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Fostering Academic Performance in 5-Year-Olds: The Role of Self-Direction Values, Presented Self-Esteem, and Positive Self-Perception

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ABSTRACT



Self-direction values, which reflect the need for autonomy, creativity, curiosity, and mastery, potentially hold substantial importance in educational settings. However, limited research exists on how these values contribute to academic performance, particularly in early childhood. This study aims to fill this gap by examining the relationships between kindergarten children's self-direction values and their academic performance while considering their presented self-esteem and positive self-perception. One hundred and twenty children (59 girls; $M_{age} = 67.45$ months, $SD_{age} = 6.56$ months) participated in this study. Children's self-direction values and positive self-perception were examined in one-on-one interviews. Teachers reported on the children's presented self-esteem and academic performance. *Research Findings:* Presented self-esteem significantly mediated the link between self-direction values and academic performance (path a: $p = .007$; path b: $p < .001$). Additionally, positive self-perception significantly moderated the link between self-direction values and their presented self-esteem in the classroom ($p = .007$). The indirect effects of self-direction values on academic performance through presented self-esteem were significant at the average and high levels of positive self-perception, but not at the low levels. *Practice or Policy:* The current research provides valuable insights into the role of self-direction values in early education and the interplay between young children's self-direction values, presented self-esteem, and positive self-perception, thus contributing to developmental and educational theory and practice.

HIGHLIGHTS

- Self-direction values are positively related to early academic performance.
- Children's presented self-esteem partially mediates these relations.
- Positive self-perception of the children serves as a moderator.
- The mediational model is significant in moderate to high positive self-perception.
- Initial evidence of the significance of self-direction values in early education.

Introduction

Research has demonstrated that strong academic performance during kindergarten predicts favorable outcomes in later school years across cognitive, academic, and social-emotional domains (Claessens & Engel, 2013; Elliott, 2019; Miller-Cotto & Byrnes, 2020). The growing body of evidence highlighting the significance of early academic performance underscores the need to examine the diverse factors

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that could support or hinder it. The current study approaches this critical issue by drawing upon Schwartz's values theory (Schwartz, 1994) to provide new insights into how children's guiding motivations in life may be linked to their academic performance during kindergarten.

Specifically, this study centers on children's endorsement of self-direction values that prompt individuals to pursue autonomy in their actions and thoughts, fostering a drive for mastery, curiosity, and creativity (Bardi & Schwartz, 2003; Kasof et al., 2007; Levontin & Bardi, 2019; Liem et al., 2012). As such, these core motivational aspects of the self are considered to have significant relevance within the educational setting (Schwartz, 2005). However, limited research has examined the contribution of self-direction values to academic-related outcomes, such as grades, learning behaviors, and approaches to learning (e.g., Liem et al., 2012; Vecchione & Schwartz, 2022). Even fewer studies have addressed how other student or environmental factors may mediate or moderate these relationships, with no research exploring these critical aspects among kindergarten children, indicating an important gap that needs to be addressed.

This study aimed to bridge this gap by examining (a) the association between kindergarten children's self-direction values and their academic performance, (b) the potential mediating role of children's presented self-esteem, i.e., their observed behavioral manifestation of self-esteem in the kindergarten class (teacher-rated), and (c) the moderating role of children's self-perception on this indirect pathway between self-direction values and academic performance via presented self-esteem. Previous studies have shown that self-direction values are positively associated with self-esteem (Collins et al., 2022; Daniel et al., 2023), and there is ample evidence of the important role of self-esteem in students' academic performance (Booth & Gerard, 2011; Busalim et al., 2019; Di Giunta et al., 2013), including in the early years of kindergarten (Bridgeman & Shipman, 1978; Cvencek et al., 2018). Therefore, we tested for the first time the mediating role of kindergarten children's presented self-esteem in the associations between their self-direction values and their academic performance. We also tested the moderating role of children's self-reported positive self-perception in the associations between self-direction values and their presented self-esteem in class. Children's positive self-perceptions of their own capabilities in different domains can potentially interact with the values they prefer. As they feel more competent, they can be encouraged to actively pursue their self-direction values-related aspirations, linked to independence, creativity, innovation, and learning opportunities which can be manifested in behaviors indicative of higher self-esteem. Individuals who have confidence in their abilities are more likely to invest increased efforts and demonstrate higher persistence in the pursuit of important goals (Gist & Mitchell, 1992; Landry, 2003).

Self-direction values

Values serve as core and broad motivational foundations that express individuals' important life aspirations, guiding how they perceive themselves and others and their decision-making and behaviors across different life domains (Schwartz, 1994, 2012). Schwartz's values model outlines 10 basic values (e.g., self-direction, stimulation, conformity, achievement, benevolence, etc.) that express distinct yet interrelated human motivations, validated across diverse cultures (Schwartz, 2006) and age groups (e.g., Benish-Weisman, 2015; Elizarov et al., 2023). Among these basic values, the current study centers on self-direction values. These values prompt individuals to actively seek exploration, learning, and mastery opportunities, to navigate challenges with curiosity and creativity, and to demonstrate independence in both thought and action (Bardi & Schwartz, 2003; Schwartz, 2005). In kindergarten-aged children, who are the focus of the current study, self-direction values may manifest in their tendency to take initiative in activities, often preferring to work independently with less reliance on teachers or peers. For example, they may approach classroom tasks with curiosity and a creative problem-solving mind-set, driven by a desire for mastery and a developing sense of agency (Elizarov et al., 2023).

According to Schwartz (1994), self-direction values embody growth-oriented principles. Individuals who embrace these values are inclined to act based on their intrinsic motivation to learn, driven by sheer enjoyment and interest in learning and exploration, along with aspirations to

foster independence in their thoughts and actions (Ryan & Deci, 2000; Schwartz, 2016; Vecchione & Schwartz, 2022). These sorts of goals are accomplished through the process of learning and mastering, involving the acquisition of new knowledge and skills that enhance individuals' competence and autonomy.

