Research publications BIODANZA & SCIENCE

Following you find a list about research publication in journals worldwide until 2017. Point 1-8 is the order of the Leipzig-Biodanza-Research plan, how it was discussed with Rolando Toro: BIODANZA Publications worldwide for download at www.bionet.name.

1. Development and updating of the theoretical model of Biodanza,
The advantage of Science is the critical reflexion. In the Professorial Dissertation of Stueck (2007) there was the demand to write a critical reflexion about the Theory of BIODANZA.


2. Experimental life science basic research on the effects of Biodanza
In this point are investigations about Laboratory research, Psychoneuroimmunological research and BIODANZA, Physiology and BIODANZA, since 1998.

Physiology and Biodanza:


Hormons, Immunesystem (Psychoneuroimmunology and Biodanza):


Investigation of Biodanza Music:


Effects of Caress and Contact:

(1) Stueck, M., Balzer, H.-U. & Sack, U. et.al. (2015), Laboratory project about contact: publication in progress
3) Quasi-Experimental studies weekly Biodanza classes (since 1998): Experimental-Control Group-Design

1999-2008: BIODANZA und Stress: Investigacion sobre los efectos psicologicos y fisiologicos de la biodanza (with R. Toro: first empirical research project worldwide)


Since 2005 Doctoral Thesis (PhD, Professorial dissertations)


DOWNLOAD: www.bionet.name
2004-2008: Systemic Stress reduction (SYSRED) in Schools under the use of BIODANZA (BIODANZA and Health Promotion)


2008 - BIODANZA, Stress, Wellbeing: annual courses of Biodanza


**Summary of the empirical BIODANZA Research worldwide (2008):**


**Biodanza and Fibromyalgia**


**4) Quasi-Experimental Research on Extension of Biodanza (since 2006)**


**5) Cross-cultural studies of Biodanza (Since 2005)**


**6) Studies on the quality of Biodanza teacher-training (since 2003), especially ethics**


**7) Biodanza with children (since 2008)**

2009/2010: BIODANZA and PTSD, e.g. after Natural Disasters for children


(2) Stück, Marcus; Schlegl, Sandra; Villegas, Alejandra; Riha, David; Törpsch, Alexander; Duben, Madlen (2010). The classification of body-oriented interventions in the Treating post-traumatic disorders in childhood and adolescence, in: Contributions to Education and rehabilitation psychology. *Learning, Adjustment and Stress Disorders*, Edt. Evelin Witruk, Frankfurt am M.: Peter Lang, S. 427-454


2010/2013: BIODANZA and School of Empathy


2010: BIODANZA and Masterplan Healthy education


2010: Waterbased selfregulation with Biodanza for children

2013: Effects of an Evidence Based Biodanza-Program (TANZPRO-BIODANZA) for Kindergarten children (4-6) on Psychology, Physiology, Immune system, Hormone system


8) Publications in scientific journals, Methodology of BIODANZA-Studies

This is a important point of the Masterplan. To focus on highly accepted publications.


New publications written especially for Biodanza teachers:

BOOK BIODANZA & SCIENCE: Introduction in the scientific Basics of BIODANZA (M.Stueck, Part 1) – print on demand: biodanzanews@gmail.com

BIODANZA & SCIENCE: Introduction in the scientific Basics of BIODANZA (M.Stueck, A.Villegas, Part 2, Eds.), print on demand: biodanzanews@gmail.com

“The Final discussion. Interviews with Rolando Toro about the Science within Biodanza” (M.Stueck): under construction/work: biodanzanews@gmail.com
Evidence-based BIODANZA in institutions to increase wellbeing and to reduce the stress in children

Marcus Stueck & Alejandra Villegas

The body is the greatest thinking organ for children. It means that a child feels this world, because than younger a child is than less the cortex is developed. So the basic of the childs wellbeing is first of all linked to the possibility to play (Krenz, 2006), to express the instincts, needs and feelings and to feel connected with others (Stueck, 2010). This wellbeing in children needs first of all support and stimulation of the adults and teachers. (1) When adults are not present, than children cant experience the environment fully with their body and they cannot develope a self conciousness, describes the biologist Humberto Maturana. (2) Second needs the child a relaxed healthy environment and (3) third empathic links to the teachers and adults. This 3 steps presence, relaxation and empathy Stueck defines in the Masterplan Healthy education as the basics in human relations. In this context empathy is the basic of wellbeing as a biologically, affective, cognitive and behavioural connection between child and teacher or parents. It needs trust, autonomy, interest in others, giving up controlling ambitions. Stueck and Villegas where developing evidence based Biodanza programmes for teachers to increase empathy and wellbeing with themself and with others and especially with nature. Also a systemic stress reductive interventive approach was testet in german schools (Stueck, 2007).

