

# Chapter 30

## Children's Attitudes toward Older People: Current and Future Directions



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### 30.1 Why and How Study Ageism in Children?

*Being old is to lose memory, to have wrinkles and also white hair*" ("Maria", 6 years old).  
*"I think that when we became old we can and we know a lot of things to teach to the future generation of the family*" ("Pedro", 11 years old).

Age is a fundamental dimension along which children organize their perceptions of people in their social world (Lewis and Brooks-Gunn 1979). According to Levy (2009), stereotypes about the ageing process and, more specifically, about older people, become internalized across the life span in two fundamental ways: top-down (from society to individuals) and over time (from childhood to old age). As people age, stereotypes internalized during childhood and adulthood tend to eventually become self-stereotypes leading to often negative outcomes for older people (Levy 1996, 2003). Four main stereotypes against older people seem to be prevalent in society: (1) older people are generally depressed and lonely lacking family and close friends and having mood disorders; (2) older people constitute a homogeneous group and ageing is perceived as a unidimensional and unidirectional process; (3) older people are frail, sick and dependent on others; and (4) older people are seen as having cognitive and psychological limitations (Whitbourne and Sneed 2002). Several studies have shown that the mere exposure to negative stereotypical traits of old age (e.g., ill, dying, forgetful) has severe negative effects on older persons in multiple domains such as memory performance, stress levels and the

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will-to-live (e.g., Levy 1996, 2003; Marques et al. 2014a). These negative views are both expressed at the individual and institutional levels because there is also much evidence of negative treatment of older people across many areas such as the media, healthcare and organizational settings (Marques 2011; Mendonça et al. 2016; Swift et al. 2016; see similar chapters in this volume, e.g., Loos and Ivan (2018; Chap. 11), Wyman, Shiovitz-Ezra, and Bengel (2018; Chap. 13), Stypinska and Nikander (2018; Chap. 6)). Hence, understanding how representations of older people develop from an early age is of crucial importance in order to better understand and intervene in this domain.

At present, the literature in this field has still not yielded clear findings and it is therefore inconclusive regarding children's views of different age groups and, in particular, of older people. In fact, the two quotes at the beginning of the present chapter illustrate well the sort of contradictory evidence that currently exists regarding the representations of older people among young children. On the one hand, several studies show that children's perceptions of older adults tend to be mostly negative. For instance children as young as 3 years old (e.g. Middlecamp and Gross 2002), have been found to have negative ideas about older adults, children prefer younger to older adults (Isaacs and Bearison 1986) and they may refer to older people in a negative manner, associating this age group with traits such as helpless, stubbornness and senility (Pinquart et al. 2000). On the other hand, there are other studies that show no significant differences in attitudes regarding younger and older targets and some even report positive perceptions of older people. For example, in a study using the drawing test methodology, children expressed a generally positive image of older people, depicting an older family member who was happy, healthy and active (Robinson et al. 2014).

These contradictory sources of evidence suggest the need to explore this issue in more detail. In this chapter, our goal is to explore and systematize the main evidence gathered so far regarding children's attitudes towards older people, in order to gain a better understanding of how these attitudes develop in childhood. Therefore, the goals of this chapter are: (1) to present a literature review of the main body of studies assessing children's attitudes toward older people; (2) to classify the available measures according to fundamental criteria of prejudice development in childhood: their level of automaticity (explicit vs. implicit measures) and the dimensions covered (cognitive, affective or behavioral); and (3) to explore the pattern of development of children's attitudes toward older people in children. We believe that this represents a very important and meaningful contribution to this literature.

In the present analysis, we adopt the definition of attitudes based on the tri-partite model (Eagly and Chaiken 1993). According to this theory, an attitude is composed of three dimensions: affective (represented by prejudicial feelings), cognitive (represented by beliefs and stereotypes) and behavioral (expressed through behavior or behavioral intentions). These three dimensions of attitudes can express a positive or negative evaluation regarding the object (Eagly and Chaiken 2007). Hence, we are interested in exploring studies addressing these different dimensions of children's attitudes towards older people. In accordance with this definition, ageism represents the specific case when there is a negative attitude towards older people (either in affective, cognitive or behavioral terms).

## 30.2 What Do We Know About the Development of Prejudice in Childhood? Implications for the Study of Ageism

There are numerous theories regarding the development of prejudice among children. We follow Levy and Hughe's (2009) suggested framework to organize the main theoretical approaches. For example, the Social Learning Theory (Allport 1954) is based on the assumption that children learn prejudice through the observation and imitation of relevant role models, namely their parents or peers. According to this theory, as children age and learn the expected behavior, their prejudice would also tend to increase or match the levels of their parents.

