

Effects of Chin Don performance as a therapy to promote the psychological and health status in the elderly in a community setting: A multiple-case study

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Abstract

Purpose of study: To examine the psychological effects of Chin-Don (CD) performance as an alternative or supplemental therapy - or CD therapy (CDT) - on elderly people by analyzing and evaluating the mood effects and interpersonal relationships in community-based settings. **Methods and subjects:** Three psychologically negatively affected elderly cases (age: ≥ 60 yr) randomized from different facilities participated in the CDT. Subjects displayed different personalities and negative psychological emotions before exposure to CD performance (or CDT). The CDT involved CD performers using drum, trumpet, flute, other Asian instruments, etc. accompanied by humorous gestures, singing and dancing with or without occasional interactive participation of subjects. Yesteryear Japanese melodies with dancing were respectively used as acoustic and visual stimuli for the elderly subjects, who had to gather at the same place and time for the CDT. The pre- and post-CDT behavior and facial expressions of participants were observed, and individually recorded on a digital video camera for post-CDT exposure reconfirmation. **Results:** Based on the findings, psychologically positive effects of CDT (including triggering of smiles/laughter, improved mood, and better interpersonal relationships) were observed in the community setting. Those pre-exposure CDT negative psychological/emotional parameters were apparently improved after CDT exposure. **Discussion:** The acoustic and visual rhythmical stimuli produced by CD performers probably mimicked certain neural pathways via neural (acoustic and visual) pathways to retrieve memory of past/childhood experiences of happiness and joy, and evoked both positive physiological and psychological changes in the elderly subjects. CD performance - as CDT - may serve as a potentially useful source of positive inputs for the psychologically negative elderly in Japan.

Introduction

Lack of interactive association/communication and isolation, which accompany aging, are factors that induce psychological inadequacy and mental disease in the elderly. Often elderly people tend to lament on the purpose of their lives and 'death-wish' to their children and grandchildren in search of consolation and sympathy. They harbor guilty feeling of causing inconvenience to lives of their offspring and others. As a result, aging-related depression, psychologically negative emotions, and poor interpersonal relationship develop as a result of solitude-related behavior of the elderly.

Apart from medication-related treatment, various non-chemical approaches of entertainment and methods

have been introduced in recent years; laughter therapy via group work or in a community setting has especially scored significantly favorable outcomes.¹

Despite consuming sufficient quantities of wellness foods, psychologically negative perspectives and mental diseases linger on in the elderly with aging. Although medication and physical activity help the affected elderly to a certain extent, the use of non-chemical methods can be complementary in attenuating aging-related psychological issues and human relationships. As previous studies using various entertainment methods have demonstrated favorable outcomes with respect to depression and aging-related problems, we attempted to use chin-don (CD) performance as a form of therapy, or



Fig.1: Chin-Don performers in a row playing music during the Edo period (with permission from Tokyodo Publishers).

CDT, in the present multiple-case study.

Chin-Don (CD) performers have been performing in streets of Japan since 1878 (<http://hasi-ken.jimdo.com>) to advertise the opening of new stores and other venues, or promote special events such as the launching of new products and price discounts (Fig. 1).² The sound ‘chin’ is produced by beating a small gong-like instrument (called ‘Sho’ in Japanese) with a stick, while ‘Don’ is produced by beating a drum (‘Taiko’ in Japanese) with a stick. Because of the gayety and joy that CD performers exhibit with rhythmic musical flow (3 + 7 beats; 3 beats: don-don-don followed by 7 beats: chin-don chin-don chin-don), those watching appear to be attracted and rhythmically mimicked by the CD tone and rhythm (repetitive 3 beats + 7 beats); a change from their monotonous and routine environments (Fig. 2). Watching CD performance was free-of-charge and the common form of entertainment for the old and young after World War II in Japan. CD performance has been and is now rarely used as a mobile human-advertising medium. The rhythmic beating of the drum with trumpet and flute music enlightens and elates most – if not all - to a better mood and level of joy, especially in the case of children and previously exposed elderly. It is likely that this live form of entertainment, featuring drums at the initial stage and subsequently enhanced with trumpets, flute, and other instruments, could trigger past memories of joy and happiness for those who have been previously exposed.

