

Modulation of Pain Through Music, A Randomised Controlled Trial

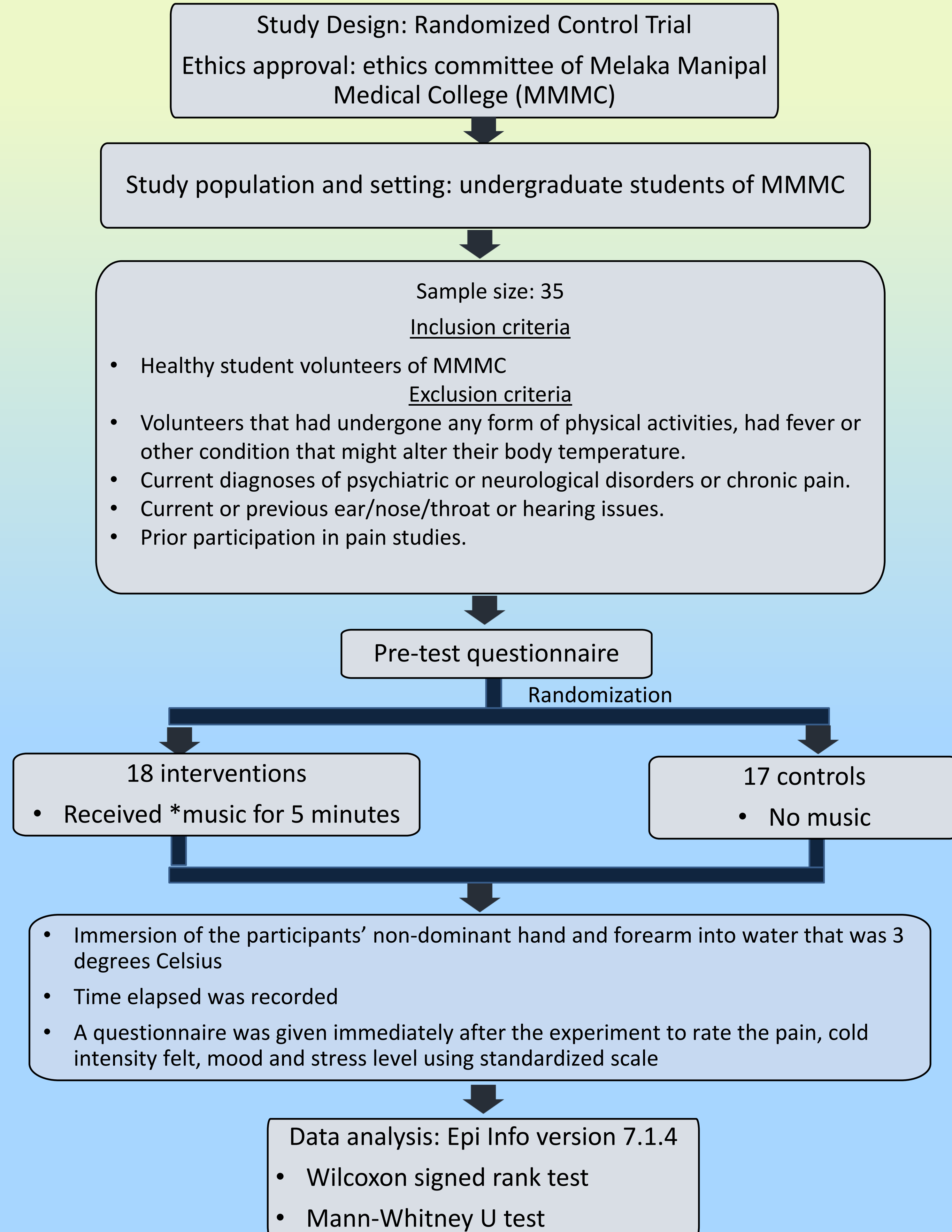
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Introduction

- Audioanalgesia → pain reducing ability of music. It influences an individual's mood and emotions leading to better pain tolerance
- Medically, audioanalgesia can be used to alleviate a patient's pain
- Aim → to investigate the effect of music on pain tolerance

Methods



*Music chosen → 'Weightless' by Marconi Union. It works by using specific rhythms, tones, frequencies and intervals to relax the listener.