A different approach is presented by the Cognitive-Developmental Theory originally developed by Piaget and Weil (1951) and applied to the prejudice field by About (1988), Bigler and Liben (2006) among others. According to this theory, prejudice is derived from children's limited cognitive abilities which undermines their capacity to see people as individuals, leading to overgeneralizations. With age, children's cognitive abilities such as multiple classification ability become more flexible, allowing them to recognize similarities across groups and differences within the same group.

Along with this cognitive maturation, children's expression of prejudice toward out-group members varies across different stages in childhood. In this regard, almost everything infants do is implicit in the sense that they are unlikely to be consciously considering and controlling any of their attitudes (Olson and Dunham 2010). Children's attitudes become increasingly explicit as they grow older: as toddlers, as preschoolers and, especially, as elementary school students. In this last developmental stage, children (especially from the age of 8 – e.g., Rutland et al. 2005; Abrams 2011) are able to manage the expression of their attitudes according to their goals and social constraints. The gradual developmental of the "explicit system" allows children to exert an increasing level of strategic control over previously automatic processes (Olson and Dunham 2010).

Another set of theories known as Social-Cognitive Developmental Theories, are based on both social and cognitive approaches, considering both personal factors (e.g. age, cognitive skills) and also characteristics of the social environment. For example, the Social Identity Development Theory (SIDT – Nesdale 1999), postulates that intergroup bias can take different forms among both adults and children, namely the preference for the in-group (in-group bias) and dislike for the outgroup (e.g. race prejudice) (Rodrigues 2011). This theory is derived from the Social Identity Theory (Tajfel and Turner 1979) which is based on the assumption that individuals are highly motivated to achieve and maintain a positive self-esteem within an intergroup context. Consequently, in-group favoritism reflects an individual's motivation to favor and positively distinguish the social groups he or she identify with from other relevant out-groups.

The Social Identity Development Theory has been currently used as a framework to explain the development of prejudice among children, mainly with regard to

racism. According to this theory, racism is derived from a process, which involves four sequential phases across childhood: (1) The Undifferentiated Phase: children aged around 2–3 years old cannot categorize people based on their racial cues. Consequently, they are not able to express any kind of intergroup bias; (2) The Ethnic Awareness Phase: children of around 3–4 years old begin to be aware of the existence of social categories that are most salient (e.g. age, gender and race). In this phase, children develop the ability of self-identification and the sense of belonging to social groups; (3) The Ethnic Preference Phase: children aged around 5–6 years old, focus on positive in-group evaluation rather than on out-group derogation. In this phase, children begin to show an in-group preference (e.g. a preference for people from their race); (4) The Ethnic Prejudice Phase: by the age of 7–8 years old children intergroup evaluations are focused both on in-group and out-group. Children hold negative out-group stereotypes and discriminate out-group members when socially permissible.

In an elaboration of Cognitive Developmental Theory (CDT), Brown and Bigler (2005) proposed a developmental framework for understanding children's perceptions of discrimination directed toward themselves and others. This model is based on the assumption that children's perceptions of discrimination are influenced by different factors: cognitive development (e.g. classification and social comparison skills), situational contexts (e.g. salience of one's group identity), and individual differences. More specifically, this model proposed that by the age of six, children acquire the basic cultural and social-cognitive skills required to perceive discrimination. Along with the cognitive maturation during the elementary school years, children may become more skilled to make attributions to discrimination in different contexts. At the end of elementary school (by age ten), children's perceptions of discrimination are more complex and similar to that of adults. However, at this age, children may not be able to perceive societal or more complex forms of institutional discrimination (e.g., subtle images portrayed in the media or hidden negative practices in some organizations). Finally, during adolescence, youth is expected to be able to identify discrimination at both societal and institutional levels.

Rutland et al. (2010), proposed a new socio-cognitive developmental perspective on prejudice that is drawn from two complementary theories: the social domain theory (Turiel 1998) and the social identity theory (SIT; Tajfel and Turner 1986). According to this perspective, the development of prejudice involves the interplay between moral reasoning (beliefs about fairness and justice) and group identity (influence of group norms). This means that children consider both moral beliefs and group identity when reasoning and developing judgments about groups and individuals. Overall, this perspective highlights the need to consider both social-cognitive abilities (emergence of moral beliefs) and intergroup context variables (social context and relationships with others).

Finally, in a further extension of the Social Identity Approach, the Developmental Model of Subjective Group Dynamics (Abrams et al. 2007; Abrams et al. 2009) holds that between the ages of 5 and 11 children develop a lay theory of group processes, which enables them to calibrate their expression of bias according to which groups are judged by the audience and by their own level of identity.

