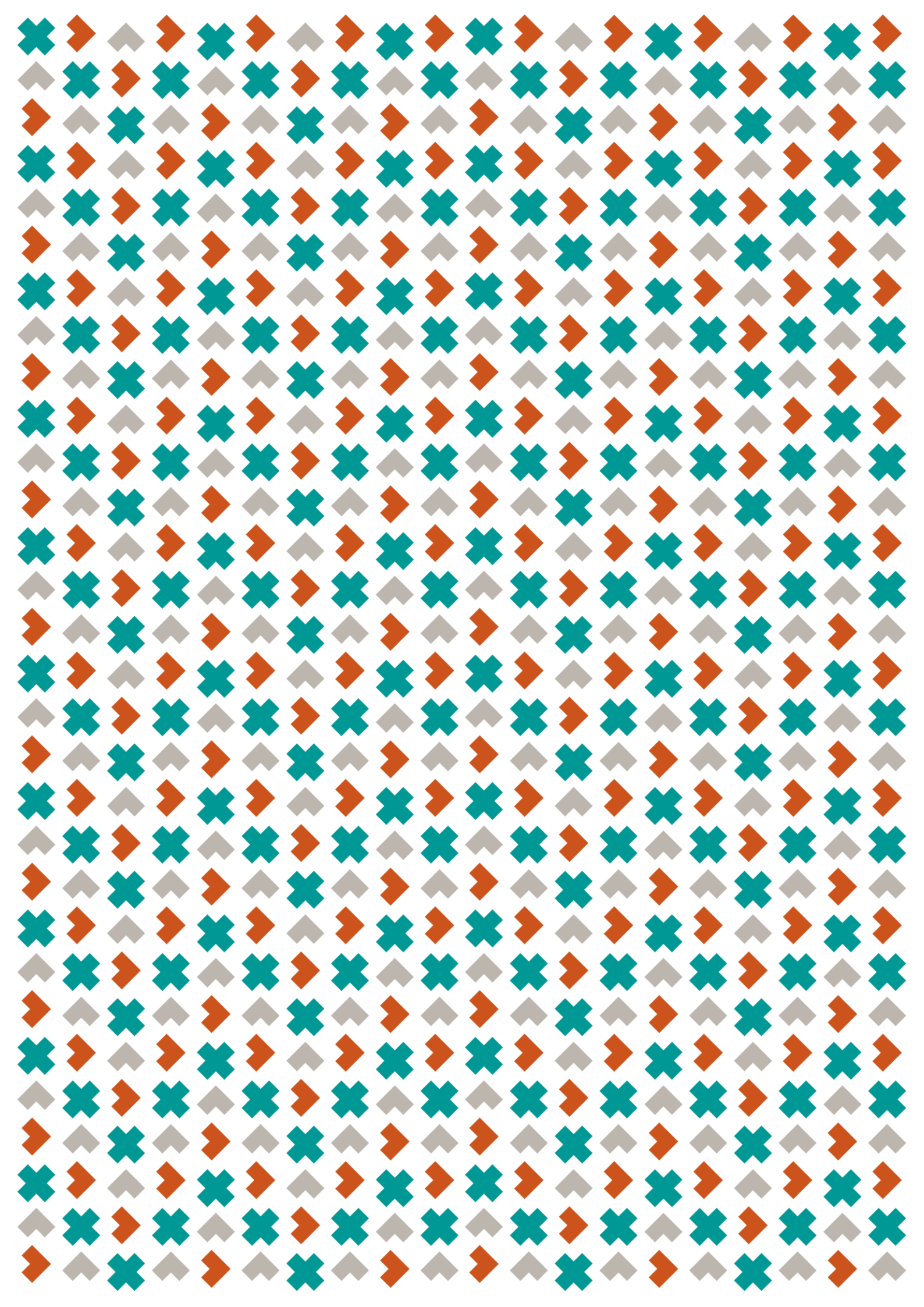


SWISS ACADEMY FOR DEVELOPMENT

WHY WE USE SPORT AND PLAY

BIEL/BIENNE [CH] / 13.4.2023 / SA4D





SCIENTIFIC BASIS FOR SPORT AND PLAY

In today's complex and rapidly changing world, it is more critical than ever to support young people in building a future for themselves and ensuring they are equipped with skills and develop strategies that allow them to successfully navigate through modern life with all its challenges. However, for many children and young adults the difficulties of growing up are exacerbated by poverty, conflict, stress and a general adverse environment. In this context, it is essential for children to, to be in a positive social surrounding and to make new experiences.

