

Calum Smith

Arts and Health: exploring the developments, focus, and strengthening of the field since 2019

(doi: 10.1446/112783)

Economia della Cultura (ISSN 1122-7885)

Fascicolo Speciale, marzo 2023

Ente di afferenza:

()

Copyright © by Società editrice il Mulino, Bologna. Tutti i diritti sono riservati.

Per altre informazioni si veda <https://www.rivisteweb.it>

Licenza d'uso

Questo articolo è reso disponibile con licenza CC BY NC ND. Per altre informazioni si veda <https://www.rivisteweb.it/>

ARTS AND HEALTH: EXPLORING THE DEVELOPMENTS, FOCUS, AND STRENGTHENING OF THE FIELD SINCE 2019

by CALUM SMITH*

Summary

Since the World Health Organization Regional Office for Europe landmark report – «What is the evidence on the role of the arts in improving health and well-being? A scoping review» (2019), written by Fancourt and Finn – attention on and capacity within the arts and health has only grown. To highlight some of this growth, this paper identifies some of the key areas of research that have strengthened the evidence base of the field of the arts and health since then. This paper uses a scoping review approach, using keyword searches of the following databases: PubMed, Google Scholar, ScienceDirect, Search Oxford Libraries Online, and Scopus. This paper focuses mainly on results from the WHO European Region, but includes findings from other countries where results were particularly salient. Both peer-reviewed publications and grey literature were included within the search.

Keywords: Arts and Health, Health prevention, Health promotion, Illness management and treatment, Healthy ageing, Refugees, Young people, Mental health, Dementia

JEL code: I18, Z1

1. Premise

In 2019, the World Health Organization Regional Office for Europe published ‘*What is the evidence on the role of the arts in improving health and well-being? A scoping review*’. Written by Fancourt and Finn, the report synthesized global evidence on the role of the arts in improving health and well-being, with a specific focus on the WHO European Region.

* *Philosophiae Doctor, Oxford University – Wellington Square – Oxford OX1 2JD, UK, e-mail: smithc@who.int*

The publication highlighted the positive impact that the arts can have on both mental and physical health. Arts and culture – the report demonstrated – can play a significant role in the prevention of ill health, promotion of health-supporting behaviours, the management of symptoms, and the treatment of illness. In addition, it proposed a range of policy considerations that could strengthen both the evidence base and impact of arts-based methodologies.

2. Promotion and Prevention: COVID-19

One of, if not the, most significant public health event since 2019 was the Global coronavirus pandemic. With a cumulative total of 762,201,169 cases and 6,893,190 deaths so far (WHO, 2023), in addition to lockdowns across the globe and a growing number of long COVID cases that are only now beginning to be understood, the impact of the pandemic is hard to overstate.

At the start of the pandemic, work was conducted advocating for the role that arts and health could have in helping people cope with the mental health consequences of the pandemic. For example, Mastnak (2020) recommended that music therapy be adopted by a network of the public health, education and social systems in order to minimise psychological harm to young people during the pandemic.

During the pandemic, according to research by Mak, Fluharty and Fancourt (2021), 1 in 5 of a surveyed 19,000 individuals in the UK increased their engagement in arts activities. It could be that, in times of uncertainty, the arts are what some turn to help with coping. The authors suggest that the arts add significant value as coping tools during stressful situations. Similarly, Baumann and Burke (2021) demonstrated how engaging a community in a virtual gallery assisted with fostering a sense of connection during the pandemic. They found that this arts-based intervention assisted with the promotion of social cohesion and positive health and well-being at a time of immense uncertainty.

Research conducted by Bradbury *et al.* (2021) found that arts engagement helped people adopt psychological strategies for coping and emotion regulation, distraction techniques and, like Baumann and Burke, promoting social cohesion. Similarly, research by Tang *et al.* (2021) found that engaging in creative processes helped individuals in China, the USA, and Germany alike to have increased wellbeing during the pandemic.

2.1. *Healthy Ageing*

Another growing area of research into the ill-health prevention and health promotion benefits of arts and health is healthy aging. Rena *et al.*

(2022) found that arts engagement is related to prolonged longevity and better overall health and functioning in older persons. Specifically, after adjusting for demographic and socioeconomic elements, they found an 84% higher chance of healthy aging in those that engaged in receptive arts activities compared to those who never engaged. Clifford *et al.* (2022) conducted a systematic review and found that dance is an effective and safe activity for older adults, finding that dancing can improve mobility and endurance into older age. Brown *et al.* (2021) found that arts-based interventions can improve executive function, cognitive flexibility, and life satisfaction, which the authors argue supports the need for further research into arts-based interventions and their potential impact on dementia risk.

