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Stress-CARE: A Chinese music therapeutic model to treat stress and burnout syndromes

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Abstract

Psychological stress, stress disorders and burnout syndromes are considered a global burden – and they are challenging public health systems. They cover a broad spectrum of health conditions, some of which are diagnosable, others not. Although particularly burnout is commonly associated with working conditions, we identified stress disorders and burnout risks also in children and adolescents, hence the need for specific health education. Based on meta-synthetic construction, the present article suggests the Stress-CARE model for classroom education. It involves four crucial perspectives – creativity, anxiety, recovery and energy – hence the model's name CARE: (i) given that chronic stress and burnout tend to freeze cognition and emotion, creative interactions and models such as 'sound scene improvisation' can restore personality dynamics, (ii) there is an inner connection between stress and anxiety, which advocates psychoeducation alongside music-guided self-exploration, (iii) stress disorders and burnout syndromes have a tendency to inhibit self-healing capacities, while specific forms of sound meditation can bring relief and help to stimulate self-regeneration, (iv) chronic stress and burnout are likely to unbalance psychosomatic energy systems – and specific body-voice-techniques are used for rebalancing. Although the Stress-CARE model was designed for health education, it may also be applied in clinical settings as add-on therapy, complementary therapy or main therapeutic intervention, depending on the patients' attitude towards creative and aesthetic processes, as well as therapeutic responses.

Keywords: Burnout; Chinese public health; Health education; Music therapy; Resource orientation; Stress disorders

1. Introduction

In William Shakespeare's poem 'The Passionate Pilgrim' we read 'She burned with love, as straw with fire flameth; She burned out love, as soon as straw outburneth' – and this phrase is regarded as the first use of the term 'burnout' in western cultures. Centuries later, the English author Graham Greene published his novel 'A Burnt-Out Case' (1960) about a famous architect who no longer finds meaning in art or pleasure in life; he moves to a Congo leper colony and is diagnosed a 'burnt-out case'. The medical term 'burnout', however, traces back to the German-born American psychologist Herbert Freudenberger, and one of today's the most outstanding stress and burnout researchers, Andreas Hillert, summarised [1]:

Since Herbert Freudenbergers "Staff Burnout", published in 1974, burnout has become a synonym for psychosomatic, psychological symptoms and social consequences of a long-lasting workload exceeding an individual's capacity. Without any binding definition, the term burnout is used by patients as well as their doctors and therapists as a medical diagnosis. Described by Freudenberger from a patient's point of view, the term tries to integrate symptoms (fatigue, emotional exhaustion, reduced personal accomplishment and distancing from clients) as well as cause (job strain) of the burnout process. Thus, burnout was claimed to have nothing in common with psychiatric disorders. Altogether this burnout concept is fairly plausible and attractive for people suffering from the symptoms. It also lowers the threshold to think about work related and psychosomatic problems

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and to look for therapeutic support. According to the criteria of modern diagnostic systems like DSM-IV and ICD-10, the attempt to integrate symptoms and causes of a psychosomatic phenomenon in a diagnosis will fail. In ICD-10 burnout only can be found as an – undefined – additional diagnostic term. Scientific data show that people suffering from burnout are a quite heterogeneous group, including people who had once been highly motivated and successful in their business as well as people feeling overworked all their lives. While burnout is not convincing as a diagnostic term, its high popularity highlights the fundamental needs and problems of a changing society, characterised by increasing work related stressors and decreasing social security.

Relating to serious experience of fatigue, lack of focus, troubles completing common tasks and persistent stress, the World Health Organisation classified burnout as ‘a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed’, which appears now in the WHO’s International Classification of Diseases ICD-11. In this article, however, the notion of burnout is not necessarily associated with workplace-related stress, but may also involve other issues such as mothers of children with severe medical conditions such as cerebral palsy [2] or family members engaged in home palliative care. Regarding these domains raises afresh the question how to define ‘workplace’. The second risk-group, which differs considerably from health-care professionals providing home-based palliative care and who are experiencing burnout [3], is a main concern of the German association ‘Desidera Care’ [4]. Given the fact that in China family members are often in charge of palliative home care, these challenges are of Chinese public health relevance too. Moreover, the present article considers complex phenomena of fatigue, experienced stress, anxiety and inner emptiness in (mainly) secondary education students as an underestimated type of burnout.

