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Understanding how children view the world: advancements, barriers, and future directions

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This paper outlines recent advances and proposes future directions in the study of child worldviews. Over the past decade, the field of developmental psychology has made significant strides in understanding how children form and revise their beliefs, as well as how these beliefs relate to their behavior and mental health. Despite these advancements, the field continues to lack extensive research on whether and how children's individual beliefs are organized into cohesive worldviews. Findings from adult research on worldview composition and structure are used to highlight these gaps in the developmental literature and to generate hypotheses concerning the nature of children's worldviews. Specifically, it is hypothesized that (1) children will have beliefs on many of the same worldview dimensions as adults (though children's worldview beliefs are likely to be more concrete and specific than adults'), (2) these beliefs form through children's direct experience and social learning processes, (3) worldview beliefs inform children's behaviors, and (4) these beliefs are resistant to change. Future research is necessary to test these hypotheses; however, numerous methodological challenges hinder such studies. Recommendations are offered to address these challenges, including the development of new instruments for assessing beliefs.

Introduction

A worldview is an individual's system of fundamental beliefs about the nature of the world. According to Johnson et al. (2011), worldviews encompass ontology (existential beliefs), epistemology (the extent, validity, and methods of acquiring knowledge), axiology (morals and values), teleology (the purpose of the world, life, and self), praxeology (behavioral prescriptions), and semiotics (communicating information about the world). It seems fitting, therefore, that Koltko-Rivera (2004) called worldviews "the ultimate parent schema." Worldview theorists state that worldviews underpin beliefs about politics, religion, morality, and interpersonal relationships, and both adults and children use their worldviews to guide behavior, interpret experiences, and make predictions about future events (Hedlund-de Witt, 2012; Ibrahim and Heuer, 2015; Kearney, 1984).

Recent years have seen significant advances in understanding children's beliefs across various domains. However, much less is known about whether and how children's beliefs are structured into a cohesive worldview in children's minds. Based on the existing research on children's beliefs and adults' worldviews, one would expect children's worldviews to include beliefs about human nature, care for others and the natural world, religion, and personal agency. One would also expect children's worldviews to be more concrete

and context-specific than adults', inform their behaviors, be resistant to change, and form through their experience and social learning. Several barriers exist to testing these hypotheses, including the lack of a child-friendly self-report worldview measure. Nonetheless, the evidence linking worldviews to mental health outcomes, behaviors, and societal functioning warrants further research efforts in worldview development. The following pages summarize the existing research on children's beliefs, remaining questions about children's worldviews, recent research on adults' worldviews, barriers to conducting child worldview research, and suggested strategies to overcome these barriers.

What we know about children's beliefs and worldviews

The content and function of children's worldviews

Across childhood, one's thinking becomes more abstract, figurative, and nuanced, and less concrete, literal, and black-and-white. This is also the case for children's beliefs (Turiel, 2006). For example, Misgav et al. (2023) found that values become more focused on internal mental states (e.g., wanting to make someone happy) and less focused on the concrete, observable behaviors associated with that value (e.g., helping someone with carrying groceries) as children age. Likewise, we expect younger children's overall worldviews to consist of more concrete beliefs (e.g., my teacher is nice, my guardian angel is an invisible person who keeps me safe) rather than abstract beliefs (e.g., humans are good by nature, there are divine forces at work in my life; Gabora, 2000).

Despite these early worldviews being more literal and specific, they should function as an adult's worldview, guiding children's interpretations and interactions with the world around them just as any schema would. Research on specific worldview components, such as religious beliefs, supports this hypothesis. For example, children (and adults) who believe that God can answer their prayers are likelier to pray (Froese and Uecker, 2022; Lane, 2020), and children prefer peers who share in their religious beliefs (Heiphetz, 2013). Research has also linked children's and adolescents' values with their behavior (Bacchini et al., 2015; Benish-Weisman, 2015; Paciello et al., 2017; Vecchione et al., 2016). In one study, children with higher self-transcendence values (i.e., greater Universalism and Benevolence values on Schwartz's circumplex model of values) were likelier to share a limited number of chocolate coins with another child (Abramson et al., 2018). Other research has found that children with higher self-transcendence values are less likely to display aggressive behavior (Benish-Weisman, 2019).