It must be noted that accessing the health-related benefits of arts-based methods may still be difficult for some. Fluharty *et al.* (2021a) note that while there is evidence of a lower incidence of age-related disabilities in those actively engaging in arts-based methods, socioeconomic inequalities (manifested in terms of, for example, financial and transportation barriers) can serve as factors that impact on ability to engage in health-benefitting arts and cultural engagement activities.

2.2. Young People

Another area that has received significant focus since 2019 is the benefits that arts-based activities can have for young people. Lo (2021) provides an example of how creative arts activities were used in the community (at a creative arts festival) to positively impact on the mental health of young people. Research has also been conducted into how visual, literary, and performing arts can be used to combat stigma associated with mental health problems (Gaiha *et al.*, 2021). The authors of this review analysed 57 studies, and found that interventions based around art are (to a small effect) effective in reducing mental-health-related stigma, with studies featuring multiple art forms being more likely than those involving single art forms to reduce stigma. Additionally, research by Lowe (2020) highlighted that using the creative arts as a way of expressing oneself was useful for young transgender people.

Arts-based interventions have also been shown to help reduce negative behaviours in the school setting (Fluharty *et al.*, 2021b), and arts activities outside of school time have been found to be associated with increased positive social support from peers during adolescence (Bone *et al.*, 2022a). For adolescents also, arts and creative activities have been associated with reduced risk of alcohol and tobacco use in young people. However, the protection attenuates over time, and research is required to examine whether sustained engagement in activities differentially influences the risk of substance use (Fluharty *et al.*, 2022c).

2.3. *Nature*

Another expanding area of research is the linkage of arts and health with research into the environment/one health approaches to public health. For example, Thompson *et al.* (2020) found that engagement with horticulture, artmaking and museum collections had benefits for some with mental health conditions. The authors suggest that there are distinct synergistic benefits when arts- and nature-based interventions are used together and call for museums to consider integrating creative activities with engagement with nature to benefit wellbeing.

Moula, Palmer and Walshe (2022) conducted research into interconnections between arts and nature, and the impact that this has on the health and wellbeing of children and young people. They found 11 studies that looked at the link between art and nature, and found that in addition to increasing environmental awareness and pro-environmental behaviours, linking arts-based interventions with nature was helpful in reducing eco-anxiety.

2.4. *Refugees*

Work has been conducted to both examine and advocate for the role arts-based interventions can play in helping migrants and forcibly displaced persons. Arts-based methods have been used to bring light to the embodied experiences of refugees who may live at the intersection of multiple axes of marginalization (Wells *et al.*, 2021). The authors examine how arts-based research could help refugees with disabilities highlight their needs, priorities and identities, and work towards making sure these are reflected and respected within policy. Similarly, Garry *et al.* (2020) highlight how arts-based research can be used to highlight the lived experiences and needs of migrants. This provides a framework through which marginalized communities can be provided with the opportunity to share lived experience of health conditions and advocate for improvements to the health system. The authors examine the role that music, particularly singing, can play as an effective arts-based participatory tool.

Clini, Thomson and Chatterjee (2019) conducted a collaborative study featuring refugees/asylum seekers, volunteers, and charity staff (within a London-based charity). They found that artistic and cultural activities had a positive impact on helping participants find a voice, create a support network and learn practical skills. Additionally, the study played a significant role in attempting to improve the public narrative surrounding refugees and asylum seekers by organizing an exhibition which enabled artwork to act as a means through which asylum seekers and refugees could interact with the public.

In 2020, the World Health Organization Regional Office for Europe published a report entitled *Arts and health: supporting the mental well-being of forcibly displaced people*. This report highlighted the role that arts activities can play in psychological, behavioural and social processes that are linked with improving wellbeing, and demonstrating that engagement in arts activities can positively impact forcibly displaced people, as well as their host community, by promoting social inclusion, social cohesion, social acceptance and belonging.

