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Dyadic Parent-Child Creative Activities and Early Childhood Resilience: Audio-recordings and Home Activities as Methodological Propositions

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ABSTRACT

This commentary invites creativity researchers to address an area that, to date, has received little attention: the effects of dyadic creative activities on early childhood resilience. There is, indeed, a growing body of work on how creative behaviour can contribute to resilience in older children, adolescents, and adults. There is less research on this topic for populations of children aged 3 to 6 years. Yet, young children are particularly dependent upon the bonds they form with their caregivers, notably their parents. The quality of the ties they maintain with them can promote, or on the contrary hinder, their resilience. After presenting the need to foster resilience among young children through dyadic creative activities, the commentary proposes audio recording as a method of investigating this phenomenon. It presents perspectives on the analysis of momentary processes. It concludes with perspectives creative activities at home that researchers can propose to parents and children to address their effects on young children's resilience.

KEYWORDS:

dyadic creativity; creative activities; early childhood; resilience; audio-recording

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INTRODUCTION

Since 1950, creativity research has mostly focused on the promotion of highly creative behaviours (Forgeard & Kaufman, 2016; Guilford, 1950). In many disciplines, including education, the organisational sciences, or the cognitive sciences, most creativity researchers have been interested in creativity as an outcome rather than a predictor (Forgeard & Kaufman, 2016; Hernández-Torrano & Ibrayeva, 2020). This should come as no surprise. The study of creativity, defined as the ability to produce both novel/original and meaningful/effective ideas or behaviour (Runco & Jaeger, 2012), was initially launched to identify (and promote) the characteristics of gifted individuals to help foster economic growth (Guilford, 1950).

Today, research provides considerable insights into the dynamics and presumed non-linearity of creativity, as well as general aspects of (and those specific to) different creative domains. We now understand that creativity manifests itself differently depending on whether it refers to insight-related and everyday creative behaviours or professional, and eminent creativity (Kaufman & Beghetto, 2009). We also have a better grasp of some of the components of creative potential – a necessary and relatively stable predictor of creativity (Barbot et al., 2015). For instance, we know that it depends on both divergent and convergent thinking; respectively, the ability to come up with multiple ideas in open-ended tasks, or a single best single solution (Guilford, 1967; Kim, 2006; Mednick, 1962). We also understand intrinsic motivation more clearly as a necessary condition for creative behaviour, which in most cases is thwarted by external rewards (Amabile, 1979, 1983; Hennessey, 2015). The importance of flexible, proactive and curious attitudes in the promotion of creative behaviours is also documented (Dewey, 1910; Doron, 2017; Dziedziewicz et al., 2014). In that sense, the field provides important literature about the antecedents to creativity.

It is disconcerting, however, that creativity researchers have devoted so much effort to promoting creative thinking and behaviour, but have barely documented whether, when, and for whom creativity can be beneficial (Forgeard & Kaufman, 2016). Today, the field of creativity is moving in this direction, and a recent manifesto argues that creativity is beneficial for societal progress on the basis that it makes people change how they relate to their environment, to others, and to themselves (Glăveanu et al., 2020). And in a way, evidence support this view. Research does outline the benefits of creativity in peer bonding, healing from traumatic events, or, more generally, in improving the quality of our lives (Forgeard, 2019).

The COVID-19 pandemic was, in this sense, a prominent example of how individuals engaged in creative activities (i.e., activities that significantly involve imagination and creative thinking, are meaningful, and develop skills; Hansen et al., 2021; Perruzza & Kinsella, 2010) to cope with this global period of uncertainty. During lockdowns in Argentina, for example, adults devoted their time to creative activities such as cooking, painting and drawing rather than other types of activity, such as reading or sport (Elisondo, 2022). Likewise, adults in Poland engaged more in creative activities during the pandemic: creative activities moderately contributed to their positive emotions during lockdowns (Karwowski et al., 2021). Further cross-cultural comparisons of different populations of

adults (in Israel, the United States, Italy, and China) showed that creative behaviour was positively and strongly associated with cross-sectional measure of resilient coping (the ability to positively adapt to stress, to perceive oneself as having a degree of personal control to deal with difficult situations, and grow); this, in turn, predicted emotional wellbeing among individuals in all four countries (Orkibi et al., 2021). This provides support to early views about how creativity would serve resilience, defined as the ability to navigate one's wellbeing in the presence of adversity (Forgeard & Elstein, 2014; Ungar, 2018).