In a comment on evolutionary theories of stress, the University of Bristol [5] highlighted that ‘almost all organisms have fast-acting stress responses, which help them respond to threats – but being stressed uses energy, and chronic stress can be damaging’. Only relatively late in history of medicine stress became a topic of interest. The Hungarian-Austrian endocrinologist Hans Selye, whose seminal paper on the ‘general adaption syndrome’ was published in *Nature* in 1936 (at that time he was at the age of 29 years), is considered the father of modern stress research [6], as well as its various domains such as neurobiology of stress [7].

Stress is an extremely common and multifaceted phenomenon – and while not all stress experiences have to be regarded as pathological, particularly strong and/or long-lasting mental stress is considered an important health-risk-factor. Divergent classifications of stress – some coinciding with diagnostic manuals, others not – make an estimation of the prevalence of pathological stress and stress disorders difficult [8]:

Given the ubiquity of traumatic events, it is not surprising that posttraumatic stress disorder (PTSD) - a common diagnosis following one of these experiences - is characterized as conferring a large burden for individuals and society. Although there is recognition of the importance of PTSD diagnoses throughout psychiatry, the literature on other diagnoses one may receive following a stressful or traumatic event is scant. This review summarizes the literature on stress disorders [...] including acute stress reaction, PTSD, adjustment disorder and unspecified stress reactions [...] common psychiatric and somatic consequences of these disorders [...] comorbid mental health conditions, including depression, anxiety and substance abuse [...] as well as [...] somatic outcomes, including cancer, cardiovascular disease and gastrointestinal disorders [...] all-cause mortality and suicide following stress disorder diagnoses is reviewed. Stress disorders are a critical public health issue with potentially deleterious outcomes that have a significant impact on those living with these disorders, the health care system and society. It is only through an awareness of the impact of stress disorders that appropriate resources can be allocated to prevention and treatment. Future research should expand the work done to date beyond the examination of PTSD, so that the field may obtain a more complete picture of the impact all stress disorders have on the many people living with these diagnoses.

There is broad consensus that stress is a challenging mental condition in China, and since the beginning of 2020 psychological distress has been significantly influenced by the COVID-19 pandemic [9]: ‘The implementation of unprecedented strict quarantine measures in China has kept a large number of people in isolation and affected many aspects of people’s lives. It has also triggered a wide variety of psychological problems, such as panic disorder, anxiety and depression’. Given the high probability that traumatic experiences associated with the pandemic give rise to chronic issues, we have to take this novel perspective into consideration, health educational models to alleviate stress disorders in Chinese pupils included.

Mental stress, stress disorders and burnout syndromes among Chinese adolescents are common and often connected with the notion of ‘educational stress’ [10] – Xin Chen and Maurya W. Glaude [11] even spoke of the ‘tragedy’ of academic stress among Chinese adolescents. Together with the efforts of the Chinese ministry of education to enhance mental health in Chinese children and adolescents through health education in regular schools [12], such epidemiological viewpoints were the main incentive for developing the Stress-CARE-model, which has been particularly designed for music classroom education.

2. Material and methods

Broadly speaking, medicine and clinical practice are dealing with three key issues: therapeutic media, underlying mechanisms and estimation of effect sizes. However, because of advanced and highly specialised related disciplines, medicine has lost important core areas: pharmacological research is in charge of the development of drugs, medical electronics produce devices such as intelligent pace-makers, and biochemistry or cognitive neurosciences discover underlying mechanisms. Together with the call for evidence based medicine, medical research has somehow lost its wholeness and balanced complexity. The importance of standardised designs such as randomised controlled trials and the statistical estimation of effect sizes seem to be overestimated, and apparently blind belief in the hierarchical pyramid of evidence based medicine is likely to ignore or exclude meta-theoretical considerations, hence the occurrence of systemic errors that are masked by terms such as ‘significance’ or ‘robustness’.

In this context, scientific epistemology raises the correspondence theoretical question how adequately abstract constructs, e.g. models based on numerical results from psychiatric inventories, may represent the source objects referred to, alongside the issue whether or to what extent inferential statistics can be used to estimate non-mathematical entities, hence the new parameters coherence size and confidence range [13, 14].

