

Synergistic effect of Samulnori performance and Ajaeng playing on music therapy (<https://youtu.be/QHiciJTTY0w>)

Kyung-Ja Ko^{1*}, Hyun-Yong Cho²

^{1*}Research professor, Department of Pharmacology, College of Korean Medicine, Kyung Hee University, Seoul, Republic of Korea. YouTube; K-culture pangpangtongtong tv (https://youtu.be/SSenbSwI_5c), ²Professor, Korean Language Education, Kyung Hee University, Seoul, Republic of Korea

ABSTRACT

The aim of this study was to evaluate the synergistic effect of Samulnori and Ajaeng combination in music therapy. Samulnori is the Korea's most successful traditional music. The Ajaeng, Korean traditional string instrument, generally plays the bass part in ensemble music. However, we have tried a new kind of musical style. (As you can see in the Youtube, <https://youtu.be/QHiciJTTY0w>). Samulnori and Ajaeng combination of our style have not been tried by any other musicians in Korea. Results from this study showed that Samulnori-induced excitation and Ajaeng-induced dynamics probably contributed to the synergistic effect of Samulnori and Ajaeng.

Keywords Samulnori and Ajaeng combination, Music therapy, excitation, dynamics

INTRODUCTION

Music has been together in human life for a long time. Joy and sadness, life and death have always been expressed in music. When everyone is inspired by the outside condition, people will feel happy or sad (Juncai, 2022). Music is often characterized somewhat paradoxically by joyful experiences of troublesome emotions, such as sorrow (Vuoskoski, 2017). Music is the emotional language of people, which controls people's emotions to the maximum through physiological and psychological means, leads people to released their inner thoughts to music, and eventually plays the role in escape, depression, and empathy (Juncai, 2022). Music characteristically approves access to diverse levels of emotional nuances and intensities with simultaneous self-reflection, detachment (Frijda, 2007). At the principal level in the hierarchical organization, music has a basic beat, the tactus, often described as an underlying pulse of a musical work (Cooper and Meyer, 1963; Lerdahl and Jackendoff, 1983; London, 2004; Large *et al.*, 2015). With the rhythm of music, people's parasympathetic nervous system will be stimulated continuously (Juncai, 2022). Musical rhythm refers to patterns of stress and timing of individual acoustic events (Parker *et al.*, 2022). The beat, while not necessarily the slowest or fastest rhythmic component of a musical work, is often the most perceptually salient level of metrical organization—the level at which listeners and dancers behaviorally entrain to music, such as tapping their feet or nodding their heads (Cooper and Meyer,

1963; Lerdahl and Jackendoff, 1983; London, 2004; Large *et al.*, 2015).

Music therapy is not only an art, but also a type of science, interpersonal process, or therapy (Juncai, 2022). Music-based interventions is a meaningful nonpharmacological engagement used in the therapy of psychiatric and behavioral disorders, and the positive curative effect on depression has been watched (Qishou *et al.*, 2020). In addition, music therapy has been applied to enhance various diseases in different research fields, such as rehabilitation, public health, clinical care, and psychology (Devlin *et al.*, 2019). Music therapy and music based-intervention give various chances for self-expression, cooperative group activities, imagination, and synchronized sensory motor experiences (Malchiodi, 2005). Besides, there is fact that music therapy and music based-intervention have helpful impacts on mood (Maratos *et al.*, 2008; Shuman *et al.*, 2016), stress (Pelletier, 2004), self-esteem (Sharma and Jagdev, 2012), motivation (Ross *et al.*, 2008), emotional expression (Baker *et al.*, 2007), and social cohesion. The various effects of music therapy are coming from many fields. It is even argued that music therapy should be provided at various treatment stages because it can improve the related health outcomes of cancer patients (Friederike *et al.*, 2020).