Resilience is a general concept studied across diverse disciplines, from psychology, psychiatry, and sociology, to environmental studies, entrepreneurship, urbanism, and engineering (Cutuli et al., 2021). In all these fields, resilience carries the meaning of bending but not breaking, bouncing back, and thriving in the face of adverse life experiences (Masten, 2014). It is a dynamic process that describes adaptation against stressors (Bonanno et al., 2015; Kalisch et al., 2017). Evidence of resilience was first documented in the 1970s and 80s by clinical psychologists, such as Garmezy, Rutter, and Werner who found positive outcomes in children who were at high risk of developing schizophrenia and other severe psychopathologies (Luthar et al., 2000). Since then, the goal of resilience research has been to identify and intervene in the individual and socio-cultural factors that can enable children to rebound and thrive in the face of adverse conditions (Luthar et al., 2000; Masten, 2019). Bridging research between the fields of creativity and resilience would therefore contribute to provide more evidence that would inform interventional research.

Unfortunately, compared to populations of adults, research has far less addressed the effects of creative activities on the resilience of children aged between three and six years old (hereafter referred to as "young children"). This was problematic in the early stages of the COVID-19 pandemic, because researchers crucially lacked information about whether and, importantly, how, when, and for whom creative activities would be used to help young children be resilient (Verger et al., 2021). The present paper aims to highlight research area that is yet to be further explored by creativity research: dyadic parent-child creative activities and their effects (and conditions of effects) on early childhood resilience. It proposes some methodological considerations to address dyadic parent-child creative behaviour.

DEVELOPMENTAL SYSTEM THEORY AS A FRAMEWORK TO STUDY CREATIVITY AND RESILIENCE IN EARLY CHILDHOOD

Early childhood creativity refers to children's everyday insights, learning, and experimentation, which, according to Beghetto and Kaufman (2007), are creative processes embedded in what they call "mini-creativity" (mini-c). But those do not occur in vacuum; they depend upon broader systems (Kupers et al., 2019). In this article, we attempt to bridge the gap between early childhood creativity and resilience in light of the Developmental Systems Theory (Bronfenbrenner & Morris, 2006) and more specifically based on Kupers et al.'s (2019) model of dyadic children's creativity.

Kupers et al. (2019) put forward a model for studying children's creativity via the triadic interaction between (a) the child, (b) the task at hand, and (c) the parent/teacher. In this model, creative behaviour is conceptualised at different levels, linked through moments of emergence and constraint, and taking place in momentary interactions. Under this model, the creative task is iterative: any state of interaction involving the child, their parent, and the task depends on prior interactions. The state of the system thus depends on both previous short-term and long-term so-called "histories" of the system. The outputs that the child generates operate as a constraint on subsequent interactions throughout the creative activity. In a similar way, the child-parent-environment interactions enable the emergence of products that influence, as a constraint, subsequent interactions during the creative activity. Such products may be labelled as 'creative' by teachers, parents or, more broadly, by their peers. In this sense, the productions of the child are nested within sociocultural evaluations, norms, and conventional beliefs about creativity: parent-child dyads thereby unfold through multiple proximal and distal systems (Bronfenbrenner & Morris, 2006).

Much like this dynamic systems approach to children's creativity, resilience is also embedded in complex proximal and distal systems (Masten, 2019). And much like early childhood creativity, the most important factor in resilience appears to be the bond (or lack thereof) that young children can form with their parents (Masten & Barnes, 2018). Resilience is founded on the dynamic Systems Theory of developmental science (Bronfenbrenner & Morris, 2006; Masten & Barnes, 2018; Masten, 2019). According to this theory, children's resilience builds up through multidimensional interactions that are occurring continuously between intra-individual characteristics (of their genes and neurobiology) and their social and cultural environment (Bronfenbrenner & Morris, 2006; Ungar, 2018). Children shape their adaptive function by maturing their immune system, stress regulatory system, or self-regulatory system as they interact with larger macro-systems, and respond to external contexts (Masten & Cicchetti, 2016).