Results

Table 1 Characteristics of independent variables via quantitative/qualitative analysis amongst Intervention and control group

Independent variables	Intervention Mean (SD)	Control Mean (SD)
Age	22.9(0.7)	23.1(0.7)
Gender:	n=18	n=17
	No.(%)	No.(%)
Female	5(35.7%)	9(64.2%)
Male	13(61.9%)	8(38.1%)

Significance level set at 0.05

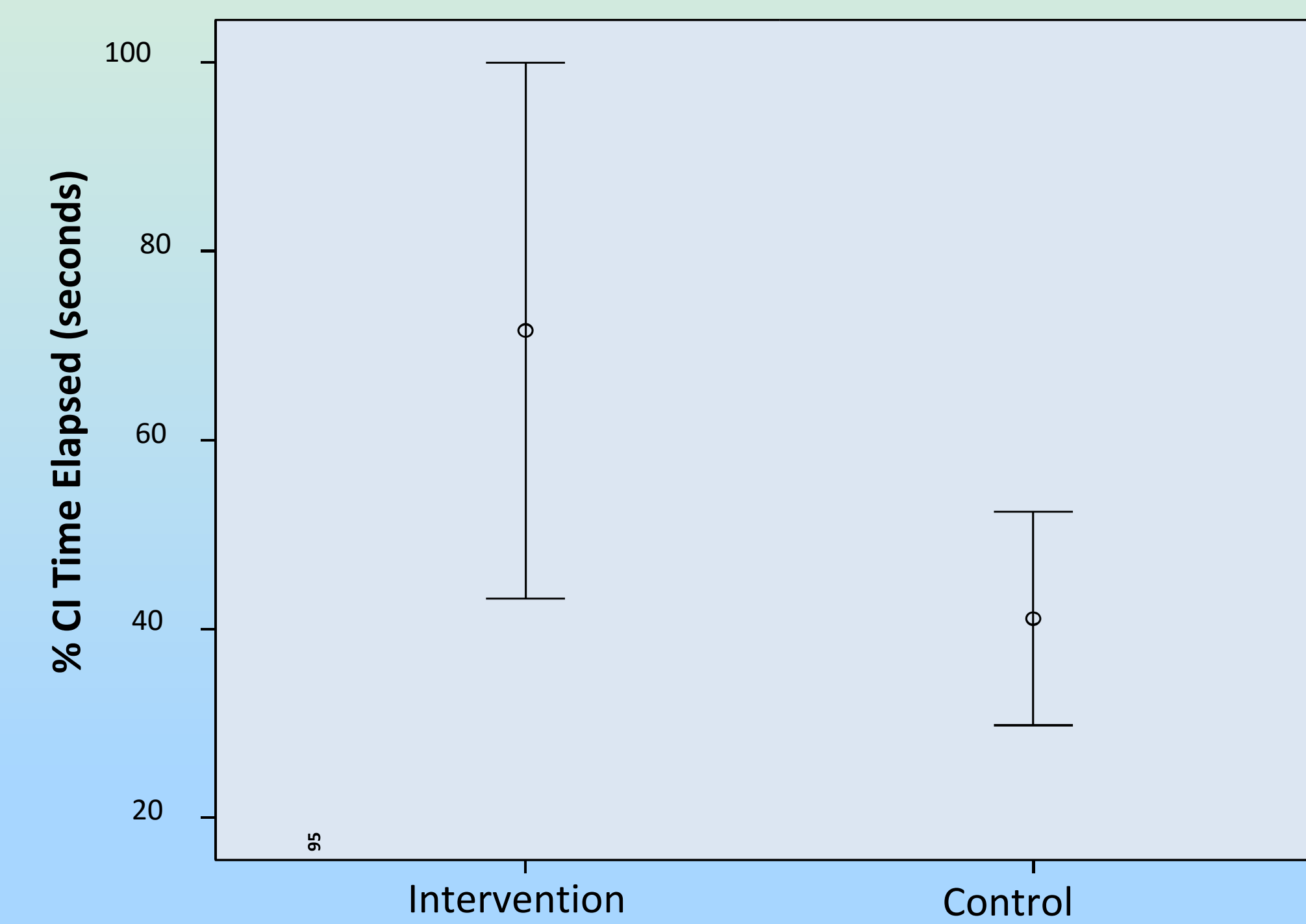


Figure 1: Error bar showing mean time elapsed (seconds) of intervention and control group