This theory shows, that to increase wellbeing in children means first of all to work with adults in a systemic approach and first of all in a nonverbal way to express their own identity. One of the methods to reach this aim is BIODANZA.

Biodanza for children was adapted from the Rolando Toro System by Cecilia Luzzi in Chile in the 1980s. Dance experiences for children are based on dances along the lines of vitality, affectivity, creativity and transcendence. In 2010 Marcus Stueck and Alejandra Villegas (Stueck, Villegas, 2013) undertook in a project of the ministry of Health and Education of Germany the first research worldwide on Biodanza with children. They prepared this method for the work in institutions by developing an evidence-based Biodanza programme (TANZPRO-Biodanza® for children / the dance of Life / way from head to Body) as the nonverbal part of the School of Empathy (SoE; Stueck, 2013). The verbal part of the School of Empathy is the Evidence-based Programme “Respectful Communication®” (Language of Life / way from the body to head) based on Marshal Rosenberg’s Nonviolent communication (Mueller, Poerschmann, 2010; Schoppe, Stuck, 2012). The verbal and nonverbal part of the development of empathy under the use of Biodanza are well integrated and with this concept Biodanza was brought to many Educational Fields in Indonesia, Latvia Germany. This Evidence-based programme TANZPRO-Biodanza® for children exists in a kindergarten version (10 sessions ages 4-6) and a school version (10 sessions ages 7-12) and was investigated at the University of Leipzig. Each session is accompanied by music and supported using activating exercises with faster music to promote not only the vitality but also the creativity of children. Then quieter exercises together with slower music are used to promote relaxation and encounters with appropriate (partner) exercises. These can improve the perception and acceptance of emotions as well as emotional regulation and empathy with others. Thus findings were made in the studies as well as a series of biochemical, physiological and immunological parameters which were investigated. Especially, the reduced testosterone levels in the saliva of children after these meetings show positive effects of the method on the immune system towards the development of more sensitivity (Stueck, Villegas, 2012). Also the reduction of cortisol and the specific effects of TANZPRO-Biodanza on heart rate and blood pressure show the improvement of physical autoregulatory processes. The results confirmed that cognitive performance in children (concentration and emotion recognition) can be developed by dancing.
and the effects are on average greater when participants have lower cortisol levels in their saliva after the TANZPRO-Biodanza sessions than with higher levels of cortisol. The measured cortisol reduction suggests that TANZPRO-Biodanza® (with its stress-reducing, pro-social nature) has the capability of promoting the development of emotion recognition abilities, thus enhancing the social skills of young children (Stueck, Villegas, 2013). This research under the use of the evidence-based Biodanza-Training TANZPRO-Biodanza will be repeated in Latvia mainly with the aim of reducing chronic stress and hypersensitivity in young children as the basis of nonviolent behaviour in schools and kindergardens (Balzer, Stueck, 2013). Embedded should be the work with children in a masterplan Healthy Education or similar meta plans where teachers and the conditions are involved (Stueck, 2009, 2013) by using 7 steps: presence, relaxation, empathy, supervision, educational abilities and frame conditions. This is also undertaken using wide research with teachers under the use of Biodanza (Stueck, 2007, Stueck, Villegas, 2008).

**Conclusion:** Wellbeing with children is first of all all support and stimulation of the adults and teachers and the possibility to move freely and to express the feelings and needs autonomously. The article will give an overview about some studies about hormonal and immunological effects of the evidence-based programmes with Biodanza.