Additionally, self-direction values have been found to relate to other core elements that promote self-reliance and support exploration and learning processes. These elements, observed in studies conducted with university students and other adults, include creativity (e.g., Dollinger et al., 2007; Kasof et al., 2007; Lebedeva et al., 2019), innovation (e.g., Grigoryan et al., 2018; Lebedeva & Schmidt, 2012) and the tendency to engage in feelings, such as interest and excitement (Tamir et al., 2016), that might support learning and exploration processes. Young children displaying these values in the classroom may similarly exhibit enthusiasm, curiosity, and creativity, behaviors aligned with self-directed learning.

Self-direction values and academic performance

Given these inherent connections between self-direction values and learning, mastery, independence, creativity, and innovation, it is unsurprising that self-direction values exhibit the strongest positive correlation with levels of education of all basic values (see Schwartz, 2005). However, there has been limited exploration to date of the role of self-direction values in educational settings. A few studies have examined the connections between self-direction values and learning-related aspects, such as learning approaches and achievement motivations (Levontin & Bardi, 2019; Liem et al., 2012; Lietz & Matthews, 2010) in high school and university students. In terms of students' endorsement of self-direction values and academic performance, only two studies to date have investigated the links between these values and students' grades as an indicator of academic performance (Liem et al., 2012; Vecchione & Schwartz, 2022). For instance, Vecchione and Schwartz (2022) found self-direction values were positively related to students' higher grades in diverse subjects. Notably, these two studies were conducted with adolescents. Given the increasing importance of academic performance in early education (Hustedt et al., 2018; Moffett & Morrison, 2020), it is crucial to expand the research to include younger children. Our study takes an important step in this direction.

Furthermore, prior research has indicated that kindergarten children's enhanced academic performance, reflected in higher skill levels across various domains like language, literacy, mathematics, and scientific reasoning, is associated with positive concurrent and lasting effects on diverse child outcomes (e.g., Duncan et al., 2007; Miller-Cotto & Byrnes, 2020; Snyder et al., 2021). Aligning with this established scientific knowledge underscoring the importance of early academic performance, extensive research aims to identify factors conducive to enhancing academic performance in kindergarten children.

Accordingly, earlier studies have demonstrated how various environmental factors, such as teachers' instructional approaches, curriculum design, content coverage, and parental involvement (Brotman et al., 2013; Le et al., 2019; Shoval et al., 2018; Wenz-Gross et al., 2018), influence the academic performance of kindergarten students. Other investigations have examined diverse child-related factors predicting early academic performance. While many of these studies have concentrated on young children's cognitive abilities, particularly executive functions (Allan et al., 2014; Finders et al., 2021; Moffett & Morrison, 2020), others have explored non-cognitive or psychological aspects, such as children's social and learning behaviors (Houri & Sullivan, 2019; Wenz-Gross et al., 2018), socio-emotional characteristics like temperament and curiosity (e.g., Bryce et al., 2018; Shah et al., 2018), and motivations and approaches to learning (e.g., DiPerna et al., 2007; Zee et al., 2021).

Notably, no studies have explored the role of children's overarching guiding motivations in life, such as their self-direction values, in their early academic performance. This gap exists despite the inherent connections between self-direction values and education, as stated above, and also despite recent studies underscoring the existence and importance of 5-year-old children's values orientations within the kindergarten context and beyond (Collins et al., 2017; Elizarov et al., 2023, 2024;

Lee et al., 2017). Accordingly, we investigated the associations between children's endorsement of self-direction values and their academic performance. Furthermore, we proposed a mediating factor between children's values and their academic performance, specifically the children's presented self-esteem in class.

The mediating role of presented self-esteem

Self-esteem is defined as the extent to which individuals value themselves as worthy and competent, encompassing overall positive feelings about their "self" as a whole (Donnellan et al., 2015; Lane et al., 2004; M. Rosenberg, 1965). For individuals to report on their self-esteem, they must be able to articulate verbally their general feelings about their self-value – a skill not yet fully developed in children aged 4 to 7 years, although they do possess an intrinsic self-awareness (Cvencek et al., 2018; J. T. Haltiwanger, 1995; J. Haltiwanger & Harter, 2019). Self-esteem is a crucial factor throughout human development (Harris & Orth, 2020; Orth et al., 2012), making it imperative to explore this aspect in young children as well. J. Haltiwanger and Harter (2019) proposed obtaining children's self-esteem through their observable behavioral manifestation of self-esteem, known as their presented self-esteem. Clemes and Bean (1990) supported the idea that self-esteem is a general feeling constantly manifested in individuals' daily actions. In alignment with this perspective, J. Haltiwanger and Harter (2019) and Lawrence (2002) argued that high self-esteem in children is actively displayed through observable behaviors such as trusting their own ideas, initiating activities, setting independent goals, enthusiastically exploring new things, and confidently approaching challenges. In contrast, low self-esteem in children is reflected in observable behaviors that indicate difficulties in executing these same behaviors.

Self-esteem plays a key role in academic performance (Boehnke, 2005; Hansford & Hattie, 1982). While substantial evidence exists for the relationship between self-esteem and academic performance in older children and adolescents (Booth & Gerard, 2011; Busalim et al., 2019; Di Giunta et al., 2013), there are comparatively fewer and more current indications of these associations in the kindergarten years (Cvencek et al., 2018; Papadopoulos, 2021). In general, the existing studies on this matter underscore how students with higher self-esteem demonstrate enhanced academic performance across all academic stages. For instance, in the kindergarten context, Cvencek et al. (2018) employed an implicit self-esteem measure, independent of children's verbal self-reports. They found significant positive correlations between self-esteem in kindergarten children and academic performance across diverse domains, such as mathematics, reading, writing, and science, indicating the relevance of these associations even in young children.