In this study, we attempted to expose 3 senior citizens with psychologically negative mood who



Fig. 2: Chin-Don performers with their musical instruments. Courtesy of Mr. R. Kawachi.

experienced difficulty in interpersonal relationships to a CD performance, and investigated if the effects of the CD stimuli – as a form of therapy or CD therapy (CDT) - could mimic change in their psychological and interpersonal relationships in a community setting.

Methods and subjects

Three elderly cases (A=60, B=60, C=70 years old or y.o.), who resided either in her own home (A), in an Old-Folks Home (B) operated by the District Public Health Office (DPHO), or in an assisted living residence of a psychiatric hospital (C), participated in the CDT. Subjects were introduced to CDT (organized by the authors) via contact from the Daycare Services Department of District Public Health Office (DPHO). The CDT was performed with the following events: [i] Instrumental performance (musicians walked freely around in circle playing different musical instruments (including drum, flute, trumpet, etc. See Fig. 2); [ii] playing musical instruments and singing yesteryear/nostalgic melodies familiar to the subjects (e.g. ‘The apple song’, ‘The Green Mountain Ranges’, etc.) and getting participants to sing together; [iii] performing simple magic shows/tricks for laughter; [iv] gathering all participants to the same place and at the same time, and getting participant(s) to dance in tempo with the music/songs (Fig. 3); as well as other events related to the present study. The behavior and physical expression of the 3 subjects participating in the above events were individually recorded on a digital video camera for post-exposure viewing analysis. Subjects were briefed on the purpose and safety aspects of the investigation, and individual written consent was obtained from all patients



Fig. 3: Participant (man in khaki) joined in the fun and dance during CD performance: interactive session. Courtesy of Mr. R. Kawachi.

or their next-of-kin. After reviewing the study protocol, the Ethical and Moral Committee of the university approved of the investigation undertaken.

Subjects - case studies: Pre-CDT exposure

Case A: She was an elderly woman (60 y.o. or years old) suffering from Parkinson disease for 10 years. Because of difficulty in walking, she was occasionally confined to a wheelchair and was consistently kept indoors. Evidence of her psychologically negative state was that she never twitched a smile for more than the past 6 years. She displayed difficult interpersonal relationships with her family members and healthcare givers; and lamented to her children of her wish to die, as she saw no purpose in continuing to live “a hopeless life with limited purpose” (Table 1). On a regular visit, DPHO staff coaxed her family members to bring her along and joined in the CDT organized by the author. She participated in the performance session involving the CD music performers, and she was beating the drum during the performance (event [i]; Fig. 2).

Case B: Subject B was a very independent 60-yr-old woman, who took care of her chores all by herself. She had never smile from day 1 since joining the old-folks home community managed by the DPHO. She exhibited difficult interpersonal relationships, and seldom interacted with others (Table 1). She was not positively involved in daily activities. When she was asked to join the dancing session during the CDT (event [iv]; Fig. 3), she promptly complied.

Case C: An elderly woman (70 y.o.) who kept to herself most of the time, and neither responded nor smiled when initially exposed to CDT comprising performance [event

i], songs [event iii], juggling and magic shows [event iii] (Table 1). Thereafter event [iv] was abbreviated as she was unresponsive to calls to join the crowd for the various performances. Observing such futile effects, the CD performers mobilized to another ward in search of more positive action/outcome. The CDT-performing members were then requested by Case C via hospital staff to return to the original ward, and they played yesterday/nostalgic melodies (event [ii]) for her again.

