicalactivity and risk factors for coronary heart disease: the Cardiovascular Risk in Young Finns Study. Medicine and Science in Sports and Exercise, 29, 1055-1061. 28. Sample, D. (1992). Frequently cited studies as indicators of music education research interests, 1963-1989. Journal of Research in Music Education, 40(2), 155-157. 29. Schmidt C. P., & Zdzinski, S. F. (1983). Cited quantitative research articles in music education research journal, 1975-1990. A content analysis of selected studies. Journal of Research in Music Education, 41(1), 5-18. 30. Terjung, R. L. (1976). Muscle fiber involvementduring training of different intensities and durayion. American Journal of Physiology, 230(4), 946-950. 31. Woody, R. H., & Burns, K. J. (2001). Perdicting music appreciation with past emotional responses to music. Journal of Research in Music Education, 49, 57-70.