Additionally, in the exploration of potential precursors of self-esteem, recent studies within the field of values research have noted the significant motivational contribution of self-direction values. These values, identified as one of the three fundamental human values consistently ranked as most significant compared to others (Schwartz, 2005; Schwartz & Bardi, 2001), have been found to notably relate to individuals' self-esteem (e.g., Collins et al., 2022; Daniel et al., 2023). Furthermore, employing the classification of values into "adaptive" and "maladaptive" types (Sagiv & Schwartz, 2000), self-direction values, which guide individuals' intrinsic motivations toward growth, learning, and self-expansion (Schwartz, 2012), are classified as adaptive values. Moreover, as mentioned earlier, these values consistently correlate with characteristics associated with growth, such as innovation, creativity, and independence, and are positively linked to better health (Hanel & Wolfardt, 2016), well-being (Sagiv & Schwartz, 2000; Sortheix & Schwartz, 2017), and well-being indicators, including self-esteem, in middle childhood, adolescence, and adulthood (Collins et al., 2022; Fetvadjev & He, 2019; Lönnqvist et al., 2009).

The current study pioneered the exploration of these associations in kindergarten children. It posited that young children's endorsement of self-direction values, encompassing their prioritization of adaptive intrinsic motivations, would be linked to higher self-esteem, reflected in more frequent behavioral manifestations indicative of their higher self-esteem. Our objective was to add to the

significant scientific evidence on values, academic performance, and self-esteem among young children. To that end, we examined how kindergarten children's presented self-esteem mediated the connection between their self-direction values and their early academic performance. We extended our exploration to consider in what condition the association between values and presented self-esteem will exist, that is the moderating role of self-reported positive self-perception in the pathway linking kindergarten children's endorsement of self-direction values with their presented self-esteem in class.

Self-perception as a moderator

As previously mentioned, 5-year-old children have yet to articulate their overall self-evaluation or self-esteem. Nevertheless, they can convey more specific self-evaluations, such as their perceptions of their own capabilities (e.g., "I am good at counting") and social standing, including perceived social acceptance (e.g., "I get asked to play with others"). These more specific self-evaluation capabilities have been described as domain-specific self-perceptions (Harter & Pike, 1984). Young children's positive self-perceptions, including in cases when they overestimate their abilities, significantly predict their adaptive development (Heberle & Carter, 2015), especially when these perceptions are evident in their observed daily conduct (J. T. Haltiwanger, 1995; J. Haltiwanger & Harter, 2019).

Two studies to date have shown significant associations between self-direction values and domain-specific self-perceptions, one involving adolescents (Llinares Insa et al., 2001) and a more recent one focusing on middle-childhood-aged children (Collins et al., 2022). Building on and extending these findings, the current study suggested young children who perceive themselves as more competent and accepted may tend to be more confident in fulfilling their self-direction intrinsic motivations in their everyday lives, including within central social settings, like the kindergarten class. Thus, their endorsement of self-direction values, combined with confidence in their abilities, will manifest more extensively in their presented self-esteem, that is, their class conduct, characterized by increased confidence, independence, initiative, creativity, and flexibility. These behavioral manifestations will mirror their higher self-esteem and the behavioral fulfillment of their self-direction growth-related goals.

This argumentation is in line with Bandura's Social Cognitive Theory (1994) whereby individuals who are confident in their competencies are more likely to feel comfortable fulfilling their important goals, for example, their self-direction values-oriented goals. Specifically, they are likely to exert more effort and demonstrate greater persistence when striving to achieve these goals (Gist & Mitchell, 1992). Conversely, individuals perceiving themselves as less capable may exhibit reduced confidence in their ability to attain their important goals, leading to less or no investment in their pursuit.

Moreover, these dynamics can be viewed through the lens of values theory and the concept of values fulfillment. The process of values fulfillment involves engaging in behaviors that align with one's important broad motivations and related goals, and can be facilitated by a belief in one's competencies. This in and of itself becomes a rewarding experience that includes positive feelings and can enhance self-esteem (Bardi & Schwartz, 2003). The experience becomes even more powerful when it involves the fulfillment of self-direction values, as these center on growth, independence, and exploration – elements crucial to fostering higher self-esteem.

The current study

Based on the preceding argumentation, we examined a moderated mediation model (see Figure 1), proposing that kindergarten children's presented self-esteem in class will act as a mediator in the presumed positive connections between the children's endorsement of self-direction values and their academic performance. Moreover, this mediation will be moderated by the children's self-reported self-perceptions. Specifically, we hypothesized:

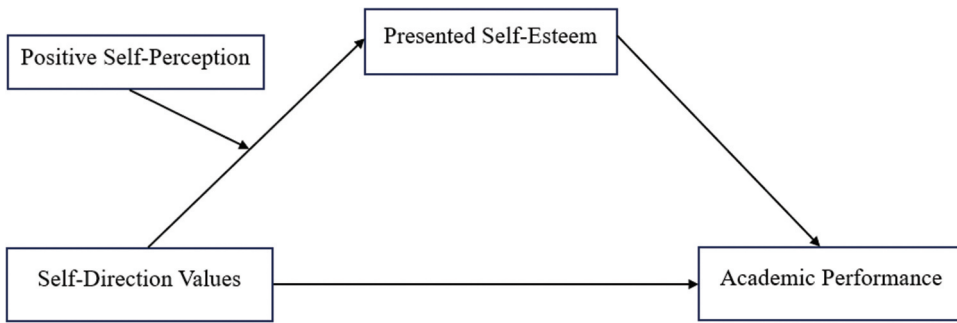


Figure 1. The Study's conceptual moderated mediation Model.

- (1) Children's endorsement of self-direction values will positively correlate with their academic performance.
- (2) Children's presented self-esteem in class will mediate the associations between their self-direction values and their academic performance.
- (3) Children's self-reported self-perception will act as a moderator in the proposed mediation model by interacting with the association between the children's endorsement of self-direction values and their presented self-esteem in class.