The enormous shift towards evidence based medicine and the dominance of effect sizes in medical research have not only resulted in a biased orientation of medical journals, but probably also brought about a decline in inventive medicine, alongside a lack of new non-technical and non-pharmacological treatment. And while methods to estimate and substantiate effect sizes such as meta-analyses of RCTs have become a broadly accepted and well-known standard, scientific means to develop psychiatric interventions that are precisely tailored to new challenges, for instance, seem to fade into oblivion.

Systemic meta-syntheses [15] are designed to construct new theories and to generate ‘powered hypotheses’, a process which can be considered complementary to the estimation of effect sizes as well as hypothesis-testing. In short: the various concepts of verification, power and truth matter. Akin to the concept of degrees of corroboration, the notion ‘powered hypothesis’ is based on epistemological strength: (i) similar to meta-analyses systemic meta-syntheses carefully select their components; different from meta-analyses, however, they are chosen because of their epistemological value and trans-disciplinary ‘goodness of fit’; (ii) while the weight of a meta-analysis stems from the amount and methodological quality of the included studies, meta-syntheses depend on the quality of linkage and how this blends with the inner logic of the entire framework; (iii) in line with the Gestalt-theoretical argument that the whole is greater than the sum of its parts, the theory of systemic meta-syntheses argues that the outcome of the whole study is not a simple and direct consequence of their parts, but substantially involves the mode of connecting its components and the epistemological rationale behind the synthesis, hence the term ‘powered hypothesis’, which also applies to the present study.

3. Results and discussion

The novel Stress-CARE model was constructed by means of meta-synthetic research, which shall lead to robust hypotheses. Nonetheless, further research is required. Action research [16] may be a good option and a feasible way providing dynamic evaluation of regular class-room teaching as well.

3.1. Creativity

Although research on the impact of persistent mental stress, stress disorders and burnout on creativity is scanty, some studies suggest that perceived feelings of burnout impact on motivation and readiness for social interaction and are [17] ‘directly correlated to a decrease in perceived feelings of creativity’. Compatible with such findings, own analyses suggest that ongoing experiences of stress or burnout have a strong tendency to mental petrification and to freeze personality dynamics, creativity included. There is good evidence that severe psychopathology inhibits creativity, while [18] ‘mild and moderate disorders can inspire and motivate creative work but are only leading to new and useful solutions when creators succeed in transforming their emotional instability and cognitive incoherence into stable and coherent forms. The cultural idea that creativity emerges in dialectical processes between order and chaos, is also to be found in the psychologic interplay of coherence and incoherence, and in neuro-scientific models of the dynamics between tightening and loosening of neuronal structures’.

It goes without saying that creative arts are inextricably intertwined with creative processes, a combination which also impacts on the inhibition of creativity in stress disorders or burnout. By way of illustration, creative writing can alleviate

professional burnout symptoms [19] and creative arts interventions are used for stress-management and to prevent stress disorders as well as burnout syndromes. In this context, a German study pointed out [20]:

Stress is one of the world's largest health problems, leading to exhaustion, burnout, anxiety, a weak immune system, or even organ damage. In Germany, stress-induced work absenteeism costs about 20 billion Euros per year. Therefore, it is not surprising that the Central Federal Association of the public Health Insurance Funds in Germany ascribes particular importance to stress prevention and stress management as well as health enhancing measures. Building on current integrative and embodied stress theories, Creative Arts Therapies (CATs) or arts interventions are an innovative way to prevent stress and improve stress management. CATs encompass art, music, dance/movement, and drama therapy as their four major modalities. In order to obtain an overview of CATs and arts interventions' efficacy in the context of stress reduction and management, we conducted a systematic review with a search in the following data bases: Academic Search Complete, ERIC, Medline, Psyn dex, PsycINFO and SocINDEX. Studies were included employing the PICOS principle and rated according to their evidence level. We included 37 studies, 73% of which were randomized controlled trials. 81.1% of the included studies reported a significant reduction of stress in the participants due to interventions of one of the four arts modalities.

Completely in line with these findings, the present article suggests single- and inter-modal artistic approaches. Regarding school-related stress and burnout, we recommend educational concepts such as Andrea Sangiorgio's 'Creative Interaction' [21] as well as Sound Scene Improvisation, a core model of Wolfgang Roscher's Polyaesthetic Education [22]. Although Sound Scene Improvisation focuses on artistic values, aesthetic experience and personal growth, already some decades ago comparative research identified elements akin to psychodrama [23] alongside preventive and therapeutic benefits [24]. Concerning stress disorders and burnout, sound scene improvisation may help (i) to create individual coping strategies, (ii) to overcome compulsive and/or petrified cognition and behaviour, and (iii) to give rise to experienced self-actualisation, which can facilitate recovery.