The evolutionary perspective, considers that prejudice and discrimination are inevitable and, consequently, very difficult to change. For example, Fishbein (1996) argues that humans are predisposed to prefer individuals who are more genetically similar to themselves. The development of prejudice is therefore associated with the development of a group identity at early ages (3/4 years old).

Beyond race, research on the development of prejudice has often focused on sexism or gender-related prejudice – “*prejudice attitudes (...) based on gender-related categorization of people*” (Glick and Hilt 2000, p.7). According to these authors, gender-related prejudice develops and is expressed differently according to a developmental sequence – Between early childhood (2–3 years old) and puberty (around the age of 11), children prefer to play with same-sex peers, showing hostile feelings and beliefs toward out-group members. This hostile prejudice is expressed through overall negative emotional evaluations of the other sex and is based on a simple cognitive reasoning. A different pattern is found among adolescents whose greater cognitive abilities, emotions and sexual attraction to other-sex individuals results in a more ambivalent form of gender-related prejudice, which is characterized by paternalistic beliefs: woman are viewed as romantic objects who are also weak and need men's protection. These two different kinds of prejudice – hostile and benevolent – may coexist during adulthood, creating ambivalent attitudes and influencing adult cross-sex interactions. The important point, however, is that prejudice should become more multi-faceted with age.

Regarding the specific case of ageism, studies are scarcer but an important review of this field (Montepare and Zebrowitz 2002) presented some evidence. Some studies (e.g. McCall and Kennedy 1980) suggest that children are influenced by salient age cues at a very early age. In fact, children as young as 4 months differentially look at pictorial representations of faces of people of different age groups. In this chapter, Montepare and Zebrowitz (2002) advanced a hypothesis regarding the expected development of ageist beliefs in children based on a social-developmental perspective. According to this theory, children's social perceptions require the categorization of people on the basis of their age-related physical characteristics (height, face and voice cues) that are used to distinguish and classify people. Later in development, children's attitudes are reflected in three types of outcomes: prejudice (children's feelings toward older adults), stereotypes (children's beliefs and knowledge about older persons) and discrimination (children's intended or actual behaviors toward older persons). These different dimensions may involve different developmental paths. In early childhood, attitudes are mostly expressed through (negative) affective reactions toward older people. Meanwhile, children develop systematic behavioral stereotypes that become more complex as a function of their cognitive development. In middle childhood, children's attitudes toward older people become more positive and differentiated and this continues throughout adolescence and adulthood.

Montepare and Zebrowitz (2002) do not elaborate much on these initial propositions. Hence, much more attention needs to be devoted to evidence and theory. For instance, although some insights may be gained from previous studies on racism and sexism, we would be cautious about generalizing across domains. In fact,

evidence so far, seems to suggest that different patterns of development and processes occur in different types of prejudice. For example, there are different theories specifically regarding the development of racism (e.g. Olson and Dunham 2010) and sexism (e.g. Glick and Hilt 2000). In the case of racism, research has focused on the role of the anti-racism norm and its influence on implicit and explicit prejudice in different stages of childhood. Studies suggest that the explicit expression of racism decreases as children get older, mainly due to conformity to a strong social anti-racism norm (Olson and Dunham 2010; Rutland et al. 2010). On the other hand, theories about the development of sexism are based on the assumption that gender-related prejudice exists throughout life assuming different forms according to the developmental stages (hostile vs. benevolent sexism) (Abrams 1989; Glick and Hilt 2000). These observations highlight the need to consider the distinctive features of each type of prejudice. However, we also assume the existence of core developmental processes. In this regard, Olson and Dunham (2010) suggest that the distinction between more implicit or explicit forms of prejudice is fundamental to understanding the patterns of development across childhood. Hence, similarly to what had been done in the case of racism, it would be important to understand how these two different modes of ageism operate across different age groups and to address the role of social-environmental factors such as the anti-ageism norms. Studies such as these would represent a very important contribute to this field of research.

We therefore aim to progress the field by reviewing the existing literature and providing a framework for systematic evidence from relevant studies in the literature. We present a classification of the main measures of ageism in children based on two main criteria: (i) the dimensions covered – cognitive, affective and behavioral (tripartite model of attitudes) and (ii) the four aspects of automaticity (consciousness, controllability, intentionality and efficacy). Together these allowed classifying measures into three categories: explicit/implicit and blend of explicit and implicit measures. We hope that this classification contributes to our knowledge regarding the development of attitudes towards older people.