Method

Participants and procedures

The sample included 120 Israeli kindergarten children (50% girls; $M_{age} = 67.53$ months, $SD = 6.53$). All children in the study used Hebrew as their primary language. According to parental reports, 70% of these children came from households where the mothers had attained a college degree or higher. In terms of household income, families had monthly incomes that ranged from \$4,000 to \$5,400, slightly above the Israeli average (the 2017 census reported families in Israel had an average monthly income of \$4,300). The children who participated in the study resided in the North and Haifa districts of Israel and attended 35 kindergarten classes located in diverse environments, from urban to rural settings.

After obtaining IRB approval (see below), we contacted kindergarten supervisors to obtain initial permission to reach out to the kindergarten teachers. We then approached the teachers by phone to explain the importance of the research and the study procedures. Most of the teachers we contacted expressed a positive attitude toward allowing the research to be conducted in their classrooms and assisting with initial contact with parents, as well as completing questionnaires for the participating children. On average, each of the 35 teachers assessed approximately three children. Once consent was granted, our research team visited the kindergarten classes and conducted one-on-one interviews with the participating children. The day before each visit, research assistants called the teachers to arrange the meeting as well as the parents to ask them to inform their children about the scheduled visit. Upon meeting the children, the assistants introduced themselves and asked if they would like to participate to receive their verbal assent. These interviews, which lasted between 30 and 40 min, included inquiries about the children's personal values, particularly their endorsement of self-direction values, using the Animated Values Instrument (a 20-min playful interview; Lee et al., 2017). They also included the self-perception assessment using the Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (PSPCSA; Harter & Pike, 1984). During the visits, teachers completed several questionnaires, including those related to the children's behavioral manifestations of self-esteem, also referred to as their presented self-esteem, and their academic abilities.

In the context of kindergarten education in Israel, and in relation to this study's inquiries, it is important to note that there is no formal distinction between preschool and kindergarten in the Israeli education system and the terms are often used interchangeably. Compulsory education begins at age 3 (David, 2023), and preschool centers serve children aged 3–6 years before they enter first grade. Therefore, the kindergarten year (ages 5–6 – the ages of children in the current sample) in Israel is considered part of the preschool environment, not the formal school setting. This distinction is important for our current examination, as the Israeli kindergarten environment typically does not focus on academic achievement but is instead more play-based, with an emphasis on free choice.

The consents and data collection of the current study were part of an extended research project conducted between 2016 and 2019. The entire study protocol received approval from the University's IRB (approval # 464/16) and the Israeli Ministry of Education's Chief Scientist Office (approval # 9312). Overall, missing data accounted for less than 1%. To facilitate interpretation of the coefficients, all total scores used in the study's analyses were standardized. For access to the materials and analysis codes, please contact the corresponding author.

Measures

Self-direction values

To investigate the values preferences of kindergarten children, with an emphasis on their inclination toward self-direction values, we employed the AVI (Lee et al., 2017). The AVI is an online survey comprising 21 brief animations, each designed to represent one of the 10 basic values outlined in Schwartz's values model (Schwartz, 1994), including self-direction values which are the primary focus of this study. The entire interview contains 21 subsets (an exemplar subset is depicted in Figure 2). Each of these 21 interview subsets has five distinct values-expressive animations. During the interview, after the child is seated on the left side of the screen and the research assistant on the right, the research assistant explains: "We are going to watch some things on the screen that might be important to kids your age, while others may be less important." Once the first set of animations appears, the research assistant continues, "Each time, we will watch five short animations. After that, I will ask you to point to the animation that you think is most like you, and then the one that is least like you. I will place

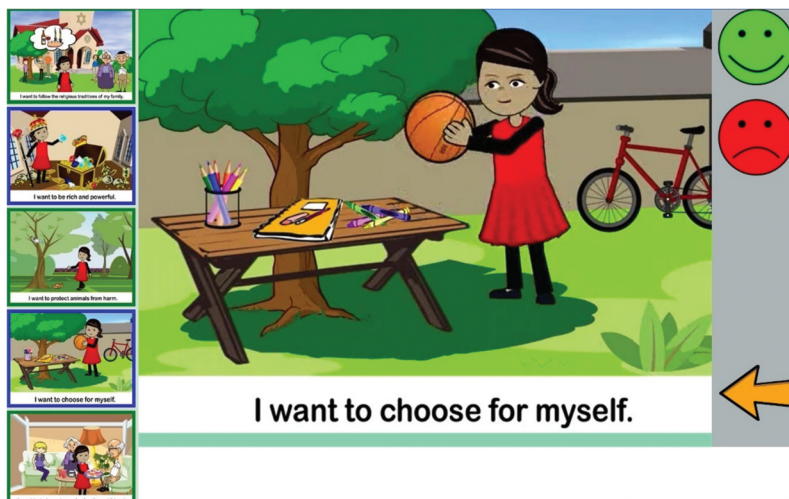


Figure 2. Screenshot of subset number 3 from the animated values instrument. The displayed subset includes five value-expressive animations from which the child is asked to choose. The subtitles for these animations, listed from top to bottom, are as follows: "I want to follow the religious traditions of my family." (tradition values); "I want to be rich and powerful." (power values); "I want to protect animals from harm." (universalism values); "I want to choose for myself." (self-direction values); "I want to help and care for family and friends." (benevolence values).

a green smiley face on the animation you choose as most like you, and a red sad face on the one you choose as least like you. Then, we will move on to the next set.” The design of the subsets ensured each item appeared five times, with every item compared to each of the other 20 items once.

Self-direction values are originally depicted in the AVI via two animations that articulate the fundamental motivations at their core: (1) “I want to learn more about things,” and (2) “I want to choose for myself” (see a snapshot of one of the animations in [Figure 2](#); see Lee et al., 2017).

Children’s values importance scores, including their self-direction values importance score, were computed by subtracting the number of times a value was chosen as “least like me” from the number of times it was chosen as “most like me.” These scores were standardized by dividing them by five, corresponding to the total number of times each animation appeared. This standardization resulted in scores ranging from -1 to $+1$, with zero indicating the midpoint of the scale. As our intention was to work with exclusively positive scores, we adjusted the scale to range from 1 to 11. In this revised scale, the higher the score, the greater the importance of the value. To obtain the final score, we computed the average of the two items representing self-direction values.

