Scientific Studies on Group Drumming
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1. Drumming Strengthens Immune System

- N=111 non-drummers. Tested five conditions: Listening Control, Drum circle, Impact Drumming, Shamanic, Composite Drumming.

- Natural Killer NK cell activity was boosted in subjects who drummed compared to controls.

- Natural Killer cell activity stimulated by Cytokines (Interleukin II and Gamma Interferon - Helper (Th1) cells) was boosted in subjects who drummed compared to controls.

- A specific HealthRHYTHMS group drumming protocol changed cellular biology and reversed the stress response.


- N=112 employees in Long Term Care. Interdisciplinary teams drumming once a week for one hour for a 6-week series.

- Significantly decreased burnout on Maslac Burnout Scale.

- Improved employee mood states by 46% on POMS Profile of Mood States – sustained effect of 62% six weeks post intervention.

- Economic Impact – saved $89,000 for typical 100-bed medical facility through employee retention and reduced turnover.

- Total annual savings to the industry based on an 18.3% decrease in turnover at every long-term care facility is therefore projected at $1.46 billion.

3. Drumming Reduces Nursing Student Burnout


- N = 75 first year associate degree nursing students.

- Improved mood states by 28.1% on POMS Profile of Mood States.

- Economic Impact projections – retention of 2 students annually per a typical 105-student program, resulting in a projected annual savings of $29.1 million to US Nursing Schools.

- Projected cost savings of $322,000 for the typical acute care hospital, and more than 1.5 billion for the US healthcare industry.
4. Drumming strengthens Immune System and corporate wellness in Japanese employees


- N = 40 Yamaha employees. The RMM group demonstrated enhanced mood, lower gene expression levels of the stress-induced cytokine interleukin-10, and higher NK cell activity when compared to the control.

5. Group Drumming reduces Instrumental Anger in at – risk Adolescents.

Creative Musical Expression as a Catalyst for Quality of life Improvement in Inner-city Adolescents Placed in a Court-referred Residential Treatment Program (Bittman, et al) ADVANCES Spring 2009, VOL. 24, NO. 1 Creative Musical Expression

http://remo.com/experience/post/creative-musical-expression-as-a-catalyst-for-qual/

- N = 52 ages 12 to 18. Pre/Post test matched controls.

- Measured Child and Adolescent Functional Assessment Scale (CAFAS) Adolescent Psychopathology Scale (APS), Adolescent Anger Rating Scale (AARS), Reynolds Adolescent Depression Scale, 2nd edition (RADS 2)

- Improved scores in school/work role performance, total depression, anhedonia/negative affect, negative self-evaluation, and instrumental anger.

- Extended impact - improvements 6 weeks after completion of the protocol.
6. Keyboard playing Reverses Stress on Genomic Level

http://remo.com/experience/post/understanding-our-genomics-research/

- Applied Biosystems and Yamaha.
- Reversed 19 of 45 gene markers of stress response versus 6 of 45 in resting control and 0 of 45 in continued stress condition.
- First study to develop an individualized genomic stress-induction signature.


http://www.hindawi.com/journals/ecam/2011/250708/

- N=101, 5th grade, 90% Latino, 12 week curriculum counselor-led drumming therapy groups. Measured Teacher’s Report Form and Child Behavior Checklist.
- Significant improvement - internalizing problems, withdrawn/depression, attention problems, anxiety problems, attention deficit/hyperactivity problems, inattention subscale, oppositional defiant problems, sluggish cognitive tempo.

8. Group Drumming better than Prozac for mental health

10 weeks of group drumming among mental health service users compared with a non-music control group.

Significant improvements were found in the drumming group compared to control group.
By week 6 decreases in depression and increases in social resilience. By week 10 these had further improved alongside significant improvements in anxiety and mental wellbeing.

All significant changes were maintained at 3 months follow-up.

Saliva samples from drumming group were tested for markers of underlying inflammatory immune responses. This included cortisol and the cytokines interleukin (IL) 4, IL6, IL17, tumour necrosis factor alpha (TNFα), and monocyte chemoattractant protein (MCP) 1.

Across the 10 weeks there was a shift away from a pro-inflammatory towards an anti-inflammatory immune profile.

This study demonstrates the psychological benefits of group drumming and also suggests underlying biological effects, supporting its therapeutic potential for mental health.