The brain of young children aged between 3 and 6 is highly neuroplastic and vulnerable to early stressors, to the point that early adverse experiences can lead to a lifetime of debilitating effects on a person's mental health and wellbeing (Broekman, 2011; Hughes et al., 2017; Nurius et al., 2015). This vulnerability makes the early years a pivotal window of intervention, hence why we focus on this age group in this article.

Adversity, defined as challenging life events, can range from living in disadvantaged socioe-conomic conditions (e.g., poverty), to a single harmful life event that can cause trauma (e.g., a car accident), to chronic exposure to stressors (Hughes et al., 2017; Luthar et al., 2000; Nurius et al., 2015). To adapt to these stressors, children change as they can learn, and develop new skills and competence, or can conversely be impacted and display negative symptoms, such as withdrawal, or externalising emotions, such as aggressivity (Kalmakis & Chandler, 2015). Adverse experiences in childhood reportedly account for about 44% of mental health disorders in childhood and about 30% of mental health disorders in adulthood (Green et al., 2010; Kessler et al., 2010; Nurius et al., 2015). Hence, intervening on early childhood resilience would not only improve the lives of today's children, but also the conditions of their lives (and thus of society) as they grow up.

This goal would fit the recent manifesto of creativity as an engine for societal progress (Glăveanu et al., 2020).

According to Morris et al. (2020), there is a need to adjust the measures that would capture how well a child navigates these adversities. For instance, researchers can calibrate their measures to the early years by assessing skills that underpin resilience (self-regulation, executive functioning, attachment) or by focusing on outcomes, such as internalising or externalising symptoms, or positive affect. In that sense, the authors emphasised the need to approach resilience through strengths and assets that can equip children throughout their life, echoing previous research on the need to develop universal interventions—that is, interventions that benefits all children, regardless of any circumstances of adversity (Dray et al., 2017; Lee et al., 2013).

The importance of dyadic considerations in early childhood resilience

Early childhood is a pivotal developmental window for children to create positive and secure bonds with family members, and most notably with their parents (Ainsworth et al., 2014; Diamond, 2006; Dubowitz et al., 2016). Successful attachment allows young children to develop positive competences, such as emotion regulation, ability to cope with stress, and to learn prosocial behaviours, such as comforting, helping, and sharing with others (Zimmer-Gembeck et al., 2017). However, when children fail to create positive and secure attachment, they display an array of negative outcomes: behavioural/opposition problems, emotional distance, or aggressive attitudes (Barlow et al., 2016; Zeanah & Gleason, 2015).

Early views on attachment posited that positive attachment would act as an innate regulatory system that, when activated under threat from the environment, would function to reduce arousal or anxiety and promote safety and survival (Bowlby, 1969; Bowlby & Ainsworth, 1965). That is, when threats arise, children would contribute to their safety via their figures of attachment (usually, their parents) to protect themselves from harm and to down-regulate their emotional distress. When not activated by threat, secure attachment figures would also serve as a base from which children can explore and take risks in their environment, thereby developing their competence, and autonomy (Vygotsky, 2004; Xi & Lantolf, 2021).

Today, longitudinal research shows that among infants, young children, and adolescents alike, a lack of secure attachments/bonds and relationship security is associated with higher rates of acute and chronic pain (e.g., primary headaches), and higher pain sensibility (Failo et al., 2019). Moreover, as a meta-analysis showed, positive attachment showed a moderate effect size with resilience across the entire life span (Darling Rasmussen et al., 2019). This further emphasises the need to intervene in early childhood on the promotion of positive parent-child dyadic interactions. But more importantly, this highlights the necessity to consider that creativity research cannot study the effect of creative activities on early childhood resilience without considering the role of the parents within these activities.

Most psychology research tends to consider individuals as discrete entities, separated from the social worlds they inhabit (Kenny et al., 2020). It is therefore not surprising that creativity research

has not that much explored dyadic behaviour, to this date. There are, of course, some pieces of work that have focused on those aspects. For instance, Torrance (1971) explored originality and enjoyment within couples. In this vein, a more recent framework has coined the concept of "romantic creativity" to theorise how partners co-create new and meaningful directions in their lives, thereby contributing to their wellbeing (Verger & Duymedjian, 2020). But overall, little research has been conducted into dyadic creative behaviour, particularly in early childhood.