The survey was originally developed in English and was used with English-speaking children in prior studies (e.g., Benish-Weisman, 2019; Collins et al., 2017). To adapt it for Hebrew-speaking children in the context of Israeli culture, we took the following steps. First, the lines spoken by the animated character were translated from English to Hebrew and then back to English to ensure accuracy. Then, to ensure the animations and audio were easily understandable to Israeli kindergarten children, we created a focus group of six kindergarten children. Approval for the final translation was obtained from Professor Shalom Schwartz, who developed the values theory, following a personal communication in July 2018. The Hebrew audio was recorded and integrated into the survey by a programmer. The entire process was conducted in close collaboration with the developers of the AVI.

Lastly, we conducted a confirmatory multidimensional scaling (MDS; Borg & Groenen, 2005) analysis. This is a widely used method to validate values structures across age groups and measurements. The MDS results showed that the 10 basic values, including self-direction which is the primary focus of the current study, all assessed using the AVI, were positioned as expected based on Schwartz’s theory, thereby supporting the construct validity of this study’s self-direction score. Specifically, self-direction was placed near other openness-to-change values, such as stimulation values, and opposite conservation values, such as conformity and security values, this in line with the theoretical framework. There were no misplacements of values, and the Stress 1 value of 0.11 indicated a good fit to the data (Spence & Ogilvie, 1973), further reinforcing the reliability of the values scores. This indicates that the intercorrelations among the 10 basic values evaluated with the AVI, including self-direction values, conform with the theoretical model (Elizarov et al., 2023; Lee et al., 2017; Schwartz, 1994).

Presented self-esteem

Children’s presented self-esteem (i.e., self-esteem as expressed through observable behaviors; rated by teachers) was assessed using the Behavioral Rating Scale of Presented Self-Esteem in Young Children (J. T. Haltiwanger, 1995; J. Haltiwanger & Harter, 2019). This teacher-rated questionnaire is based on the daily classroom behaviors that teachers observe. The scale includes 24 items that assess behaviors in children aged 4 to 7 years, reflecting high self-esteem through actions related to exploration, curiosity, initiative, and independence within the classroom setting (see examples below).

The questionnaire is structured so that each item presents two contrasting statements regarding the same type of behavior. The first statement reflects higher self-esteem, and the second reflects lower self-esteem, for example: (1) “Prefers activities that stretch his/her abilities; sets high goals” versus “Does not prefer activities that stretch his/her abilities; does not set high goals; (2) “Approaches challenging tasks with confidence” versus “Lacks confidence to approach challenging tasks; shies away from challenge,” and so forth. Initially, the teacher is asked to select which of the opposing

statements best characterizes the child's behavior. Following this selection, the teacher rates whether the child is "very much" like the description in the chosen statement or only "somewhat" like it.

Each item is scored on a 4-point scale, with a higher score indicating a higher level of behaviorally presented self-esteem. For the purpose of this study, the questionnaire underwent a translation process from English to Hebrew and then was back-translated to English to verify its accuracy. Previous studies reported very good internal consistency ($\alpha = .89-.93$; e.g., J. T. Haltiwanger, 1995; Oppenheim, 1990). The internal consistency in our study was excellent ($\alpha = .95$).

Children's positive self-perception

Children's positive self-perception was measured using the Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (PSPCSA; Harter & Pike, 1984). This child-report direct assessment, designed for preschool and kindergarten children, comprises 24 items distributed into four domains, with six items allocated to each domain. These domains include children's self-perceptions of their cognitive competence (e.g., "[This child is] good at counting," "[This child] knows names of colors"), physical competence (e.g., "[This child is] good at running," "[This child is] good at climbing"), peer acceptance/social self-perceptions (e.g., "[This child] has lots of friends," "[This child] gets asked to play with others"), and maternal acceptance (e.g., "[This child's] mom talked to him/her," "[This child's] mom takes him/her places he/she like"). The assessment can also be used to generate a total general score, offering a broader representation of young children's self-perception.

The pictorial scale is structured such that for each item, the child is presented with two pictures that express contrasting statements on the same type of behavior. For example, the item asking about performance on puzzles includes two pictures, one with a child character who performs well in puzzles, and the second with a child character who performs poorly. Initially, children are asked to select the picture with the character that is more like them. Following their selection, they are asked to rate whether they are "very much" like the description in the chosen statement or only "somewhat" like it. Each item is scored on a 4-point scale, with higher scores indicating more positive self-perceptions.

This assessment tool has been translated into Hebrew and successfully applied in Israel (e.g., Kedem et al., 2021; Önder et al., 2022; L. Rosenberg et al., 2013). With kindergarten children, the internal consistencies reported for each of the four domains by Harter and Pike (1984) ranged from $\alpha = .50$ to $.85$. Similarly, the internal reliabilities of the subscales in our study were modest: $\alpha = .50$ for cognitive competence (after excluding item 5 "[This child] gets many stars stickers on his/her papers"); $\alpha = .58$ for physical competence; $\alpha = .70$ for peer acceptance (after excluding item 6 "[This child] stays overnight at his friends' houses"); and $\alpha = .73$ for maternal acceptance. Previous studies employing the total self-perception score, encompassing all four subscales, as in the current study, indicated internal consistency ranging from $\alpha = .83$ to $.85$ (e.g., Harter and Pike (1984); Kedem et al. (2021); Önder et al. (2022)). In our study, the internal consistency of the positive self-perception total score was $\alpha = .81$. We used this total score in our analyses.

Academic performance

We obtained the children's academic performance score, reflecting their comparative success in academics, by having teachers rate them across six primary academic domains: oral language, writing, fine motor skills, gross motor skills, math skills, and scientific reasoning skills (see "Mock report card" in Pierce et al., 1999). Each domain was evaluated using a 5-point Likert scale, ranging from "1" ("child is performing well below grade level") to "5" ("child is performing well beyond grade level"). Mean grades were: 3.59 for oral language ($SD = .69$, range = 2–5); 3.17 for writing ($SD = .83$, range = 1–5); 3.47 for fine motor skills ($SD = .82$, range = 2–5); 3.41 for gross motor skills ($SD = .77$, range = 1–5); 3.38 for math skills ($SD = .75$, range = 2–5); and 3.40 for scientific reasoning skills ($SD = .70$, range = 2–5). The total academic performance score we used in the analysis comprised the mean score across these six academic domains. The internal consistency of this total score was $\alpha = .83$.