The following paragraphs summarise current discussions and recent research, all of which point to the crucial role sport and play can have in fostering positive social surroundings – for everyone, but especially for children to thrive. We will show that, both on an individual and community level, sport and play can provide the foundations for factors that help to counterbalance negative circumstances and create opportunities for growth. Sport and play hold the potential to support people in their development and to encourage curiosity, empathy, social exploration, learning, joy and a lot more. In addition, we will also show how these qualities – which are, and always have been, fundamental human traits – contribute to a more equal world, where everyone has the chance to live their life in a safe and nurturing environment.

1. Sport and play as a foundation for positive child development and cognitive skills in adulthood

1.1 Sport and play, child development and cognitive functions of adults

In early childhood, play is vital for children to develop cognitive skills and can even increase brain functioning. For adults, sport can help in preventing neurological diseases, such as dementia.

Development psychology and neuroscience present us with strong evidence of the profound effects of early childhood experiences – children's play being a critical one – on individuals' development. The way we play in childhood has an influence on our behaviour and relationship throughout our whole life – and can affect the following generations too (Günes, 2021).

For children's brain connections to form, a healthy, responding and empathic social environment is necessary which is characterised by rich social interactions (CDC at Harvard University, 2011). This can be achieved in most of playful activities. In play, children try out their first interactions. This allows them to learn how to communicate with and how to relate to others. While playing, children discover their environment safely. They learn what they can and cannot do and are able to benefit from the experiences of others (Holmes et al., 2015; Lillard, 2015).

Play also fosters their imagination and creativity, which, in turn, allows for abstract thinking (Lyle, 2017; Milteer et al., 2012). While playing, children make up scenarios for themselves and generate new thoughts, plans, and ideas. This creative process is critical to human cognition – and goes far beyond learning. In the situations they create, children form and test new hypotheses about their world – similar to academic researchers (Chu & Schulz, 2020). Additionally, there is evidence which suggests that a lack of play can negatively affect the social-emotional development– as is the case for children growing up in marginalized communities, where there is no space and time for play (Miltier et al., 2012).

At the same time, it has been shown that sport can lead to better brain functions – in children and adults as well. Given that the human brain is not fully developed until someone reaches their twenties– regular exercise until then can have a lasting positive influence on cognitive and brain health (Khan & Hilman, 2014). Furthermore, doing sports regularly as an adult protects the brain from diseases, such as dementia, and has positive effects on the central nervous system (Colcombe & Jramer, 2003; Hung et al., 2013; Zimmer et al., 2015).

1.2 Cognitive skills and development

The importance of play becomes even more evident, if we consider how its positive effects on individuals' cognitive and socio-emotional development can contribute to the prosperity and economic development of whole societies. The development of basic cognitive skills such as perception, attention, memory, processing, and logical reasoning, as well as higher-order cognitive skills such as problem-solving and critical and abstract thinking, is directly linked to economic development, as research shows. Hanushek and Woessmann (2021) found that long-term growth in gross domestic product (GDP) is largely determined by what they call 'knowledge capital of a nation', which is the aggregate cognitive skills of a nation's population. A previous study already showed that a population's cognitive skills, rather than school attainment or attendance, are powerful indicators of individual earnings, the distribution of income, and economic growth (Hanushek & Woessmann, 2008). Even within a country differences in GDP per capita growth can be explained by differences in cognitive skills (Laurini & de Carvalho Andrade, 2012). In addition, Altinok and Aydemir (2017) found that the positive effect of cognitive skills on economic growth is even about 60 percent higher for low-income countries compared to high-income countries. Thus, the use of sport and play can contribute to development by facilitating and promoting the development of cognitive skills in children and adults, thereby increasing the 'knowledge capital of a nation'.

2. Sport and play as education facilitator and accelerator

2.1. Learning through sport and play

From birth, children learn naturally through play. Research shows that play can positively influence learning by providing a joyful, motivating setting where social-emotional connections can be formed and hypotheses about the world can be tested.

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Learning works best when the learner is active, engaged, connected to meaningful material and socially interactive (Hirsh-Pasek et al., 2015). Those conditions are better met in a sport and play setting than through traditional teaching methods. When teachers use play-based methods, students' motivation increases, they stay engaged, focused and ignore distractions. As a result, they can better concentrate and remember what has been taught (Lieberoth, 2014; Yogman et al., 2018). In addition, play allows learners to frame problems in ways that are interesting for them (Chu & Schulz, 2020).

Even though play can get children to engage with and easily understand specific content, play is not solely an epistemological activity. Play might be prompted by a specific question or concern. However, while children make up a scenario and engage with it, the knowledge they gather is multidimensional. In play, children make many new experiences and learning often happens along the way (Chu & Schulz, 2020).