When external spectators see a sound scene or music drama improvisation, which is basically similar to the first, just bigger, they may have the impression of a modern opera or an avant-garde music event. Nevertheless, the performance is part of an educational process and was created by pupils. Polyaesthetic Sound Scene Improvisation is a complex inter-modal genre:

- **Sources:** Music dramatic improvisation in Polyaesthetic education has roots in medieval school performances and mystery plays and was importantly influenced by the avant-garde as well as music-dramatic traditions in various cultures.
- **Material:** Sound scene improvisations are usually based on so called 'concept compositions' – in German 'Konzeptkompositionen' – containing musical modes, melodic frameworks, texts fragments, dramaturgical ideas etc. They are the result of an interactive educational process or provided by an artist-in-residence, or the classroom teacher. These concept compositions define the frame and orientation of the entire music-dramatic improvisation.
- **Genre:** Sound scene improvisations have no explicit artistic limitations and may include inter-modal installation art, cross-cultural oratorio improvisation or rhythmic plays with small poems such as Chinese four-word-idioms, the 成语故事 chéngyǔgùshi, Japanese Haiku or old English proverbs. The play's plot and its aesthetic features are the outcome of an interactive dynamic arts-educational process.
- **Psychological factors:** Sound scene improvisation involves artistic ways of self-actualisation and encompasses psychodramatic elements. It encourages arts-based self-exploration and the growth of one's creative talent, as well as heuristic discovery of traditional and new symbols and the experience of aesthetic values. Sound scene improvisation is also used in clinical contexts, e.g. to give hallucinations in schizophrenia a 'non-pathological' stage of artistic imagery.
- **Aesthetic essence:** Notwithstanding the developmental psychological and mental health benefits of sound scene improvisation, it is a genuine music educational model which primarily aims at the pupils' creativity, aesthetic experience and artistic adventure. In the context of this article it is also considered a way to enhance creative flow and thus to reduce stress-related psychological stiffness.

3.2. Anxiety

Stress and anxiety are deeply interrelated: clinical observations show that stress experiences are likely to trigger anxiety responses, while anxious personality traits may increase stress vulnerability. Moreover, stress and anxiety are physiologically connected and their interaction has an impact on immunomodulation [25]:

Stress and stressful events are common occurrences in our daily lives and such aversive situations bring about complex changes in the biological system. Such stress responses influence the brain and behavior, neuroendocrine and immune systems, and these responses orchestrate to increase or decrease the ability of the organism to cope with such stressors. The brain via expression of complex behavioral paradigms controls peripheral responses to stress and a bidirectional link exists in the modulation of stress effects. Anxiety is a common neurobehavioral correlate of a variety of stressors, and both acute and chronic stress exposure could precipitate anxiety disorders. Psychoneuroimmunology involves interactions between the brain and the immune system, and it is now being increasingly recognized that the immune system could contribute to the neurobehavioral responses to stress. Studies have shown that the brain and its complex neurotransmitter networks could influence immune function, and there could be a possible link between angiogenesis and immunomodulation during stress.

The inner connection between stress and anxiety is of significant clinical relevance. For instance, high anxiety traits are considered a vulnerable phenotype for stress-induced depression [26], and regarding the target group of the present article, a study from Columbia University [27] highlighted:

Late and middle childhood and early adolescence are filled with transitions that can cause psychological stress. Degrees of stress experienced are a function of both emotional response and coping abilities. Age, gender, development, temperament, and parental models affect both susceptibility to stress and effectiveness of coping mechanisms. Failure to recognize manifestations of stress, and to assist with the development of positive coping skills, causes detrimental effects to the child's mental, physical, and emotional health.

For this reason the Stress-CARE model suggests a dual approach consisting of (i) psychoeducational support to understand individual mechanisms of stress and anxiety, and (ii) music-guided access to unconscious sources of anxiety and stress vulnerability.