Results

Table 1 displays the means, standard deviations, and intercorrelations among all variables examined in the study. Consistent with Hypothesis 1, children's endorsement of self-direction values was positively correlated with both their presented self-esteem in the classroom ($r = .20, p < .05$) and their academic performance ($r = .28, p < .01$; H1). Moreover, children's positive self-perception showed a positive correlation with gender ($r = .18, p < .05$; boys = "1," girls = "2," control variable). That is, girls tended to exhibit more positive self-perception than boys. However, no significant correlations were identified between children's positive self-perception and the three other main variables: self-direction values, presented self-esteem, and academic performance. Additionally, gender was not significantly correlated with these three variables.

Testing the proposed moderated mediation model

We applied the Hayes Process Model 7 (Hayes, 2017; Rockwood & Hayes, 2020) in SPSS 23 to investigate the proposed moderated mediation model, encompassing (1) the use of children's presented self-esteem as a mediator between their self-direction values and their academic performance, and (2) the role of children's positive self-perception as a moderator in the relationships between children's self-direction values and their presented self-esteem (while controlling for gender).

As Table 2 shows, children's self-direction values significantly predicted their presented self-esteem in the classroom (path a: $\beta = 0.24, t = 2.73, p = .007$), and their presented self-esteem, in turn, significantly predicted their academic performance (path b: $\beta = 0.39, t = 4.58, p > .001$). We employed a bootstrapping approach with 5000 bootstrap samples and calculated 95% confidence intervals (CIs) to determine the significance of the indirect effect of self-direction values on academic performance via presented self-esteem. The 95% CIs did not include 0, indicating that, in line with Hypothesis 2, the indirect effect of children's self-direction values on their academic performance was statistically significant (95% CI = .012, .183).

In addition, in support of Hypothesis 3, children's self-perception moderated the positive associations between their self-direction values and their presented self-esteem in the classroom ($\beta = 0.23, t$

Table 1. Descriptive statistics and correlations between study variables.

	Mean	SD	Minimum	Maximum	Skewness	Kurtosis	1	2	3	4
1. Self-direction values	5.71	1.15	3.00	8.50	.37	-.31				
2. Presented self-esteem	3.06	.52	1.46	4.00	-.37	-.03	.20*			
3. Academic performance	3.41	.56	2.00	5.00	.44	.14	.28**	.43***		
4. Positive self-perception	3.32	.38	2.33	3.96	-.42	-.60	-.13	-.09	.03	
5. Gender	-	-	-	-	-	-	-.07	.14	.03	.18*

* $p < .05$; ** $p < .01$; *** $p < .001$. Gender (1 = boys, 2 = girls).

Table 2. Test of the Moderated Mediation Effects Linking Children's self-direction values and academic performance.

Regression equation (N = 120)		Fit index			Coefficient significance			
Dependent variables	Independent variables	R	R ²	F	β	SE	t	P-value
Presented self-esteem	Constant	.366	.134	4.432**	.033	.087	.372	.710
	Self-direction				.243	.089	2.734	.007
	Positive self-perception				-.125	.089	-1.397	.165
	Self-direction X Positive self-perception				.227	.082	2.750	.007
	Gender				.179	.089	2.017	
Academic performance	Constant	.469	.220	10.881***	.002	.082	.021	.983
	Self-direction				.196	.084	2.315	.022
	Presented self-esteem				.387	.085	4.579	.000
	Gender				-.013	0.83	-.152	.888

β refers to the standardized regression coefficient of the equation; Gender (1=boys, 2 =girls).

(115) = 2.75, $p = .007$). For children with more positive self-perception, the significant positive correlation between self-direction values and presented self-esteem in the classroom was stronger. The most robust significant positive association was found among children who reported high scores for positive self-perception (one SD above the mean): $\beta = .47$, $t(115) = 3.62$, $p > .001$. When children reported average scores for positive self-perception (at the mean level), the association remained positive and significant but was notably weaker: $\beta = .24$, $t(115) = 2.74$, $p = .007$. When children reported low scores for positive self-perception (one SD below the mean), the association between their self-direction values and their presented self-esteem was not statistically significant ($\beta = .02$, $t(115) = 0.14$, $p = .887$). Taken together, these results suggest the indirect effects of children's self-direction values on their academic performance through their presented self-esteem are significant at high and moderate levels of positive self-perception, but not at low levels.

The results of bootstrapping analyses showed that when children's self-perception scores were average (mean level) and high (one SD above the mean), the indirect effect of self-direction values on academic performance through presented self-esteem in the classroom was statistically significant (indirect effect = .09, 95% CI = .021, .190; indirect effect = .18 95% CI = .064, .343, respectively). However, when self-perception scores were low (one SD below the mean), the indirect effect was not statistically significant. In this instance, the 95% CI from the bootstrap analysis ranged from -0.118 to 0.104 and contained the value 0 (indirect effect = .01).

These findings suggest children's self-direction values are associated with their academic performance through their presented self-esteem only when they report average or high scores in positive self-perception. Accordingly, a moderated mediation model was established, with a model index value of 0.088 and a 95% bootstrap CI ranging from 0.018 to 0.197.

Discussion

In our study, we examined the largely unexplored territory of the role of self-direction values in academic performance in early childhood and the mechanisms by which self-direction values and academic performance are connected. Specifically, we investigated whether children's self-direction values, advocating for autonomy, curiosity, creativity, and mastery, relate to their academic performance in kindergarten, if presented self-esteem mediates this link, and then also if children's self-reported self-perception moderates the full model.