3. Management and Treatment

3.1. *Mental Health*

Evidence continues to accumulate on the benefits arts-based methods have for those living with mental health conditions. Researchers from Israel looked at arts-based interventions to help with the management of mental health conditions, and found that participation impacted recovery processes by providing a sense of belonging to the community, as well as by providing a sense of empowerment and reducing stigma (Nitzan and Orkibi, 2021).

In the United Kingdom, an RCT was conducted to examine whether song writing had an impact on mental health in young people (Gee, Hawes and Cox, 2019). Results showed that levels of depression were lower, and levels of social connection were higher, in those that participated in the song writing intervention, compared to those that did not. Similarly, receptive cultural engagement, such as going to the theatre and museums, has also been shown to reduce depression. A study by Bone *et al.* (2021) found that engaging in artistic and creative activities was associated with reduced depression.

Research into arts on prescription also indicates the role that arts-based interventions can have in assisting with the management and treatment of mental health conditions. Sumner *et al.* (2021) found that anxiety and depression decrease, and well-being increases, after referral to arts programmes, with re-referral being linked with continued improvement, and rebound observed between referral cycles. Similarly, research by Halsam *et al.* (2019) looked into developing a new therapeutic intervention for depression, called 'Arts for the Blues – A New Creative Psychological Therapy for Depression'. They found an overall satisfaction rate of 70% among participants.

However, a note of caution. A review providing a narrative summary of findings on the role of creative art therapy in managing symptoms of severe mental illness (schizophrenia, trauma-related disorders, major depression, bipolar disorder) found that, while creative art therapy promises to be potentially low-risk and high benefit, lack of methodological rigour has prevented quick advancements in use of this

approach for management of symptoms of severe mental illness (Chiang, Reid-Varley and Fan, 2019).

3.2. *Dementia*

A study involving people with dementia and their partners (the 'With All') study, found that artistic co-creativity increased both feelings of connection and a sense of autonomy (Zeilig *et al.*, 2019). Using this methodology was beneficial not just in terms of increased understanding, but improvements in well-being were identified using the Canterbury Well-Being Scale.

An intergenerational study was conducted with older adults living with a diagnosis of dementia, their carers and partners, young people, and a team of professional artists (Jenkins, Farrer and Aujla, 2021). The study aimed to examine the well-being impacts of an intergenerational arts and health project, and found benefits for individuals' psychological health, along dimensions of well-being including: positive emotion, engagement, positive relationships, meaning, and achievement/accomplishment.

Barroso *et al.* (2020) conducted a narrative synthesis systematic review and found that participatory visual arts have positive effects on cognition, social and psychological functioning of people with dementia, in addition to participants finding the interventions enjoyable and engaging.

4. Arts and Health as a Methodology

In recent years, in addition to research into specific health areas and arts and health interventions, some invaluable research has been conducted into the role and function of arts and health as a methodology in itself.

For example, Warran, Burton and Fancourt (2022) published *What are the active ingredients of 'arts in health' activities? Development of the Ingredients in ArTs in hEalth (INNATE) framework*. The study identified 139 potential active ingredients, and divided these within the overarching categories of 'Project' (related to intrinsic characteristics of the activity itself), 'People' (how people interact with the project, and who is involved) and 'Contexts' (activity setting). This research is a significant step towards understanding both how arts and health interventions function, and helping potential practitioners understand what needs to take place in order to ensure an effective intervention.

Other research into how arts and health 'works' includes de Witte *et al.* (2021) who attempted to pinpoint therapeutic factors specific to each Creative Art Therapy's discipline, and Fancourt *et al.* (2021) who attempt to identify a unifying framework for how leisure activities affect health (including, but not limited to, arts and creativity). In this review, they identify mechanisms (psychological, biological, social and

behavioural processes) that together are synthesized into a new theoretical framework (the Multi-level Leisure Mechanisms Framework).

Research has also been conducted to address some of the gaps present in current arts and health literature, such as Bone *et al.* (2022b), who examined whether participation in community arts groups was associated with wellbeing after removing confounding by demographic, socioeconomic, and health-related factors. Similarly, Wang, Wan Mak and Fancourt (2020) found that, after controlling for time-constant variables and time-varying confounders (socioeconomic status, childhood arts engagement, previous mental health, personality, self-selection bias), frequent arts participation and cultural attendance were associated with lower levels of mental distress and higher levels of life satisfaction. Both Bone *et al.* and Wang, Wan Mak and Fancourt found that frequent arts participation and cultural attendance had significant health benefits after accounting for variables.