SAMULNORI AND AJAENG

Percussion has a long history in medicine (Roman *et al.*, 2021). *Samulnori* is a representative percussion ensemble of Korean folk music. It is a performance consisting of *Janggu* (hourglass drum), and *Kkaenggwari* (small gong), Buk (Korean drum, barrel shaped drum), and Jing (large gong), and both the performer and the audience freely communicate with each other and participate together. *Samulnori* is a performance that creates the most popular and diverse

*Correspondence: Kyung-Ja Ko

E-mail: sono-1004@hanmail.net

Received Aug 11, 2022; Accepted Aug 19, 2022; Published Aug 31, 2022

doi: <http://dx.doi.org/10.5667/CellMed.2022.013>

©2022 by CellMed Orthocellular Medicine Pharmaceutical Association

This is an open access article under the CC BY-NC license.

(<http://creativecommons.org/licenses/by-nc/3.0/>)

variations with the ensemble of four traditional Korean percussion instruments. It feels more familiar because the composition of the instruments is simple, anyone can easily participate in the performance, and they can be replaced anytime, anywhere. Active music therapy, including improvisational, re-creative, and compositional, is defined as playing musical instruments, singing, improvisation, and lyrics of adaptation (Qishou *et al.*, 2020). *Samulnori* is a music activity of active participation with improvisation.

Ajaeng is a stringed instrument used in state-designated events such as the Lotus Lantern Festival (*Yeondeunghoe*, 燃燈會) and *Palgwanhoe* (八關會) in the 11th century Goryeo Dynasty. *Ajeng* has changed with a long history and tradition. The sound box was increased to create a greater sound effect, and the low-pitched band was enlarged to continue the afterglow deep and long.

RESULT AND DISCUSSION

Goethe said, "The sound of drums has a power that cannot be expressed by human emotions." We think it's because of the subtle feeling of driving the human body-friendly rhythm and emotions that only percussion instruments have. The feeling of a percussion instrument is as important as its sound,' says Talley and O'Connor (1992). Percussion instruments are both trained, as well as listening and tactile skills. (Anna, 2016). *Samulnori* is a total activity that exchanges feelings and shares energy while watching, listening, and breathing with each other. In addition, *Samulnori* provides more musical and sensual stimulation with the relaxation and tension principle of rhythm and beat. Moreover, *Samulnori* is not a solo performance. Other ensembles are similar, but in the case of *Samulnori*, all participants often play all instruments. Learn the basic rhythm by learning *Janggu* (Hourglass drum), and learn *Kkaenggwari* (small gong), *Buk* (Korean drum, Barrel shaped drum), and *Jing* (Large gong). Performers play one or a few of them, but the accompanying performance of a person familiar with all instruments has a different depth of harmony. The depth of empathy is different. The distinction between me and others disappears. When many people are together, it increases the synergy of empathy. It's possible with four people, but the more people you play with, the more exciting it is. In the word "exciting," the word "overwhelming" means "it is difficult to endure or endure because the degree or amount is excessive." In other words, it's called "self." When the excitement rises, the shoulders automatically move up and down, humming, and chirping. The harmony of the four percussion instruments is also a fantastic harmony. Many instruments are like that, but percussion is more immersive than the listener. You often fall into a trance. If you learn it yourself and leave yourself in the rhythm of percussion, you can meet the time to escape psychological pain. Ajaeng and *Samulnori* are perhaps awkward but perfect harmony. You can see the harmony between the most percussive stringed instrument and the most detailed percussion instruments. From the heavy and slow ajaeng rhythm, it leads to light and fast *Samulnori*, and the speed of things is heightened by meeting the rough tone of ajaeng.

In this work, a verse of Jindo Arirang resonates sadly when the performance stops for a while. Then, through all the instruments and chirping, the climax catharsis is achieved. In other words, it creates a synergy effect. The harmony of percussion, string, rest, and folk songs expresses the four seasons of emotion and shows the joys and sorrows of life,

making the listeners feel at their peak in various emotions. We think that although the role of Ajaeng in this work is a string instrument, it gives a synergy effect of music therapy through dynamic participation such as percussion. Just as tuberculosis, which kills two million people every year, has a greater synergy effect on tuberculosis treatment when two are used, in addition to using only one treatment (Yoko *et al.*, 2013).

Through solidarity and cooperation, the energy of co-prosperity is emitted, and this intense wave becomes a synergy that creates greater power. The collaboration between *Samulnori* and *Ajaeng* will exert greater power from a music therapy perspective. So, we hope that this combination will be a new alternative approach to music therapy.