P-value= 0.047

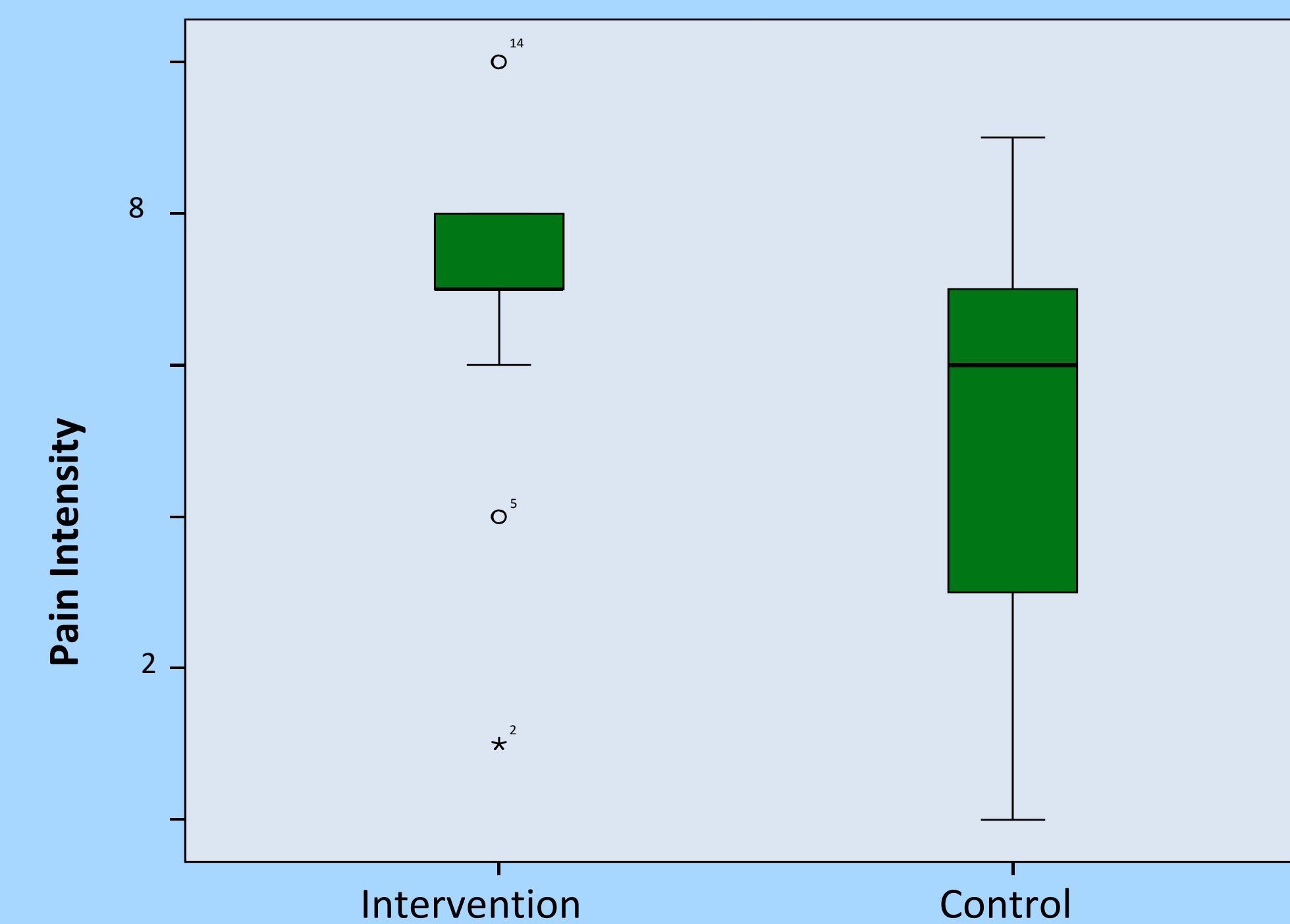


Figure 2: Box plot representing pain intensity of intervention and control group

P-value= 0.049

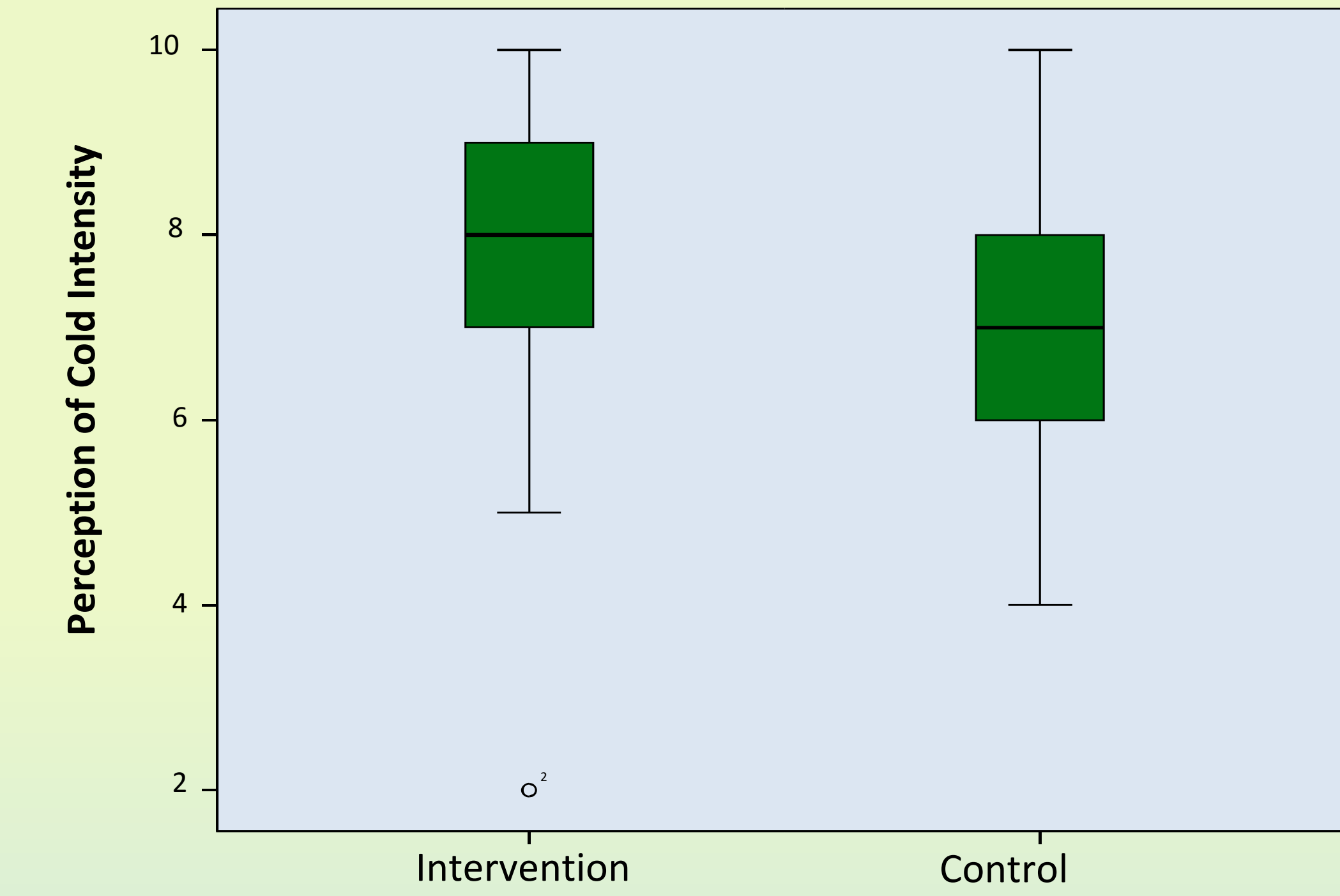


Figure 3: Box plot representing perception of cold intensity of intervention and control group

P-value= 0.335

Conclusion

- The participants in the intervention group exhibited higher pain tolerance compared to those in control group
- As pain is such a widespread epidemic, and musical stimuli is easily available, breakthrough research in this area could provide a cost-effective non-pharmacological adjunct to pain management

Acknowledgement

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References

- Sparks, L. (2001). Taking the "ouch" out of injections for children: using distraction to decrease pain. *American Journal of Maternal/Child Nursing* 26:72–78.
- Knox, D., Beveridge, S., Mitchell, L., MacDonald, R., 2011. Acoustic analysis and mood classification of pain-relieving music. *Journal of the Acoustical Society of America* 130 (3), 1673-1682
- Renn, C.L., Dorsey, S.G., 2005. The physiology and processing of pain: a review. *AACN Clinical Issues* 16 (3), 277-290.
- Aitken, J.C., Wilson, S., Coury, D., Moursi, A.M. The effect of music distraction on pain, anxiety and behaviour in paediatric dental patients. *Pediatric Dentistry* 24, 114–118. 2002
- Melzack, R., Weisz, A.Z., & Sprague, L.T. (1963). Stratagems for controlling pain: contributions of auditory stimulation and suggestion. *Experimental Neurology* 8:239–247.