In addition, Lokugamage, Chetwynd and Harris (2022) highlight the essential role that art can play in disrupting rigid knowledge hierarchies. They state that *The historically biased, epistemically rigid, hierarchical thinking that has led us to the brink of environmental collapse, must be replaced with a more nomadic or rhizomic type of thinking.* They argue that performance art can prove fruitfully disruptive, providing space for forms of thinking that move beyond *historically biased, epistemically rigid, hierarchical thinking.*

5. Activities at the World Health Organization

The World Health Organization Regional Office for Europe has recently run an implementation study, examining the feasibility of running a singing for postpartum depression intervention in Denmark, Romania and Italy (Warran and Smith, 2022). This study will highlight what activities need to be undertaken in order to successfully implement an arts and health intervention in different cultural contexts. A report, due to be published later in 2023, will outline some key steps that the team suggest be undertaken by other implementation teams aiming to run successful arts and health interventions in a culturally sensitive, appropriate way.

Additionally, 2023 saw the launch of the Jameel Arts & Health Lab, a collaboration between the World Health Organization Regional Office for Europe, the Steinhardt School at New York University (NYU), Community Jameel, and CULTURUNNERS. The lab will coordinate and promote research into the effectiveness and value that the arts and creativity can have in improving health and wellbeing. The lab is the first major arts and health initiative in the history of the WHO, and follows its 2019 report on the role of the arts in preventing illness and promoting health.

6. Conclusion

The aim of this paper was to demonstrate the strengthening of the evidence base of the ability of arts and health to help prevent ill health, promote health and healthy behaviours, and help with the management and treatment of illnesses across the life course. It adopted a scoping review approach and, as such, aimed not to provide an exhaustive account of developments since the publication of the 2019 report, but rather highlight some key areas in which research has developed and strengthened. In addition to research demonstrating the role of arts and health in prevention, promotion, management and treatment, this paper has also highlighted valuable research into arts and health as a methodology in itself, both in how it functions to improve health outcomes, and the promise it holds for public health going forwards. With increasing focus on arts and health within the World Health Organization itself, it is hoped that attention to, research in, and advocacy for this area only continues to grow.

References

- BARROSO, A.C., RAI, H.K., SOUSA, L., ORRELL, M. and J. SCHNEIDER (2020), «Participatory visual arts activities for people with dementia: a review», *Perspectives in public health*, vol. 142, issue 1.
- BAUMANN, S.E. and J.G. BURKE (2021), «Creating Community During COVID-19: A Virtual Art Gallery to Address Social Isolation During a Pandemic», *Health Promotion Practice*, vol. 24, issue 1.
- BONE, J.K., BU, F., FLUHARTY, M.E., PAUL, E., SONKE J.K. and D. FANCOURT (2021), «Active arts engagement and depression in older adults in the United States: Longitudinal evidence from the Health and Retirement Study», *Social Science and Medicine*, vol. 294.
- BONE, J.K., FANCOURT, D., FLUHARTY, M.E., PAUL, E., SONKE, J.K. and F. BU (2022a), «Cross-sectional and longitudinal associations between arts engagement, loneliness, and social support in adolescence», *Social Psychiatry and Psychiatric Epidemiology*.
- BONE, J.K., FANCOURT, D., FLUHARTY, M.E., PAUL, E., SONKE, J.K. and F. BU (2022b), «Associations between participation in community arts groups and aspects of wellbeing in older adults in the United States: a propensity score matching analysis», *Aging and Mental Health*.
- BRADBURY, A., WARRAN, K., MAK, H.W. and D. FANCOURT (2021), *The Role of the Arts during the COVID-19 Pandemic*, London, UCL .
- BROWN, C.J., CORTES CHIRINO, A.F., CORTES, C.M., GEARHART, C. and G.G. URIZAR (2021), «Conceptual Art for the Aging Brain: Piloting an Art-Based Cognitive Health Intervention», *Activities, Adaptation & Aging*, Vol 5, issue 1.
- CHIANG, M., REID-VARLEY, W.B. and X. FAN (2019), Creative art therapy for mental illness, *Psychiatry Research*, 275: 129-136.
- CLIFFORD, A.M., SHANAHAN, J., MCKEE, J., CLEARY, T., O'NEILL, A., O'GORMAN, M., LOUW, Q. and O. NI BHRIAIN (2022), «The effect of dance on physical health and cognition in community dwelling older adults: A systematic review and meta-analysis», *Arts & Health*, vol. 5, issue 2.
- CLINI, C., THOMSON, L.J.M. and H.J. CHATTERJEE (2019), «Assessing the impact of artistic and cultural activities on the health and well-being of forcibly displaced people using participatory action research», *BMJ Open*, vol. 20, issue 9.