Results (post-CDT exposure) and Discussion

Psychological findings were interpreted by observing the facial expressions, gestures, and behaviors of the subjects. The facial expressions were categorized as: no expression (-), occasional smiles without laughing out (\pm), with definite smiles and occasional (less than 3 times) laughing out loud (+), and with marked smiles and repeated (3 or more times) laughing out loud (++). Additionally, mood was categorized according to facial expression indicating: irritation and anger (-), expressing no irritation or anger (\pm), showing definite signs of pleasant feeling (+), and portraying marked happiness and joy (++). Interpersonal relationships were judged based on their behavior (especially talking) toward surrounding people, where ignoring others (-), noticing others without talking (\pm), noticing others definitely and talking softly with less than 10 words (+), and using more than 10 words to markedly talk excitedly with surrounding people (++).

Case A: In the CDT session (Fig. 2), accompanying dancing of CDT performers, Case A was observed beating the drum with a smiling face. Occasionally, she could even stand up and dance along with the CD performers. On the day after she returned home, she wrote a letter to the DPHO to confess that this was the first time in 10 years that she had enjoyed herself and laughed. Mood was reported as improved in post-exposure evaluation. On evaluation of the videotape recording, laughter was mostly observed during the performance (with acoustic/visual stimuli). Again she displayed laughter when allowed to view the videotape of her laughing in tempo with the music played by the CD performers (Table 1). On history analysis of her innate characters and personality, she was found to have been a radiant and happy-go-lucky, who occasionally attended laughter sessions (e.g. comedy performance) at the Yoshimoto stand-up comedy theater in Osaka when she was more independent. Beating the drum per se was something she found very healing, delightful, and comforting. According to her family members, she

appeared to have more positive onflash on life and was talking more with family members and healthcare givers after exposure to CDT.

Case B: She promptly agreed to join the dancing CDT session with a smile. Her smiles escalated to open laughter; DPHO facility staff were surprised at her ‘looks’ or expressions they had never seen before. On reviewing the videotape recording, her face lit up again with smiles and laughter, and told the surrounding staff and authors of the present study that she had actually studied dancing before, and was very thrilled to have the chance and feel to dance in tempo with her favorite rhythms/beats and songs during the CDT session. Her mood improved and she was elated as a result of participation in the CDT session (Table 1). DPHO staff observed improved positive interpersonal relationships with others, and she seemed to enjoy her daily activities more than ever after CDT exposure.

Case C: When CDT members returned to the ward for the second time, Case C was glad that they came. On playing some yesterday/nostalgic melodies or ‘oldies’, Case C gradually recalled names of the songs and felt the natural beauty of the CD musical flow. She whispered with marvel: “How beautiful nature can be!” On reviewing the videotape recording, she bubbly spoke of the good old days when she enjoyed the drum-beat and flute music of humorous CD performers. Her mood improved while reminiscing on past events and accompanying experiences (Table 1). She appeared to be more alert and responsive and talked to others for 3-4 days after the CDT exposure. When her condition relapsed to solemn mood and ‘looks’, playing those yesterday melodies appeared to light up her face.

Degenerative changes in physiological and psychological functions develop with age: unfavorable changes in the elderly (above age 60 years) are obviously more evident. Depression, which is often encountered by the elderly, negatively affects their mood, human (interpersonal) relationships, health, and overall quality-

of-life (QoL). Apart from exacerbating clinical conditions of the diseased (Case A), negative psychological condition may lead to impaired mobility and decreased lifespan.¹ Moreover, since diseased elderly place substantial burdens on family and caregivers, social and health services, attenuation of negative feelings in the elderly or diseased improves QoL and may prevent familial grief, and promote happiness for the elderly. Pain moderation, depression, insomnia, and sleep quality without cognitive change can indeed be improved significantly via laughter.^{1,3}

Although therapeutics are currently available for treatment, non-chemical treatments involving physiotherapy and physical activity are also often practiced. Laughing or laughter is a useful approach to attenuating depression and aging-relevant negative psychological symptoms. According to Takeda et al.,⁴ laughter serves as a good and effective complementary and alternative intervention for treatment and improvement of QoL in dementia patients.