Early evidence on adult subjects suggests that one's worldview relates to mental health (Jinkerson, 2016; Walker et al., 2010). One study by Alsancak-Akbulut and Barişkin (2020) investigated the connections between worldviews, mental health (specifically, severity of Obsessive-Compulsive symptoms), and experiences of childhood traumas. They found that those with more negative worldviews (i.e., low self-worth and belief that the world is malevolent and meaningless) had worse OCD symptoms. Furthermore, these negative worldviews partially mediated the relationship between frequency of childhood traumas and OCD symptoms. Thus, it seems that more traumatic childhoods are associated with more negative worldviews, which are then both associated with worse mental health. Further research is needed to examine just how strong and stable these effects are, and whether similar effects exist in child subjects.

Maturity in children's beliefs

Some aspects of children's worldviews appear well-developed by middle childhood. Research on Schwartz et al.'s (2001) model of values has identified the same 10 core values (Universalism, Benevolence, Tradition, Conformity, Security, Power, Achievement, Hedonism, Stimulation, and Self-Direction) in both adults and children as young as 7 years old in various cultural contexts (Cieciuch et al., 2016; Collins et al., 2017; Döring et al., 2015; Liem et al., 2011). Still, value priorities do seem to change as one ages. A review by Döring et al. (2016) suggests that, with age, children tend to value self-transcendence values (i.e., Universalism and Benevolence) and conservatism values (i.e., Tradition, Conformity, and Security) less whereas they value self-enhancement (i.e., Power, Achievement, and Hedonism) and openness to change (i.e., Hedonism, Stimulation, and Self-Direction) more. Furthermore, significant life events can lead to a shift in values. For example, adolescents and adults tend to value security more in the time after a traumatic event (Döring et al., 2016).

The development of metaphysical beliefs, another major component of one's worldview, has been studied extensively over the last 25 years. While adults often believe that children have difficulty determining what is "real," research suggests that children accurately distinguish between make-believe and physical reality and engage in "fantastical thinking" at similar rates as adults (see Woolley, 1997 for a review). Like adults, children are more likely to believe fantastical stories if they are explained through a religious lens. For example, when stories from the Old Testament Bible, such as Jonah and the Whale, were re-written to remove all references to God and religious characters and locations, children reported significantly lower levels of belief in the story (Vaden and Woolley, 2011). These findings were mirrored in a new study by Davoodi et al. (2023), which found that older children (9–10 years old) were more likely believe religious stories than stories involving magic (e.g., using the "power of God" vs. "magical powers" to solve the same issue). It is important to note that these findings likely depend on the religious context that the participating children are raised in. Children who are raised in a religion that involves magic are more likely to believe in the stories about "magical powers." Indeed, Goldstein and Woolley (2016) found that children believe more in magical beings (i.e., Santa Claus) when that being is emphasized by their cultural context. In summary, although children tend to be more literal and inflexible in their thinking, they seem to have well-developed values and metaphysical beliefs, two key components of one's worldview.

Worldview consistency

Worldviews appear to be resistant to change (Carey, 1999; Greenberg and Arndt, 2011) and generally cohesive, with beliefs

within a worldview being more compatible with one another than contradictory (Cohen, 2001; Oishi et al., 1998; Schwartz et al., 2001). Just as adults are more receptive to information that fits within the framework of their existing worldviews, teenagers appear to have the same inclination. Zummo et al. (2021) found that adolescents with more conservative worldviews (operationalized as worldviews focused on interpersonal competition and individualism) are less receptive to new climate change research findings. Additionally, abstract, fundamental beliefs inform specific, context-dependent beliefs (Narvaez et al., 1999; Rattan et al., 2012). A study by Lane in 2020 found that children and adults who endorse religious beliefs are more likely to believe prayer can affect future events but not wishes. Still, the stability and consistency of children's overall worldviews are yet to be tested.