Our results substantiated H1, showing that children's endorsement of self-direction values positively relates to their academic performance. By definition, self-direction values are conceptually and inherently related to more adaptive behaviors in educational settings, as their essence includes promoting individuals' aspirations of learning and mastering and overcoming intellectual challenges (Levontin & Bardi, 2019; Schwartz, 2005). In the context of kindergarten, self-direction values may manifest in several ways. Children who endorse these values may express a desire to take initiative in their activities, preferring to do things on their own with less dependence on teachers or peers. They might engage in problem-solving and creative tasks independently, demonstrating curiosity and a drive for mastery. For instance, they may be more inclined to approach classroom challenges with a sense of curiosity and innovation, relying on their sense of agency (Elizarov et al., 2023). Additionally, children who highly endorse self-direction values may explore tasks with greater interest and enthusiasm (Tamir et al., 2016), showing a readiness to make their own choices, all of which are behaviors that promote learning.

Despite this, our understanding of the linkage between self-direction values and academic performance in young children is still limited. The few studies to empirically examine it (Liem et al., 2012; Lietz & Matthews, 2010; Vecchione & Schwartz, 2022) found self-direction values were related to better learning approaches and academic performance. Our findings are consistent with and extend these prior research findings, providing crucial evidence of a significant connection between self-direction broad motivations and academic performance in young learners. Furthermore, they contribute to a growing body of research that explores

the importance of values in the daily lives of kindergarten children (Abramson et al., 2018; Collins et al., 2024; Elizarov et al., 2023, 2024; Lee et al., 2017). This study represents one of the first pieces of evidence supporting the role of values in the academic domain of young children.

The results for the proposed mediation model supported H2, showing that children's presented self-esteem partially mediated the positive relationship between self-direction values and their academic performance. This trajectory posits that beyond the direct connections between self-direction values and children's academic performance, these intrinsic motivations of children that encourage independence, initiation, and exploration are also indirectly connected to academic performance through the children's confident classroom behaviors. These behaviors demonstrate high self-esteem during interactions with peers and when tackling class assignments and challenges, contributing to academic outcomes. Consistent with these findings, earlier research emphasized the contribution of self-esteem to academic performance from early education to later academic stages (Di Giunta et al., 2013; Körük, 2017; Wang et al., 2021). While the connections between self-direction values and self-esteem were established in recent values research (Collins et al., 2022; Daniel et al., 2023), ours is the first study to establish this connection in early childhood. The results suggest the early emergence of the association and provide preliminary evidence of how children's self-direction values, presented self-esteem, and academic performance interact.

Regarding H3, our findings for the pathway between children's endorsement of self-direction values and their presented self-esteem suggest the strength of the association depends on the extent to which children perceive themselves as competent and accepted. In our study, this relationship became more robust when children possessed higher levels of positive self-perception (average to high). This increase in children's positive self-perception was reflected also in the indirect pathways between their self-direction values and academic performance through their presented self-esteem, which, in turn, became more robust. Conversely, the pathway between self-direction values and children's presented self-esteem became non-significant when children had low levels of positive self-perception; the indirect pathway became non-significant as well. These intriguing findings and their potential interpretation resonate with the notion that belief in one's own abilities serves as an accelerator for pursuing and achieving important goals, as outlined in Social Cognitive Theory (Bandura, 1994). The results may imply that children actively pursued their self-direction values-related aspirations and goals, manifested in confident, creative, and independent behaviors in class, which are indicative of higher self-esteem, primarily when they perceived themselves as sufficiently competent and socially accepted (displaying average to high levels of positive self-perception). In addition,

Other intriguing potential interpretations of these results, grounded in values theory, point to the role of positive self-perception in individuals' belief in their ability to fulfill their important values, especially adaptive values like self-direction (Schwartz, 2012). That is, when children endorse self-direction values and maintain more positive self-perceptions of their competence, this interaction correlates with higher self-esteem, as evidenced in this study through the children's behavioral manifestation of self-esteem in class. This process accords with the notion that values fulfillment, or the subjective belief in one's ability to fulfill key values, is experienced as rewarding (Bardi & Schwartz, 2003) and thus may be linked to greater self-esteem, an important aspect of well-being (Oppenheim-Weller et al., 2018). Moreover, some of the behaviors indicative of higher self-esteem, such as displaying confidence and independence, taking the initiative, and overcoming challenges while expressing curiosity and creativity, not only signify higher self-esteem (J. T. Haltiwanger, 1995; J. Haltiwanger & Harter, 2019; Lawrence, 2002) but also, to some degree, can be interpreted as behavioral expressions of self-direction values (Bardi & Schwartz, 2003; Schwartz, 2012). From this perspective, the outcomes of our study that centered on self-direction values, positive self-perception, and high self-esteem expressive behaviors can be understood in the context of the values-behavior relationship, and as such, offer insights into the mechanisms and factors that may intervene in it (see review in Sagiv & Roccas, 2021). These mentioned results imply that children's positive self-perception

and belief in their competencies may reinforce the associations between their endorsed self-direction values and a more pronounced display of self-direction values-expressive behaviors.

Limitations and future directions

Along with the study's novelty and the significance of our findings, several limitations should be acknowledged. We provided a theoretical basis supporting the sequence and directionality of the proposed model, and the results validated and provided additional support for the assumptions outlined in this study. However, the study was correlational in nature, cross-sectional design. Consequently, the results should be interpreted with caution, as causal conclusions cannot be established. The use of experimental and longitudinal methodologies in future work is essential to replicate the proposed sequence or to explore alternative directionalities.

Additionally, regarding the measurement of children's self-direction values, although the two self-direction items ("I want to choose for myself" and "I want to learn more about things") address the core aspects of self-direction, including autonomy, creativity, curiosity, and mastery, they may not capture each of these facets to the same extent. In particular, the animations primarily and explicitly emphasize autonomy and curiosity. While these two self-direction items do implicitly relate also to creativity and mastery, they may not provide explicit representations of these two facets. Given that our study focused specifically on self-direction values, we acknowledge that future research would benefit from employing a broader range of stimuli to better capture the full spectrum of self-direction values, for example by incorporating additional items or measures. This approach would enhance our understanding of how these values relate to academic performance and other outcomes in early childhood. Also, in terms of this study's measurements, it is important to acknowledge potential biases associated with both child self-report measures, where children report on themselves, and teacher-report measures, which may be influenced by teachers' personal biases or expectations.