Psychoeducation in its current form goes back to C.M. Anderson [28], who developed this method as a sort of family treatment of adult schizophrenic patients. Her approach has become a certain standard in the domain of psychotic diseases, and systematic reviews [29] suggest that psychoeducation reduces relapse, encourages medication compliance and reduces the length of hospital stay. Psychoeducation is also used in the context of anxiety disorders [30] – and Mastnak and Tièschky [31] have established psychoeducation in the realm of psychiatric music therapy and clinical music education, which directly concerns the essence of this article. The Stress-CARE-model suggests an enlarged concept of psychoeducation which also encompasses interactive learning and the development of sustainable skills to cope with anxieties, such as vocal meditation (see next section).

Broadly speaking, interdisciplinary anxiety concepts take the interplay between traumatic stimuli, human and individual vulnerability and modes of information processing into consideration. From this perspective discovery of the hidden sources of stress-associated anxieties matters for therapeutic outcomes, and the Stress-CARE model goes music-guided ways to access the unconscious.

Using music for depth-psychological purposes is not new. In the late 1970s the German music therapist Christoph Schwabe published his 'Regulative Musiktherapie' [32], analytical music therapy was largely developed by the British music therapist Mary Priestley [33] and Helen Bonny's Guided Imagery and Music [34] is a depth psychological form of music psychotherapy, which is also used to help individuals cope with work-related stress.

In a similar way, the Stress-CARE model uses music as a way to access unconscious areas and to evoke images symbolising anxiety-related material. However, these approaches were designed for health education in classroom-practice and use different forms of image-processing such as spontaneous drawing, poem writing or expressive movement, which is akin to techniques of intermodal expressive therapy. Moreover, this article does not speak of an actual 'discovery' but rather of a music-guided awareness of the inner self and its anxieties.

3.3. Recovery

Living beings are equipped with resilience capacities, human beings included. Consequently we are able to recover from moderate stress experiences. However, stressful life-events [35] and intensive stress experiences – both acute single and debilitating recurring ones – tend to give rise to chronic fatigue and near-burnout syndromes, which need recovery. There is evidence of differential activation of brain networks involved in cognitive regulation during the phases of stress and recovery [36]. This is important for our understanding of the mechanisms that underlie successful and unsuccessful stress regulation. In this context, interdisciplinary studies shed light on epigenetic factors of stress memory and maladaptive recovery [37].

There is huge imbalance between (i) broad and robust research about distributions, prevalence and intensities of experienced stress, stress disorders and burnout syndromes and (ii) science-based development of therapeutic

techniques and recovery models. And yet, self-help platforms and user-oriented networks provide a wealth of practical means comprising physical, mental and behavioural approaches. Many of them are inspired by cognitive behavioural therapy (CBT) and focus on changing cognitive patterns, work-life balance, attitudes towards roles and responsibilities, or obsessive-compulsive habits, others involve creative expression, improvement of social bonding and mindful self-care.

Complementary to approaches such as CBT-based stress management and burnout recovery, or possibly even as an alternative, the Stress-CARE-model suggests music-based meditation. The Chinese music therapist Jingyi Yang is currently conducting research on Chinese music meditation for therapeutic and rehabilitative purposes, as well as to enhance mental health and resilience. Practitioners may use their own voice or specific techniques of listening. Notwithstanding the new features of therapeutic sound meditation to alleviate mental stress and to recover from burnout, these approaches have traditional roots such as OM-chanting. That practice causes changes in autonomic balance and deactivation of limbic brain regions [38, 39] as well as reduction in cortical arousal [40], which are considered key factors of stress-modulation.

In clinical Stress-CARE sessions music-meditation practitioners spoke of being completely immersed in sound as well as a mystical union with music. They described blissful inner emptiness and the experience of salvation, as well as a recovery of life energy alongside the ability to relax without disturbing feelings or thoughts. Although these single case experiences are of high individual value, generalisation requires scientific in-depth investigation comprising differential characteristics, effect sizes and underlying mechanisms.