Origins of children's beliefs

In addition to understanding the content of children's beliefs, researchers are increasingly examining the origins of these beliefs. Beliefs can form through direct experience with the world (a la "theory-theory;" see Gopnik, 2011) and through social learning (Arrow and Burns, 2004; Conway and Schaller, 2007; Harton and Bourgeois, 2004; Kashima et al., 2015; Kasser et al., 1995; Van Lange et al., 1997; Vandello and Cohen, 2004). Legare (2019) identified five processes of belief development: exploration, observation, participation, imitation, and instruction. Consider beliefs about human nature as an example. A child may come to believe that people are inherently good through their exploration of the world (e.g., others have helped the child when they asked for it), observation (e.g., seeing their parents exchange hugs), participation (e.g., a teacher explaining to the child that their classmate did not yell because they were mean, but because they were frustrated), imitation (e.g., the child imitating pro-social actions), and instruction (e.g., the child being read a story that explicitly says people are good and kind). Beliefs across all worldview dimensions can form through these five processes, but it is yet to be explored which processes are more foundational to worldview development.

Furthermore, children seem to rely on different sources of information for different types of beliefs (Harris and Corriveau, 2021; Davoodi et al., 2020). For example, in research by Payir et al. (2024), a sample of Turkish children relied more heavily on testimonial source to justify their religious beliefs (e.g., "My grandma told me about heaven") but used more elaboration to justify their scientific beliefs (e.g., "If there was no electricity, then my tablet would not work right now"). Thus, the source of children's various worldview beliefs may differ depending on the domain of the belief.

Parents have a particularly strong influence on their children's beliefs, especially when their children are young. Research has identified strong overlaps between parents' and children's values (Kohn et al., 1986) and beliefs regarding religion, fate, and social cynicism (Oceja, 2009). Parents with authoritative parenting styles, who talk openly about their beliefs, and who have secure attachments with their children seem to transmit their beliefs to their children the most faithfully (Barni et al., 2011; Cheung and Pomerantz, 2015; Fraley et al., 2012; Pratt et al., 2003; Whitbeck and Gecas, 1988). From this research, we can hypothesize that parents have a strong influence on children's overall worldviews. However, instruments that directly measure children's and adults' worldviews are needed to examine their alignment as well as the factors that moderate this relationship.

In addition to environmental and social influences, genetic factors may also play a role in shaping worldviews. Much of this research has centered on Schwartz's circumplex model of values (though see Olson et al., 2001 for a study on heritability of attitudes). A study by Uzefovsky et al. (2015) on Israeli 7-year-olds found that genetic factors explained 29% of variance in self-transcendence values, 47% in self-enhancement values, and 31% in conservatism values. Only openness to change values appeared to be fully explained by environmental factors. Thus, it appears that more survival-oriented beliefs (e.g., the values of security, power, and care for others) have the strongest genetic component. These findings mirror other studies on children and adults, which have also identified genetics as a significant predictor of values (Button et al., 2011; Knafo and Spinath, 2011; Schermer et al., 2008; Waller et al., 1990). Other research, however, suggests that variance explained by genetic factors is often overestimated (Liu et al., 2015; Sauce and Matzel, 2018).

Remaining questions regarding childhood worldviews

There is growing consensus on several features of worldviews, such as the idea that worldviews are "parent schemas" used to predict and interpret the world around us. However, there is much more disagreement regarding the operationalization and measurement of worldviews. For example, some believe that religious beliefs are a core component of one's worldview and should be included in any worldview measure (e.g., Ai et al., 2014). In contrast, others believe that worldviews are more generalized assumptions about the world and do not include beliefs associated with a specific religious ideology in their worldview measures. Furthermore, much research on worldviews has not focused on capturing one's overarching worldview but instead on a particular set of worldview beliefs, such as one's political worldview. This limits researchers' ability to discern the overarching structure and content of worldviews. Indeed, worldview-relevant research on children almost exclusively investigates one domain of worldview beliefs, such as beliefs about the self, religious beliefs, or values. This has enabled researchers to gain significant insights into specific types of beliefs over the last decade. However, it constrains their understanding of how various worldview beliefs relate to one another and are organized into an overarching worldview, how adult and child worldviews differ, and how worldviews develop across the lifespan.

Barriers to research on worldview development and next steps

One significant barrier to research on worldview development is the lack of a reliable, child-friendly self-report measure of worldviews. Such a measure would allow researchers to assess children's beliefs across a variety of domains simultaneously and may offer greater validity than parent reports alone. Furthermore, the flexibility and efficiency of survey research would enable researchers to collect data from a larger number and greater variety of children, thereby facilitating cross-population comparisons and longitudinal research. Much like the Big Five Inventory has done for personality research, developing a similar measure of worldviews would allow researchers to simultaneously identify the core components of one's worldview and identify measurement items that relate to each of these latent factors.