**Literature:**
s. Literatur list.

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**Fernanda Perche gewidmet**

BIODANZA for adults – the biological basic of wellbeing

Marcus Stueck & Alejandra Villegas

Wellbeing is first of all a biological process, embedded in social contexts and with psychological effects. For instance is a certain synchronisity between heart beat and breathing cycle for wellbeing necessary (distribution 4:1). Also between other autonome reactions (skin resistance, skin potencial, skin temperature), biochemic parameters (cortisol, testosterone, immune globuline A) and wellbeing are shown this synchronisity effects (Balzer, 2008). Stueck and Balzer investigated the parameter Hypersensibility of the skin and its effect on exhaustion and Burnout. This biological malfunctions and its influence on wellbeing can be regulated by Yoga, Meditation and Biodanza as different studies of Stueck and Villegas has shown. In their studies they found, that in 10 sessions of Yoga and Biodanza selfregulative balancing processes are stimulated. It means Immunglobuline A is increasing after each session significantly. In comparision to Yoga (relaxation method) by using dance and expression of Emotion in Biodanza the Pre Values of Immuneglobuline shift to a higher level from the 7th session onwards. It means a selforganisation in the IgA-regulationary system took place. Selforganisation is a process of instability and new stability and it can be measured by different parameters (e.g. skin response) and analyzing models (bio rhythmometrical time row analysis, Hecht and Balzer, 2000). Stueck, Villegas and Balzer could show, that the instability of the vegetative-emotional system is significant higher after a Biodanza Session but the participants feel in the same time significantly more awake, had a better mood and a higher vitality. Also the physiologically excitement was significant higher in the next day after a Biodanza session accompagnied by a higher feeling of wellbeing and by using less protection mechanisms (e.g. overloaded inhibition states) to cope with the excitement. To conclude the biological basic of wellbeing has to do with stability /instability in the autonomeeous regulation, with expression of emotion, with selfregulation and one effective method for that is dance respective Biodanza. Biodanza exercises directly stimulate most of all the symphatic-nervous system and the limbic-hypothalamic system in a natural, positive and healthy way (Stueck, Villegas, 2008). The method of Biodanza was developed by Rolando Toro in the 60s. Rolando Toro's aim was for people to learn how to live well and happily together, because when people are happy they are healthy, as different research has shown (see positive psychology, Seeligman, 2002). For this he created with Biodanza a system of dances in 5 Lines of Experience: Vitality, Affectivity, Sexuality, Transcendence, Creativity. The theory of Biodanza is based on the concept of human integration on a personal, interpersonal and transcendental level. In the 1990s Marcus Stueck and Alejandra Villegas and colleagues started to investigate scientifically BIODANZA at Leipzig university and published their results about the effects of BIODANZA on wellbeing as the examples has shown in the beginning of this abstract. In different studies they demonstrated that Biodanza has an effect on physiological, psychological and immunological system (Villegas, Stueck et al. 1999, 2000, Villegas, 2006, Stueck, Villegas, 2004, 2007, 2008, 2009). By this changes Biodanza is a 'method to improve than psychological parameters, for instance improvement of the expression of identity', it means the unit between thinking, feeling and acting'. Thus inducing harmony, unity, fluidity, eroticism, pleasure and plenitude which can be shown in the change of different psychological variables (higher optimism, relaxation, self-efficacy, ability of love and empathy, (Villegas 2006/2008, Stueck, 2007/2008, 2012). This increased potential counterbalances the excessive negative impact on the system from stress, anxiety, depression and the sublimation of instinct and self-expression into 'more culturally acceptable' behaviour. Studies have been done especially in the study group in Leipzig with adults (teachers, patients of psychotherapy, employees), teachers and children (see literature). An overview about the worldwide dissertation works is given in the Bionet Journal 2012 (see www.bionet.name).
Literature:


Research of the authors about Biodanza

“To investigate Biodanza is like to investigate a treasure deep in the ocean
or to watch a indefinite universe full of incredible and beautiful miracles”

Marcus Stueck

Publication 2016: A review out of 7 Biodanza studies with discussion of study quality
Research Article

Marcus Stueck, Paul S. Tofts

Biodanza Effects on Stress Reduction and Well-Being – A Review of Study Quality and Outcome

DOI 10.1515/sigtem-2016-0018

Abstract: Biodanza is a new approach towards health and well-being. It aims to work with dance and group experiences to reinforce intra- and inter-individual resources, reduce stress and increase well-being. Up to 2016, 13 studies and one systematic review about Biodanza studies have been published. The Research Network BIONET was created in order to connect researchers and to find a consensus on the standards of good quality studies. In this review, the authors summarised seven Biodanza studies on stress reduction and well-being. The authors describe and create criteria to evaluate the quality of the research works inspired by international standards of clinical and social scientific intervention research. In several studies, Biodanza has an effect on impatience, ability to recover, feeling of activation, physiological sympathetic activity (e.g., heart rate, skin response), increased mood, feeling of well-being, immunological effectiveness on IgA and increased expression of emotion. One study also showed the effect on stress reduction. Also there was a large difference between those who choose Biodanza (they have a significant lower status of stress reduction) and the other groups. In this study, the dropout rate was high (42%); in the other studies, it was under 10%.