Play and learning are so interconnected, that researchers are now using children's play as a blueprint for artificial intelligence. By using "game-based" elements, machines are supposed to learn imagination, problem-solving and planning – the cornerstones of human intelligence – in the same way children do when they discover the world through play (Friston et al., 2021).

2.2. Education and development

Acknowledging the power of sport and play as education facilitator and accelerator becomes even more important when we consider that learning and education are not only key for individual development, growth and empowerment, but also critical factors for the social and economic development of societies in general. Education has been found to have a positive effect on a multitude of variables, including economic outcomes (e.g., higher growth and productivity; lower income inequality and poverty), health outcomes (e.g., higher life expectancy; lower infant mortality and HIV/AIDS prevalence), political outcomes (e.g., strengthened democracy and political stability; lower crime rates), and even indirectly on environmental outcomes (e.g., reduced deforestation and pollution) (Gyimah-Brempong, 2011; McMahon, 1999, 2010; Vila, 2000). Facilitating learning and education through sport and play can thus indirectly contribute to all these development outcomes.

3. Sport and play as tools to strengthen psychosocial and mental health

3.1. Sport and play and psychosocial and mental health

By reducing symptoms of mental health issues and promoting social relations, sport and play can positively influence the general well-being, self-perception and resilience of children and young adults. Physical activity is not only a cornerstone for physical health but also a proven strategy to treat and prevent mental disorders and foster psychosocial well-being (Rosenbaum et al., 2021). Various studies have found that exercise can reduce symptoms of depression, anxiety, schizophrenia, post-traumatic stress disorder, and alcohol and substance use disorders (Ahn & Fedewa, 2011; Ashdown-Franks et al., 2020; Hartmann and Pühse, 2009). Spontaneous play serves as a tool for therapy, since it creates a comfortable situation for the child to open up in (Chazan & Cohen, 2010). ADHD might be reduced by including social play in a child's life early on – through social interactions, communication and joined ventures, a pro-social mind is developed which might lead to a reduction of ADHD symptoms (Panksepp, 2007).

3.2. Psychosocial and mental health and development

The important and well-documented contribution of sport and play to the mental and psychosocial health of individuals is also associated with substantial benefits for the society as a whole. While having been relatively neglected for a long time, the importance of mental and psychosocial health for achieving the Sustainable Development Goals (SDGs) is increasingly recognized (Davidson, 2019; Izutsu et al., 2015;

Mills, 2018; Votruba et al., 2014). Mental disorders and psychosocial disabilities have extensive economic, social and health consequences on a global scale (Funk et al., 2012; Mills, 2018). From a health perspective, mental disorders contribute to a large portion of the global burden of disease, are a leading cause of disability, and significantly increase morbidity and mortality rates (Funk et al., 2012; Izutsu et al., 2015; Mills, 2018). As a result, the economic cost of mental disorders is estimated to be more than 4 percent of global GDP (Izutsu et al., 2015), and mental distress has been found to significantly increase the risk of poverty (Funk et al., 2012; Mills, 2018). Finally, mental disorders have diverse social consequences, including poor educational opportunities and outcomes, higher rates of imprisonment, homelessness, lack of employment and reduced income (Funk et al., 2012). Improving mental and psychosocial health through sport and play can thus help reduce these negative impacts on various development outcomes.

4. Sport and play as powerful tools for social cohesion

4.1. Sport and play and social cohesion

On a community level, sport and play are also powerful tools to (re)build social cohesion and can even contribute to conflict resolution, reconciliation and peacebuilding. Sport and play activities can bring together people from very different cultural and social backgrounds. By providing a neutral space for intergroup contact such activities can help to foster mutual understanding, reduce prejudices and bridge divides (Sugden et al., 2019). Sport and games also teach important skills and values like cooperation, tolerance and respect which constitute the foundation for social cohesion on an individual level (Moustakas, 2022).

4.2. Social cohesion and development

The positive effects of sport and play on social cohesion are further amplified as they can contribute to communities' economic and social development. Social cohesion has been found to have a positive effect on economic growth, long-term prosperity and competitiveness of a country (Karimi-Moghari et al., 2012; OECD, 2011; Sommer, 2019). In addition, socially cohesive societies tend to have better formal and social institutions (Sommer, 2019) as well as higher levels of political stability (OECD, 2011). Using sport and play activities to foster social cohesion and bridge cultural divides can thus indirectly contribute to strengthen these important pillars of economic and social port development.