Recent conceptualisation, for instance in Kupers et al.'s (2019) model, outlined children's creativity as a phenomenon that was dependent upon the triadic interaction between (a) the child, (b) the task at hand, and (c) the parent/teacher. Yet, in this model, the focus remains on the creative product and on the emergence of creative personality. It does not allow to provide a clear framework to conceptualise the effects of creative activities on early childhood resilience. Likewise, previous research that studied parent-child relationships within creative activities has mainly (if not only) addressed dyadic aspects by looking at how parents can encourage creative behaviours among their young children (Jankowska et al., 2020; Kwaśniewska & Lebuda, 2017; Lebuda et al., 2020). Although interesting, this research does not allow to document the extent to which creative activities could contribute to the resilience of young children.

Hypothetical mechanisms that would explain the effects of parent-child creative activities on the resilience of young children

The Self-Determination Theory, which was formulated by Deci and Ryan (2000), provides a theoretical backdrop to hypothesise the mechanisms that would explain the effects of dyadic parent-child creative activities on the resilience of young children. This theory proposes that the inherent needs of children are to learn (notably on their own) and to master their abilities, which the authors labelled respectively as their need for autonomy, and for competence. According to this theory, the feeling of competence is thwarted by negative feedback and non-fitting challenges but is promoted through a third need: relatedness. This dimension refers to the fact that children internalise behaviours, practices, values, and integrate new knowledge when they feel attached to someone or want to be close to someone (Deci & Ryan, 2009). This theory has ramifications to inform early childhood research. Indeed, the Development of Self-Determination Model (Palmer et al., 2013) posits that young children develop their self-determination through three aspects: (1) opportunities to practise their choice-making and problem-solving; (2) self-regulation/abilities to regulate their own emotions, behaviours, and attention; and (3) meaningful and prolonged engagement with their environment. These three intertwined fundamental needs are promoted by deliberate adult facilitation, most notably by their parents (Erwin et al., 2016).

In early childhood, parents are active ingredients in satisfying these needs as much as they are important factors in promoting creative thinking and creative behaviours in their children (Hoicka et al., 2016; Jankowska et al., 2020; Kwaśniewska et al., 2018). At home, parents can promote a positive climate for the expression of creative behaviours through supporting their children's autonomy, experimentation, and fantasy-based behaviours (Kwaśniewska et al., 2018; Kwaśniewska & Lebuda,

2017). Unlike traditional schools, which often overlook individual differences when they approach educational programs, home environments can allow each parent to display autonomy support to facilitate their children's desired behaviours (Baker, 1967; Bindman et al., 2015; Froiland, 2015). This everyday environment can offer parents the possibility of adjusting the type of creative activities they do with their child, thereby accounting for children's individual differences and personal interests (Kwaśniewska et al., 2018; Lebuda et al., 2020). Parents who provide autonomy support to their young children tend to encourage them to initiate activities autonomously and to push them to make their own decisions about the appropriate steps to take in order to resolve problems (GroInick et al., 2002; Grolnick & Ryan, 1989). Thus, home settings can allow the parents of young children to tailor creative activities and creative tasks to their children's needs (Harrington et al., 1987; Kupers et al., 2019; Pugsley & Acar, 2020).

When satisfied, the needs for autonomy, competence, and relatedness contribute to flourishing (Ryan & Deci, 2001). Positive emotions are an important outcome in resilience, and in a context of adversity these emotions provide evidence that a child navigates their wellbeing (Masten & Barnes, 2018). Previous research has documented that individual creative activities tend to support young children's life quality and happiness (Cheung, 2018). Brown and Sax (2013) reported that a preschool-based intervention that integrated music, dance, and visual arts promoted positive emotions among 4-year-old children. Other studies using a similar pretend play intervention on school-aged children also reported significant effects on positive affect with larger sample sizes (Moore & Russ, 2008). However, research has not yet documented the extent to which creative activities outside preschool settings (e.g., at home) can promote young children's positive emotions. Part of the reason, we propose, lies in the need have at one's disposal flexible methodological approaches that parents can easily implement at home. This is the development of the next section.