In 2019, a new measure of adults' worldview, the Unified Worldview Measure (UWM), was developed (Woodard, 2019). This measure was designed to balance both top-down and bottom-up measurement strategies by compiling five of the most well-cited but discrepant (that is, each based on differing factor structures) measures of worldviews and using exploratory and confirmatory factor analyses to identify the main worldview factors and their associated items (i.e., the factors and items that explain the most variance). Five worldview factors emerged. The first factor, Humanism and Harmony, is comprised of 11 items that focus on humanity's potential to do good and humanity's responsibility to care for other people and the environment. The second factor, Secularism, consists of nine items that contrast secularism with religiosity, specifically focusing on more Western conceptions of religion. Two example items on this factor are "Regarding my life, after death everything is over" and "After death, my soul goes to an absolutely peaceful place, the Heaven," with the former item loading positively and the latter item loading negatively onto the factor. The third factor, Eastern-Based Spirituality, also consists of metaphysical beliefs, but from a less Western perspective. The eight items on this factor include statements about Nirvana, reincarnation, and spiritual interconnectedness. The fourth factor, Self-Reliance, includes seven items about the direct relationship between hard work and success regardless of discrimination or other environmental factors. Lastly, the fifth factor, Determinism, consists of six items concerning the existence (or nonexistence) of free will and human agency. Although exploratory factor analyses on a new sample in 2024 produced the same five factors, confirmatory factor analyses on samples collected in both 2019 and 2024 suggest some room for improving the fit between the factor structure and the data.

In 2020, a child-friendly version of the UWM, called the Unified Worldview Measure-Child Form (UWM-CF), was created (Woodard, 2021). The most recent version of the UWM-CF includes four items from each of the five existing UWM factors (translated into child-friendly language) as well as 13 new items based on core worldview dimensions that were underrepresented by the UWM, including whether the world is just and whether events happen at random or if they are predictable or controllable. These are dimensions central to many other measures of worldview beliefs, such as the Primals Inventory (Clifton et al., 2019), the World Assumptions Scale (Janoff-Bulman, 1989), and the Social Axioms Survey (Leung et al., 2002). Data is currently being collected to test this updated version of the UWM-CF on a child sample. Future research, particularly longitudinal research, will be key in discerning how worldviews change with age and over time. Future research should also be conducted to investigate whether and how worldviews differ in content and structure among children from diverse cultural contexts. It may be that worldviews, like values, retain the same structure across cultures but differ in children's average ratings of each dimension.

Advancing our understanding of worldview development holds both theoretical and practical value. As discussed earlier, worldviews are related to one's mental health and behavior. If we wish to improve mental health and promote more positive behaviors, it is crucial to understand the developmental origins of more adaptive and constructive worldviews. Parents, teachers, and other influential adults can help foster more positive worldviews through modeling optimism, valuing compassion and environmental stewardship, and providing supportive, trauma-free environments. Moreover, clinicians and mental health professionals may benefit from utilizing the worldview framework to gain a deeper understanding of how their clients perceive and interact with the world. Therapists can then work within their clients' worldviews, strengthening the therapist-client relationship and improving treatment outcomes (Sue et al., 2009). Ultimately, better understanding of worldview development may yield lasting benefits for individuals' overall mental health throughout their lifespan.

Concluding thoughts

Though much progress has been made over the last decade regarding our understanding of children's beliefs, we still know relatively little about how children's beliefs are (or are not) structured into an overarching worldview and how said worldviews develop. We do know that much of child belief research aligns with adult worldview research. For instance, children's beliefs inform their behavior and mental health, just as adult worldviews do. Furthermore, children are remarkably adult-like in the detail, consistency, and stability of many of their beliefs. We can also infer how children's worldviews develop by applying existing research on belief development, which suggests that direct experiences, social learning, and genetic influences play a role. As several studies have linked worldviews to adults' behaviors, mental health, and societal functioning, further research into the origins and development of these worldviews is crucial. Advances in the field, such as creating a child-friendly self-report worldview measure, are key to overcoming the challenges associated with such research.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

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Author contributions

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