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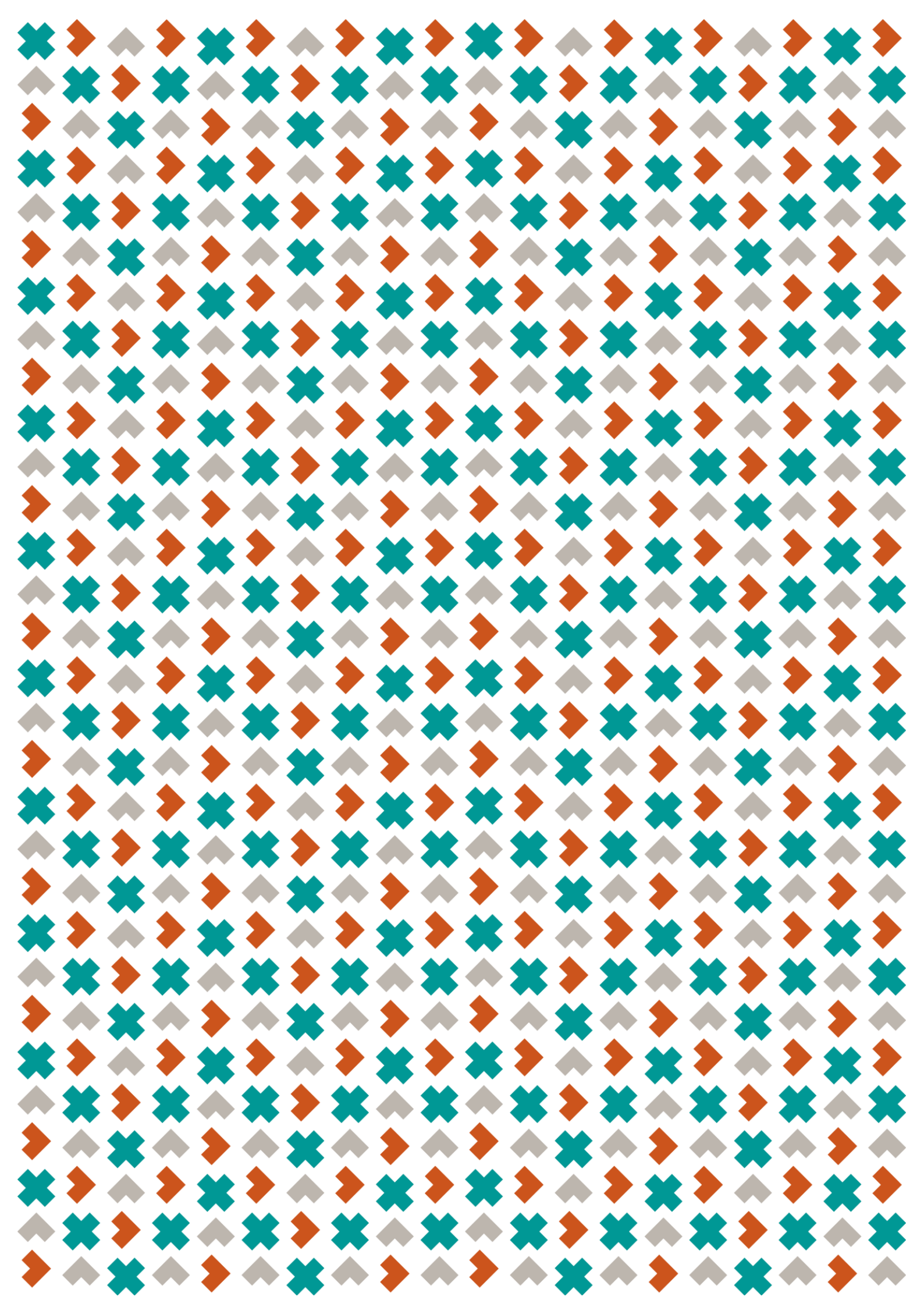
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Additional resources:

- Video: “The role of play in any setting” *Centre on the Developing Child, Harvard University*, 5 February 2023, <https://developingchild.harvard.edu/resources/play-in-early-childhood-the-role-of-play-in-any-setting/>.
- Video/Exhibition: Francis Alys, 2020, *Children’s games*, 5 February 2023, <http://francisalys.com/category/childrens-games/>.
- Podcast: “The Brain Architects: Building Resilience Through Play”, *Centre on the Developing Child, Harvard University*, 5 February 2023, <https://developingchild.harvard.edu/resources/podcast-resilience-play/>.
- Podcast: “Using Play to Rewire & Improve Your Brain”, *Huberman Lab Podcast #58*, 7 February 2022, <https://www.youtube.com/watch?v=BwyZlWeBpRw>.



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