METHODOLOGICAL PROPOSITIONS TO ADDRESS DYADIC PARENT-CHILD CREATIVE BEHAVIOUR

Sociocultural approaches to creative behaviour champion the idea of an interdependency (or "nonindependence") between individuals and the characteristics of a situation at hand; that is, of the external world (Glăveanu et al., 2015; Kupers et al., 2019; Rusbult & Van Lange, 2003). Precisely because parents and children are interdependent during creative activities, it is necessary to consider methodological aspects adapted to both members of the dyad. There are multiple means by which one can study parent-child creative behaviour: one can focus on the product, the characteristics of both the child and the parents, and other traditional 4-P's aspects reported by creativity research (Rhodes, 1961).

Here, however, we want to focus on methodological considerations about the dynamic parent-child process. There are multiple methods to address those dynamics at home, most notably the use of direct observations via an external assessor (or the parent themselves), or through videorecording (Ostrov & Hart, 2013). For clarity of argument, this article focuses on the usage of audio-recordings. This method is not so commonly used in creativity research. Yet, it can minimise experimenter bias, and can help conduct research that can investigate real-time, and collect ecological data, about how young children and their parents interact during creative activities. This, we think, would contribute to further test Kupers et al.'s (2019) theoretical conceptualisation and better identify dyadic attitudes that foster resilience among young children.

The value of audio-recordings

Audio-recordings is an interesting method that can allow to capture moment-to-moment dynamics within creative activities and make sense of the dynamics of dyadic creative behaviour to capture phenomena as they unfold, thereby increasing the accuracy of data capture (Monrouxe, 2009). For the participants, audio-recordings are easier to complete and reduce completion burden associated with written diaries and other ecological momentary assessment (Markham & Couldry, 2007). With audio-recordings, the reference standards sit within the respondents (Hislop et al., 2005). This method is, therefore, well-suited to understanding the within-person and within-dyads dynamics at home. A key benefit of this approach is that audio-recordings minimise the influence of the researcher over the parent-child interactions in their ecological settings (for instance, at home), which can be, by nature, private and less accessible (Monrouxe, 2009). Hence, audio-recordings allow to collect data about ongoing interactions, but are also beneficial for studying behaviours of children, and usually match parent-attitude reports, and observational data (Johnson et al., 1976). There are benefits of this method over direct observation, however. Parents can use this method at home without needing the presence of the researcher. This, in turn, can minimise observer bias, as may be the case with direct observation methods, or with video recordings and the presence of a camera.

Researchers can code data from audio-recorded activities using, for instance, content analyses, as way to code for occurrences of behaviours and attitudes in parent-child interactions (Kupers et al., 2018). Previous methods have, for instance, transcribed the audio-recording into a structure, such as a dialogue, whereby the speaker was identified either as a parent (P) or a child (C), and where each utterance was numbered (Gajda et al., 2017). An utterance can be considered, for instance, to commence at the start of a sentence spoken by one speaker, and end when another speaker began a new sentence. Each utterance can be dichotomously coded to indicate whether a specific behaviour was present (1) or absent (0). The coding scheme can be determined inductively or deductively (i.e., specifying themes prior to or after the data coding). Once all the data has been coded, the researcher can then conduct a second round of coding in order to (a) discard of codes that appear isolated or non-relevant for their goal, and (b) code new attitudes and behaviour that emerged inductively from the first round of coding.

Audio-recordings have also a clear benefit over think-aloud protocols, wherein the participants would be explicitly prompted to vocalise their thoughts and behaviour. In audio-recordings, participants can simply record the data they wish on any electronic device and upload the section they feel comfortable with to online questionnaires. This is an important ethical aspect that

also mitigates participants' burden and give them agency to disclose only what they wish. From a research perspective, audio-recordings constitute, therefore, an interesting and unobstructive method that can yield ecological data and, thereby, open new perspectives of inquiry in creativity research (Beghetto & Karwowski, 2019; Gajda et al., 2017; Kupers et al., 2018).