- DE WITTE, M., ORKIBI, H., ZARATE, R., KARKOU, V., SAJNANI, N., MALHOTRA, B., HUNG HO, R.T., KAIMAL, G., BAKER, F.A. and S.C. KOCH (2021), «From therapeutic factors to mechanisms of change in the creative arts therapies: a scoping review», *Frontiers in Psychology*, vol. 12.
- FANCOURT, D., AUGHTERSON, H., FINN, S., WALKER, E. and A. STEPTOE (2021), «How leisure activities affect health: a narrative review and multi-level theoretical framework of mechanisms of action», *The Lancet Psychiatry*, vol. 8 issue 4: pp. 329-339.
- FANCOURT, D. and S. FINN (?2019)?, *What is the evidence on the role of the arts in improving health and well-being? A scoping review*, World Health Organization. Regional Office for Europe. Available at: <https://apps.who.int/iris/handle/10665/329834>
- FLUHARTY, M.E., PAUL, E., BONE, J.K., BU, F., SONKE, J. and D. FANCOURT (2021a), «Difference in predictors and barriers to arts and cultural engagement with age in the United States: A cross-sectional analysis using the Health and Retirement study», *Plos One*, vol. 16, issue 12.
- FLUHARTY, M.E., BONE, J.K., BU, F., SONKE, J.K., FANCOURT, D. and E. PAUL (2021b), «Associations between extracurricular arts activities, school-based arts engagement, and subsequent externalising behaviours: Findings from the Early Childhood Longitudinal Study», *PsyArXiv*.
- FLUHARTY, M.E., BU, F., BONE, J.K., SONKE, J., FANCOURT, D. and E. PAUL (2022c), «Associations of arts and cultural engagement with substance use trajectories in adolescence and early adulthood: a latent growth curve analysis of the Add Health cohort», *PsyArXiv*.
- GAIHA, S.M., SALISBURY, T.T., USMANI, S., KOSCHORKE, M., RAMAN, U. and M. PETTICREW (2021), «Effectiveness of arts interventions to reduce mental-health-related stigma among youth: a systematic review and meta-analysis», *BMC Psychiatry*, vol. 21, issue 364.
- GARRY, F., MURPHY-TIGHE, S., MACFARLANE, A. and H. PHELAN (2020), «The use of music as an arts-based method in migrant health research: a scoping review protocol», *HRB Open Res*, vol. 3, issue 75.
- GEE, K.A., HAWES, V. and A.N. COX (2019), «Blue Notes: Using Songwriting to Improve Student Mental Health and Wellbeing. A Pilot Randomised Controlled Trial», *Frontiers in Psychology*, vol. 10.
- HASLAM, S., PARSONS, A., OMYLINSKA-THURSTON, J., NAIR, K., HARLOW, J., LEWIS, J., THURSTON DR, S., GRIFFIN, J., DUBROW-MARSHALL, L. and V. KARKOU (2019), «Arts for the blues – a new creative psychological therapy for depression: a pilot workshop report», *Perspectives in Public Health*, vol. 139, issue 3.
- JENKINS, L.K., FARRER, R. and I.J. AUJLA (2021), «Understanding the impact of an intergenerational arts and health project: a study into the psychological well-being of participants, carers and artists», *Public Health*, vol. 194, pp. 121-126.
- LO, A. (2020), «Using the occupation of the creative arts to promote mental health in young people: Positive Mindset Creative Arts Festival», *World Federation of Occupational Therapists Bulletin*, vol. 77, issue 1.
- LOKUGAMAGE, A., CHETWYND, C., and M. HARRIS (2022), «Biomedical Research and Global Sustainability: Throwing off the straitjacket of hierarchical thinking, making space for nomadic thinking», *Decolonial Subversions*, vol. 3.
- LOWE, R. (2020), «Exploring the experiences of transgender adolescents using the creative arts and a participatory approach to research». DEdCPsy thesis, University of Sheffield.
- MAK, H.W., FLUHARTY, M. and D. FANCOURT (2021), «Predictors and impact of arts engagement during the COVID-19 pandemic: Analyses of data from 19,384 adults in the COVID-19 social study», *Frontiers in Psychology*, vol. 12.
- MASTNAK, M. (2020), «Psychopathological problems related to the COVID-19 pandemic and possible prevention with music therapy», *Acta Paediatrica*, vol. 109, issue: pp. 1516-1518.
- MOULA, Z., PALMER, K. and N. WALSHE (2022), «A systematic review of arts-based interventions delivered to children and young people in nature or outdoor spaces: impact on nature connectedness, health and wellbeing», *Frontiers in Psychology*, vol. 13.