Based on the Results (Table 1), the positive effects of CDT included triggering of smiles/laughter, improving mood, and promoting healthy interpersonal relationships in different community settings. Subjects were all negatively affected in terms of psychological condition to a certain degree, and all 3 cases displayed difficult interpersonal relationships before CDT exposure. They were probably feeling hopeless, lonely and could have felt they were just staying alive with little purpose. However, CDT performance (with music and dancing) apparently triggered past learning and experiences of joy (http://www.human-memory.net/processes_recall.html), or memories of blissful times and events in the past seemed to have retrieved through CD performance (music and dancing), yielding positive feedback reminiscence/responses or episodic memory.⁵ In fact, the region of the brain where memories of our past are supported and retrieved also serves as a hub that links

Table 1: Smiling/laughter, mood and interpersonal relationships with others were scored according to the psychological state of 3 elderly subjects living in community-settings before and after chin-don therapy (CDT). Elderly cases A, B and C (60-70 years) responded positively to CDT in a community setting. Definite (+) and marked (++) positive effects were observed after CDT exposure.

	Smile/laughter			Mood			Interactive talking		
	A	B	C	A	B	C	A	B	C
Before CDT exposure	-	-	-	-	-	-	-	-	-
After CDT exposure	++	++	+	++	++	++	++	++	+

familiar music, memories and emotion.⁶ This in fact supports the positive effects exhibited in all 3 cases upon their participation and self-indulgence in the CD performance.

Hitherto, CD performance has not been employed for 'healing' and improving mood and interpersonal relationships despite of its long-known existence. This is the first attempt by the author to evaluate if a useful effect can be mimicked in subjects previously exposed to CD. The rhythmical flow of beats (3 beats: don-don-don followed by 7 beats: chin-don chin-don chin-chin-don), spontaneous humorous performance, and dancing of CD performers probably stimulated certain acoustically and visually related neural pathways to retrieve blissful memory and physiological changes⁶ such as muscle tone with decreased skeletal muscle tone or relaxation of muscle fibers.⁷ This muscle tone change may have enabled Case A to dance with CD performers despite the fact that she experienced difficulty walking. The present study using CD may have evoked both physiological and psychological changes in the 3 elderly subjects via acoustic/visual stimuli derived from hearing/observing health-promoting and mood-improving CD performances. Observations of positive psychological and positive emotions in Cases B and C agree with previous documented findings.^{1,3,4,8,10-12} Three effects were obvious in this study: (i) mimicking positive psychological input/output of perceptions; (ii) triggering retrieval of past joyful events and happy memories; (iii) promoting better interpersonal relationships. Therefore, the use of CD performance may serve as a useful CDT for the Japanese elderly who have had previous CD exposure. The author is unsure if subjects who have not been previously exposed to CD would respond well to CDT.

According to Freud (1928),⁹ humor can be seen as a specific defense mechanism where positive emotions can overcome the undesirable negative emotions involved in a stressful situation. Apart from previous findings on QoL improvements in depression and dementia patients,¹⁰ stress attenuation^{11,12} as well as immunodefense enhancement via natural killer cell activity,¹² the present apparently favorable psychological and neurophysiological outcomes of CDT are obvious in previously CD-exposed Japanese elderly subjects, albeit the assessment could be subjective. As such, an objective approach is therefore warranted in order to demonstrate the actual effects on the psychological and

neurophysiological well-being as well as other effects in Japanese elderly.

Conclusion

CDT evoked smiles/laughter and improved mood to yield useful effects with positive psychological and neurological (and probably endocrinal) outcome via retrieval of fond memories of past events and experiences for 3 Japanese elderly cases. The outcomes indicate that CD performance may serve as a potentially useful source of positive psychological and neurophysiological input as a therapy for not-so-happy or psychologically negatively affected elderly in Japan.

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