ACKNOWLEDGEMENT

For those who participated in the concert and contributed, *Janggu* (hourglass drum): Seo Hyun Park, Young Hee Tak. *Jing* (large gong): Ok Hee Song, Hyun Yong Cho. *Kkwaenggwari* (small gong): Kyung Ja Ko. *Buk* (barrel shaped drum): Soo Ran Park, Joo Hee Yang. *Ajaeng*, Trumpet: Hyung Min Kim. Background work: Korean painter Kyung Hyun Kim. Gyu Seong Cho, who provides traditional Hongik pigment. The trumpet song "Feel so good" at the end of the performance was added to further heighten the excitement.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

REFERENCES

- Anna Harris. Listening-touch, Affect and the Crafting of Medical Bodies through Percussion. *Body Soc.* 2016 Mar; 22(1): 31–61. Published online 2015 Nov 12. doi: 10.1177/1357034X15604031 [PubMed]
- Baker FA, Gleadhill LM, Dingle GA. Music therapy and emotional exploration: Exposing substance abuse clients to the experiences of non-drug-induced emotions. *Arts Psychother.* 2007;34: 321–330. doi: 10.1016/j.aip.2007.04.005 [Google Scholar] [PubMed]
- Cooper GW., Meyer LB. *The Rhythmic Structure of Music.* (Chicago, IL: University of Chicago Press). 1963. [Google Scholar] [PubMed]
- Devlin K., Alshaikh JT, Pantelyat A. Music therapy and music-based interventions for movement disorders. *Curr. Neurol. Neurosci. Rep.* 2019;19:83. 10.1007/s11910-019-1005-0 [PubMed] [CrossRef] [Google Scholar]
- Friederike Köhler, Zoe-Sofia Martin, Ruth-Susanne Hertrampf, Christine Gäbel, Jens Kessler, Beate Ditzen, and Marco Warth. Music Therapy in the Psychosocial Treatment of Adult Cancer Patients: A Systematic Review and Meta-Analysis. *Front Psychol.* 2020; 11: 651. Published online 2020 Apr 16. doi:

10.3389/fpsyg.2020.00651 [PubMed]

Frijda NH, Sundararajan L. Emotion refinement: a theory inspired by Chinese poetics. *Perspect Psychol Sci.* 2007; 2(3):227–241. [PubMed] [Google Scholar]

Jaakko Erkkilä, Olivier Brabant, Suvi Saarikallio, Esa Ala-Ruona, Martin Hartmann, Nerdinga Letulè, Monika Geretsegger, and Christian Gold. Enhancing the efficacy of integrative improvisational music therapy in the treatment of depression: study protocol for a randomised controlled trial. *Trials.* 2019; 20:244. Published online 2019 Apr 29. doi: 10.1186/s13063-019-3323-6 [PubMed]

Juncai Hou. Effective Ways for College Students' Mental Health Education Based on Music Therapy. *J Healthc Eng.* 2022; 2022: 3031064. [PubMed]

Kailimi Li, Linman Weng, and Xueqiang Wang. The State of Music Therapy Studies in the Past 20 Years: A Bibliometric Analysis. *Front Psychol.* 2021; 12: 697726. Published online 2021 Jun 10. doi: 10.3389/fpsyg.2021.697726 [PubMed]

Large EW, Herrera JA, Velasco MJ. Neural networks for beat perception in musical rhythm. *Front. Syst. Neurosci.* 2015; 9:159. 10.3389/fnsys.2015.00159 [PMC free article] [PubMed] [CrossRef] [Google Scholar] [PubMed]

Lerdahl F, Jackendoff R. *A Generative Theory of Tonal Music.* (Cambridge, MA: MIT Press). 1983. [Google Scholar] [PubMed]

London J. (2004). *Hearing in Time: Psychological Aspects of Musical Meter.* Oxford: Oxford University Press. [Google Scholar] [PubMed]