- NITZAN, A. and H. ORKIBI (2021), «We're All in the Same Boat» – The Experience of People With Mental Health Conditions and Non-clinical Community Members in Integrated Arts-Based Groups», *Frontiers in Psychology*, vol. 12.
- RENA, M., FANCOURT, D., BU, F., PAUL, E., SONKE, J. K. and J. K. BONE (2022), «Receptive and participatory arts engagement and healthy aging: Longitudinal evidence from the Health and Retirement Study», *Social Science and Medicine*, vol. 294.
- SUMNER, R.C., CRONE, D.M., HUGHES, S. and D. V. B. JAMES (2021), «Arts on prescription: observed changes in anxiety, depression, and well-being across referral cycles», *Public Health*, vol. 192, pp. 49-55.
- TANG, M., HOFREITER, S., REITER-PALMON, R., BAI, X., MURUGAVEL, V. (2021), «Creativity as a Means to Well-Being in Times of COVID-19 Pandemic: Results of a Cross-Cultural Study», *Sec. Organizational Psychology*, vol. 12.
- THOMSON, L.J., MORSE, N., ELSDEN, E. and H. J. CHATTERJEE (2020), «Art, nature and mental health: assessing the biopsychosocial effects of a 'creative green prescription' museum programme involving horticulture, artmaking and collections», *Perspectives in Public Health*, vol. 140, issue 5.
- WANG, S., WAN MAK H. and D. FANCOURT (2020), «Arts, mental distress, mental health functioning and life satisfaction: fixed-effects analyses of a nationally-representative panel study», *BMC Public Health*, vol. 20, issue 208.
- WARRAN, K., SMITH, C., UGRON, H., FROKJAER CARSTENS, L., ZBRANCA, R., OTTOW, M., BLAGA, O.M., LADEGAARD, N.L., DAVIS, R.E., FANCOURT, D. and N. FIETJE (2022) «Scalability of a singing-based intervention for postpartum depression in Denmark and Romania: protocol for a single-arm feasibility study», *BMJ Open*, vol. 12, issue 12.
- WARRAN, K., BURTON, A. and D. FANCOURT (2022) «What are the active ingredients of 'arts in health' activities? Development of the INgredients iN ArTs in hEalth (INNATE) framework», *Wellcome Open Res*, vol. 7, issue 10.
- WELLS, R., MURAD, M., HIGGINS, M., SMITH, L., LENETTE, C., LAPPIN, J., DEW, A., BOYDELL, K., BIBBY, H., CASSANITI, M., ISAACS, D., SHANTI, R. and K. SWI (2021) «Exploring the intersection of human rights, health, disability and refugee status: an arts-based approach», *Australian Journal of Human Rights*, vol. 26, issue 3.
- WORLD HEALTH ORGANIZATION (2022), *Arts and health: supporting the mental well-being of forcibly displaced people*, Copenhagen, WHO Regional Office for Europe.
- WORLD HEALTH ORGANIZATION (2023), «WHO Coronavirus (COVID-19) Dashboard», Available at <https://covid19.who.int>. Accessed 10th April 2023.
- ZEILIG, H., TISCHLER, V., VAN DER BYL WILLIAMS, M., WEST, J. and S. STROHMAIER (2019), «Co-creativity, well-being and agency: A case study analysis of a co-creative arts group for people with dementia», *Journal of Aging Studies*, vol. 49.