Moreover, in this study, we focused on the anticipated positive outcomes associated with children's endorsement of self-direction values in an educational context. Particularly, in terms of how their aspirations for self-direction could translate into more confident, initiative-taking, and independent behaviors in the classroom, potentially leading to improved academic performance. However, future research should investigate the possibility of less adaptive trajectories. Specifically, the current study prompts questions about the potential challenges posed by an educational environment that emphasizes conformity to rules, norms, and asymmetric relationships between teachers and students (Saldana, 2013). What happens when children's self-direction aspirations cannot be expressed in the classroom? How might these children be perceived by teachers who do not prioritize their call for independence and initiative? Can the endorsement of these values present challenges to the educational system and the teachers' capacity to oversee their classrooms, especially in the context of large classes and extended school days?

Further, the expression and impact of self-direction values may differ across cultural contexts. In more individualistic societies where autonomy and independence are often emphasized, children's self-direction may align well with educational goals that encourage initiative. However, in more collectivist and traditionally structured cultures that prioritize respect for authority, adherence to norms, and group cohesion, similar behaviors may be perceived differently, potentially leading to diverse academic and classroom outcomes (Schwartz, 2006). This underscores the importance of cross-cultural research to expand the generalizability of our findings by gaining a deeper understanding of how broader societal norms and culturally specific educational philosophies and principles impact the dynamics between children's endorsement of self-direction values, self-perception, the behavioral manifestation of self-esteem in the classroom, and academic performance (Mantzicopoulos, 2004).

Moreover, another key way to broaden the generalizability of our findings is by studying this dynamic across various age groups, as previous research has indicated notable developmental-related changes in self-perceptions of competence (Dapp & Roebbers, 2018; Nobre & Valentini, 2019).

Finally, our sample comprised a relatively small group of 5-year-old children, mostly from middle-class families in Israel. Sensitivity analysis indicated that, given the current sample size ($N = 121$), only moderate to large effect sizes could reach statistical significance. Future research with larger sample sizes would be valuable in determining whether the non-significant indirect effect observed in children with low positive self-perception is attributable to weak effect sizes or insufficient power.

Implications

The results of this study yield valuable insights for child caregivers in the educational field and beyond. We found two significant positive outcomes associated with higher endorsement of self-direction values. The first was increased presented self-esteem, manifested in classroom behaviors. The second was improved academic performance, even when presented self-esteem was tested as a mediator. These outcomes have practical implications for child practitioners, teachers, and parents who aim to support children's development, especially in psycho-emotional and academic domains, by encouraging their prioritization of self-direction values.

To attain this objective, caregivers, whether at home or in educational settings, should establish occasions for children to showcase independence, participate in creative problem-solving, take the initiative, and explore. In line with self-determination theory (Deci & Ryan, 2000) and with studies focusing on the importance of children's right to actively participate in decision-making processes (Correia et al., 2019, 2024), practices supporting children's autonomy may include providing them with opportunities to make their own decisions while offering meaningful alternatives to select from and providing meaningful explanations for the activities they are asked to participate in (Benita et al., 2014; Deci & Ryan, 2000). These practices together with recognizing children's rights to participate meaningfully in decision-making can be essential for fostering their self-direction values as they affirm the children's sense of agency. By nurturing positive experiences and providing support for their engagement in daily activities that demonstrate these qualities, caregivers can help children associate self-directed behavior with positive and rewarding feelings. This, in turn, can empower them to apply behaviors related to these values more spontaneously and independently in the future, while also equipping them with relevant strategies. Ultimately, individuals' values systems are not only influential in shaping their behaviors but are also reciprocally influenced by their daily actions (Benish-Weisman, 2019). Intentional attempts to provide children with opportunities to engage in self-direction values-related behaviors can contribute to a broader and enduring prioritization of these values in children.

Furthermore, while it is essential to encourage young children's endorsement of self-direction values, our results indicate that this alone may not be sufficient to realize the potential positive contribution to self-esteem and academic performance. The findings imply that to witness the actualization and fulfillment of self-direction values in children's lives, they need to maintain a positive perception of themselves as competent and accepted individuals. This recognition introduces an added layer of intricacy that child caregivers should keep in mind in their interactions with young children. It emphasizes the need to be attuned to how children perceive themselves and the importance of making efforts to enhance their positive self-perception when required. This study, alongside prior research (Bouffard et al., 2003; Dapp & Roebbers, 2018; Measelle, 2005), underscores the potentially profound impact of self-perceptions on psychological and education-related processes of young children and offers guidance to caregivers concerned with supporting children's adaptive development.

Finally, the study sheds light on the behavioral manifestation of self-esteem in young children (i.e., children's presented self-esteem), particularly in relation to its underlying socio-cognitive and psychological factors. Our findings echo previous research (Chen et al., 2004; Fu et al., 2020; Skinner et al., 2008) and emphasize the need to view young children's behaviors not as random events but as reflections of complex internal processes, intricately connected to their social cognition and psychological identity. As suggested by the findings of this study, it is more beneficial for caregivers to perceive young children as social agents from an early age, possessing notions about what is important

in their lives and representations of self and others, which guide their interpretation, experience, and responses to their social surroundings. To provide care, assistance, and nurturing in a more effective and profound manner, caregivers should put more emphasis on understanding the social mind and psychological self of young children, including their values as their important broad motivations, and their self-perceptions.

Disclosure statement

Complete study protocol approval was obtained from the University's IRB and from the Ministry of Education chief scientist office in Israel (approval # 9312). Materials and analysis codes for this study are available by emailing the corresponding author.

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