Keywords: Biodanza, stress reduction, well-being, health, dance, yoga, review, methodology, body work, study design.
Publication 2017: With articles from researchers and dancers from the whole world and one Article about BIODANZA with children:

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**CHAPTER 4**

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**EVIDENCE-BASED BIODANZA PROGRAMMES FOR CHILDREN (TANZPRO-BIODANZA) IN SCHOOLS AND KINDERGARTENS**

*Some Effects on Psychology, Physiology, Hormones, and the Immune System*

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**MARCUS STUECK AND ALEJANDRA VILLEGAS**

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since 2010 Development of Evidencebased Biodanza Programms for Institutions (in a Project of the German Ministry of Health).

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**FIGURE 4.1.** Examples of evidence-based Biodanza programmes (Logos). (Credit: M Stueck.)
Some results:

**Table 4.2. Overview of sessions and related themes of basis version of TANZPRO-Biodanza.**

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Theme</th>
<th>Notion (life focused value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Travel to Spain</td>
<td>Love and care</td>
</tr>
<tr>
<td>2</td>
<td>Travel to Egypt</td>
<td>Joy</td>
</tr>
<tr>
<td>3</td>
<td>Travel to Tanzania</td>
<td>Leisure and courage</td>
</tr>
<tr>
<td>4</td>
<td>Travel to Chile</td>
<td>Wishes and risk</td>
</tr>
<tr>
<td>5</td>
<td>Travel to Brazil</td>
<td>Feeling of security and embrace</td>
</tr>
<tr>
<td>6</td>
<td>Travel to Mexico</td>
<td>Diversity and friendship</td>
</tr>
<tr>
<td>7</td>
<td>Travel to Ireland</td>
<td>Acceptance and integration</td>
</tr>
<tr>
<td>8</td>
<td>Travel to Russia</td>
<td>Humbleness and sportsmanship</td>
</tr>
<tr>
<td>9</td>
<td>Travel to China</td>
<td>Creativity and solidarity</td>
</tr>
<tr>
<td>10</td>
<td>Travel to Germany</td>
<td>Respectful communication</td>
</tr>
</tbody>
</table>

**Change in Cortisol Level in Kindergarten Children because of TANZPRO-Biodanza**

This study showed the change in cortisol of kindergarten children after taking ten sessions of TANZPRO-Biodanza. Children initialized with high cortisol level seemed to be ‘normalizing,’ whilst those with low cortisol level seem to be already ‘normalized’ (Stueck et al. 2015). Furthermore, the findings from this study suggested that there might be an autoregulatory effect of TANZPRO-Biodanza sessions in children of kindergarten age.

**Effects on Emotional Recognition and Its Relation to Cortisol Reduction**

The same study (ten children, aged 4–5; ten sessions of TANZPRO-Biodanza) confirmed that cognitive performance in children (e.g. emotion recognition, measured with the Emotion Recognition Test in the Vienna test system, whereby the children had to recognize different emotions from photographs) could be developed by dancing. The effects were on average greater when participants had higher initial cortisol levels in their saliva (before the TANZPRO-Biodanza sessions) than those with lower levels of cortisol (Stueck et al. 2015).

**Heart Rate and the Improvement of Physiological Auto-regulation**

In the same study, looking at the heart rate for each child before and after the TANZPRO-Biodanza course, there was a significant decrease in the average score, which was statistically significant ($p = 0.04^*$, $d^* = 0.77$, $1 - \beta = 0.68$). The low-level and high-level groups showed significant change of heart rate (average over ten session) between pre-session and post-session, towards the value of the medium heart-rate group (see Table 4.3).
To acquire in the publishing house of the centre of educational health (Germany)

Stück, M. & Villegas A. (ed.)

Physiological aspects of Biodanza: Empirical research.
Leipzig: publishing house centre of educational health

Immunological and endocrinological studies on Biodanza
Leipzig: publishing house centre of educational health

Biodanza with patients
Leipzig: publishing house centre of educational health

Effects of Biodanza after one year
Leipzig: publishing house centre of educational health

Effects of Biodanza-Marathon
Leipzig: publishing house centre of educational health

All books are in German with summaries in English, Spanish and Italian

Print on demand:
biodanzanews@gmail.com