3.4. Energy

Individuals with chronic stress or burnout syndromes mostly feel a serious lack or breakdown of life-energy. This is not only an individual experience but also connected with complex physiological mechanisms such as mitochondrial energetics – mitochondria are the endocrine organelles that provide both energy and signals which enable and direct stress adaptation – and associated neural circuits regulating social behaviour [41]. Moreover, related psychopathological processes are also influenced by mitochondrial energetics. In this context, Fibroblast growth factor 21 (FGF21) is a hormone-like substance that also acts as a stress hormone induced by endoplasmic reticulum stress and dysfunctions of mitochondria [42] – and its imbalance jeopardises the human healthspan and accelerates the aging process. Moreover, stress has an adverse influence on the limbic system, hence its impact on psychological wellbeing [43]:

The ventral tegmental area dopamine (VTA-DA) mesolimbic circuit processes emotional, motivational, and social reward associations together with their more demanding cognitive aspects that involve the mesocortical circuitry. Coping with stress increases VTA-DA excitability, but when the stressor becomes chronic the VTA-DA circuit is less active, which may lead to degeneration and local microglial activation. This switch between activation and inhibition of VTA-DA neurons is modulated by e.g. corticotropin-releasing hormone (CRH), opioids, brain-derived neurotrophic factor (BDNF), and the adrenal glucocorticoids. These actions are coordinated with energy-demanding stress-coping styles to promote behavioral adaptation. The VTA circuits show sexual dimorphism that is programmed by sex hormones during perinatal life in a manner that can be affected by glucocorticoid exposure. We conclude that insight in the role of stress in VTA-DA plasticity and connectivity, during reward processing and stress-coping, will be helpful to better understand the mechanism of resilience to breakdown of adaptation.

From a clinical perspective stress is a risk factor for obesity and addiction too [44]. This also includes family-related stress, which has been – already for some decades – regarded as a pathogenic risk factor [45] that may also contribute to alcoholism or drug-addiction [46]. Prevalence and seriousness of mental stress, stress-related conditions and burnout syndromes have brought about a wealth of therapeutic interventions such as cognitive stress management therapy and integrative models of stress management alongside applications in various medical areas such as oncology [47], as well as creative approaches, e.g. attitude-oriented emotion regulation programs [48].

Concerning energy regulation, the Stress-CARE model involves particularly arts-based approaches such as provided in Sound Energising. Sound Energising is, alongside Sound Coping, Sound Focusing and Sound Balancing, one of the four areas of Sound Work [49, 50], a comprehensive voice-body-oriented concept for health promotion, inclusive education and clinical practice.

Sound Energising encompasses a broad variety of models and techniques such as vocal stimulation of TCM-energy points, e.g. 勞宮 (勞宮) láogōng, the acupuncture point Pericardium 8 (Pc-8), which is located in the middle of the palms. Sound Energising practice working with these points combines Chinese medicine and self-exploratory techniques to rebalance energy levels.

Completely different from such TCM-related vocal work, the 'Sound Igloo' is a standard model in Sound Work: Four or five practitioners are kneeling or crouching on the floor forming a small circle. The others enclose them forming a tight concentric circle, their torsos slightly bent to the centre to shape a 'dome'. While all igloo-members are singing towards an imaginary sound centre, the protagonist crawls into the inner circle and receives the group's sound projection.

Originally designed for exposure training against claustrophobia, the Sound Igloo is today mostly used for altered states of consciousness and trance-related processes, for 'intra-uterine' regression, to feel safeness and security, as well as to receive 'sound energy'. While a subjectively high energetic level may influence stress- and burnout-syndromes, we have to be aware of contraindications, particularly if patients have a tendency to develop epileptic seizures or psychotic fits.

4. Conclusion

This model-generating study is part of a huge Chinese project to improve mental health in children and adolescence and to alleviate syndromes through arts-based interventions in educational areas. The relevant spectrum includes, according to Chinese psychiatric epidemiology and mental public health studies, most prevalent conditions in the Chinese younger generation. These are, in addition to mental stress, stress-related disorders and burnout syndromes, particularly attention deficit hyperactivity disorder, oppositional defiant disorder, anxiety disorders, depression, eating disorders, and mental disturbances caused by measures to control the COVID-19 pandemic such as social isolation.

Next steps include qualitative exploratory studies, scientific work to generate standardised models and quantitative multicentre research. Feasibility studies shall help to provide such arts-based educational-therapeutic facilities throughout the People's Republic of China. Moreover, cross-cultural studies shall help to adapt these models in different cultures and to contribute to culturally sensitive creative and aesthetic therapies.

Compliance with ethical standards

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The author declares no conflict of interest.

Statement of ethical approval

No approval is needed for this type of research.

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