Louisa Hohmann, Joke Bradt, Thomas Stegemann, Stefan Koelsch, Qinhong Zhang, Effects of music therapy and music-based interventions in the treatment of substance use disorders: A systematic review. *PLoS One.* 2017; 12(11): e0187363. Published online 2017 Nov 15. doi: 10.1371/journal.pone.0187363 [PubMed]

Malchiodi CA. Expressive therapies: History, theory and practice In: Malchiodi CA, editor. *Expressive therapies.* (New York, US: Guilford Press); 2005. pp. 1–15. [Google Scholar] [PubMed]

Maratos A, Gold C, Wang X, Crawford M. Music therapy for depression [Internet]. The Cochrane Collaboration, editor. *Cochrane Database of Systematic Reviews.* (Chichester, UK: John Wiley & Sons, Ltd); 2008. doi:10.1002/14651858.CD004517.pub2 [Google Scholar] [PubMed]

Nan Mao. The Role of Music Therapy in the Emotional Regulation and Psychological Stress Relief of Employees in the Workplace. *J Healthc Eng.* 2022; 2022: 4260904. Published

online 2022 Jan 29. doi: 10.1155/2022/4260904 [PubMed]

Pelletier CL. The effect of music on decreasing arousal due to stress: A meta-analysis. *J Music Ther.* 2004;41: 192–214. doi: 10.1093/jmt/41.3.192 [PubMed] [Google Scholar]

Qishou Tang, Zhaohui Huang, Huan Zhou, Peijie Ye, Sukru Torun. Effects of music therapy on depression: A meta-analysis of randomized controlled trials. *PLoS One.* 2020; 15(11): e0240862. Published online 2020 Nov 18. doi: 10.1371/journal.pone.0240862 [PubMed]

Roman Krumpholz, Jonas Fuchtmann, Maximilian Berlet, Annika Hangleiter, Daniel Ostler, Hubertus Feussner, and Dirk Wilhelm. Telemedical percussion: objectifying a fundamental clinical examination technique for telemedicine. *Int J Comput Assist Radiol Surg.* 2022; 17(4): 795–804. Published online 2021 Nov 24. doi: 10.1007/s11548-021-02520-z [PubMed]

Ross S, Cidambi I, Dermatis H, Weinstein J, Ziedonis D, Roth S, et al.,. Music therapy: A novel motivational approach for dually diagnosed patients. *J Addict Dis.* 2008;27: 41–53. doi: 10.1300/J069v27n01_05 [PubMed] [Google Scholar]

Sharma M, Jagdev T. Use of music therapy for enhancing self-esteem among academically stressed adolescents. *Pak J Psychol Res.* 2012;27: 53–64. [Google Scholar] [PubMed]

Shuman J, Kennedy H, DeWitt P, Edelblute A, Wamboldt MZ. Group music therapy impacts mood states of adolescents in a psychiatric hospital setting. *Arts Psychother.* 2016;49: 50–56. doi: 10.1016/j.aip.2016.05.014 [Google Scholar] [PubMed]

Talley NJ, O'Connor S. (1992) *Clinical Examination: A Systematic Guide to Physical Diagnosis*, 3rd edn. Sydney: Maclellan and Petty. [Google Scholar] [PubMed]

Vuoskoski JK, Eerola T. The pleasure evoked by sad music is mediated by feelings of being moved. *Front Psychol.* 2017; 8. 10.3389/fpsyg.2017.00439. [PMC freearticle] [PubMed]

Yoko Kita, Satomi Hashimoto, Toshihiro Nakajima, Hitoshi Nakatani, Shiho Nishimatsu, Yasuko Nishida, Noriko Kanamaru, Yasuhumi Kaneda, Yasushi Takamori, David McMurray, Esterlina V. Tan, Marjorie L. Cang, Paul Saunderson, E.C. Dela Cruz, and Masaji Okada. Novel therapeutic vaccines [(HSP65 + IL-12)DNA-, granulysin- and Ksp37-vaccine] against tuberculosis and synergistic effects in the combination with chemotherapy. *Hum Vaccin Immunother.* 2013 Mar 1; 9(3): 526–533. Published online 2012 Dec 18. doi: 10.4161/hv.23230 [PubMed].