Of course, uploading audio recordings can pose some ecological issues, particularly in terms of the validity of selective data provided by parents. Parents, who can choose to report exclusively data they are comfortable with, can, by the same token, report data that miss important ecological aspects of the dyadic parent-child creative interaction. As with any use of evaluation methods, it is therefore necessary to triangulate the data. This can be done, for example, by asking parents to take a photo of an outcome of their dyadic creative interactions, which would then be evaluated by other parents of young children using the Consensus Assessment Technique (Amabile, 1982). Data from audio-recordings can also be triangulated with scores of children on divergent thinking tests (Bijvoet-van den Berg & Hoicka, 2014) or even parents' own creative ability (Hoicka et al., 2016).

Ethical considerations of autonomous home-based research

In this article, we proposed the methods of audio-recordings for allowing participants to autonomously collect data of their dyadic creative activities with their children. Yet, this method requires the mitigation of some ethical risks. First, there is the need to consider the child's assent, which defines the child's willingness to participate in this research as assessed by their verbal and nonverbal behaviour in response to the features of the research design (Dockett & Perry, 2011; Oulton et al., 2016). Indeed, unlike the methods of direct observation and videorecording, with the method of audio-recording on electronic devices (e.g., a smartphone), there are no obvious signs for children to see that they are being recorded. It is therefore necessary to explicitly ascertain the child's wish to take part in a creative activity in which they are audio-recorded. When designing any online questionnaire for parents to upload their recording, researchers can thus ask parents "Did your child express their willingness to complete the proposed activities?" Failure to confirm this could automatically end the completion of the online questionnaire. Next is the question of the preference for the creative activity for the child who agreed to be recorded. This can be addressed by revisiting a Patient Preference Clinical Trial design, in which the researchers can provide the parents and their children a list of creative activities they can freely choose to do, based on their preference (Kowalski & Mrdjenovich, 2013). These activities can be conducted in the child's home, by the parent and the child, without any intervention of any researcher.

PERSPECTIVES

Dyadic parent-child creative activities could contribute to early childhood resilience. However, this topic has seldom been addressed by researchers. Identifying the candidate processes that may account for the effects of dyadic creative activities on young children's resilience would further contribute to informing interventional research by identifying how parent-child creative activities could be integrated into universal resilience interventions or positive psychology interventions in early child-hood (Dray et al., 2017; Holm-Hadulla, 2020; Verger et al., 2021). This research is needed to inform how applied research can leverage creative activities to improve the condition of children with and without presence of stressors (Grych et al., 2015; Masten & Barnes, 2018; Zimmerman et al., 2013).

Addressing the effects of dyadic parent-child creative activities on young children's resilience would contribute to identify to what extent creativity contributes to societal progress, by fostering positive parent-child relationships and other important resilience factors (Masten & Barnes, 2018). By focusing on a phenomenon that is inherently dyadic, creativity research would need to advance towards the usage and refinement of dynamic, dyadic methods of investigation of moment-to-moment creative behaviours. This can be addressed through audio-recordings, which can provide ecological data collected through minimally intrusive methods. This method can further permit to easily address cross-cultural comparisons by asking participants around the globe to electronically provide audios of their dyadic engagement in creative activities. Such methods can yield insights about potential cross-cultural differences and similarities and inform the study of creativity and early childhood resilience. Ultimately, this would help creativity research to move towards a better understanding of whether, when, how, and for whom creative behaviour can – or cannot – be beneficial.

Future research could focus on the design of home-based creative activities that are tailored to the child's preference. To ascertain which activity to focus on specifically, and to address the content of these activities, as well as their duration, it would be necessary to carry out a qualitative study with parents who practise creative activities at home with their children. As discussed in this article, there is indeed a dearth of research on the topic of early childhood creative activities in the home, and important exploratory research needs to be done in this direction. This line of research would also enable the design of a self-reported inventory to measure the frequency and domains of parent-child dyadic creative activities, opening new avenues for quantitative research and helping to inform intervention research on early childhood resilience. There is a need to focus on important resilience assets that would contribute to the quality of life of young children with and without adversity – factors, such as self-regulation, executive functions, parent-child bond, autonomous behaviour, and sense of mastery, and competence.

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