### 30.3 Goals and Method of the Present Study

A literature review was undertaken using four databases (PsycARTICLES, PsycINFO, ERIC and Psychology and Behavioral Sciences Collection) and a combination of two groups of keywords – *children* AND *ageism* (n = 135); *children* AND *attitudes* AND *ageing* (n = 1257). Studies were considered in this review if they comply with the following inclusion criteria: (1) reported the use of measures to assess children's or adolescents' (under 18 years old) attitudes toward older people and/or the ageing process. (2) measured children's attitudes without any previous manipulation. Our goal was to explore studies measuring attitudes in their original form. Therefore, we excluded studies that employed interventions or experimental manipulations.

Of the 1392 articles identified, 171 were duplicated and were therefore excluded. This search allowed us to identify 10 articles that focused specifically on the assessment of children's attitudes regarding older people and that met the inclusion and exclusion criteria. Subsequently, the reference lists from the identified studies were also consulted allowing us to locate 6 additional articles. Therefore, a total of 16 articles were subjected to a deeper analysis. These included both quantitative, qualitative or mixed methods.

## 30.4 What Is Being Measured

### 30.4.1 Cognitive, Affective and Behavioral Measures

We analyzed the available measures to assess children's attitudes based on the tripartite model (Eagly and Chaiken 2007), therefore considering their beliefs, feelings and behavior regarding older people and/or the ageing process. The cognitive dimension was mostly assessed through four scales: "Kogan's Attitude Toward Old People Scale" (Ivester and King 1977); "Social Attitude Scale of Ageist Prejudice" (SASAP – Isaacs and Bearison 1986); "Tuckman-Lorge Old People Scale (OP – Harris and Fiedler 1988); and the "Child Adolescent Facts in Ageing Quiz" (CAFAQ – Haught et al. 1999). This quantitative approach is based on the assumption that through the use of scales with different methodological characteristics (e.g. Likert-type; dichotomous response) one can assess children's knowledge, beliefs and stereotypes associated with older people and the ageing process. For example, the "Kogan's Attitude Toward Old People Scale" (Ivester and King 1977) is a Likert-type instrument (34 items) for assessing adolescent's attitudes toward old people with respect to both norms and individual differences (e.g. "*Most old people get set in their ways and are unable to change.*"). Stereotypes and misconceptions about different areas of older people's lives (e.g. personality characteristics; social adjustment) were also assessed through the use of the Tuckman-Lorge Old People Scale (OP – Harris and Fiedler 1988), in which participants were asked to circle "yes" or "no" for each of the 137 statements about old people (e.g. "*They are unproductive.*"). A very similar method was used in the "Child Adolescent Facts on Ageing Quiz" (CAFAQ – Haught et al. 1999). However, in this case, children's and adolescent's attitudes were assessed through 16 items using a true/false format (e.g. "*Most older workers do not work as well as younger workers*"). All these instruments have in common the idea that children's attitudes are best assessed by asking children about their representations regarding specific stereotypic traits of older people.

A different approach was used in the "Social Attitude Scale of Ageist Prejudice" (SASAP – Isaacs and Bearison 1986) in which the categories of *young* and *old* were visually represented by photographs of a middle-aged person (35–50 years old) and of an aged person (70–85 years old). Children were then asked to select the picture

of the person that they regard as the recipient of either positive (e.g. *“One of these people is always invited to all parties because everyone likes him. Which person does everyone like?”*) or negative social events (*“These two men are arguing. One of them is nasty and always yells at people. Which one is nasty?”*) (46 items). Beliefs and stereotypes regarding older people and the ageing process have also been assessed using a sentence completion task (Lichtenstein et al. 2003), by asking children to write responses to five prompts (e.g. *“Old people...”*; *“When I am old I...”*).

The affective dimension has been mostly assessed through indirect measures, particularly the drawing test. This technique is based on the assumption that through drawing, children share their internal world of experiences (Lichtenstein et al. 2005). In the studies using this approach, different methodologies have been adopted. In some studies children were asked to draw a typical older person in a setting (e.g. Lichtenstein et al. 2005). Other studies specified that the drawn person should be an old person that children know from real life (Robinson et al. 2014), making the task more self-relevant to the children. Still other studies asked children to simply draw human figures of different ages (young/old from both genders) (e.g. Villar and Fabà 2012).

In some of this research (e.g. Lichtenstein et al. 2005), interviews were used as a complementary methodology in order to elicit oral or written responses to obtain more detailed information regarding the pictures drawn (e.g. person’s age, activities, feelings, thoughts, possible relation to the child, person’s characteristics that differ from those of the child). All the studies identified using this methodology aimed to cover both the cognitive and affective dimensions of children’s attitudes regarding older people based on the analysis of several dimensions: height of the drawings, physical characteristics (e.g. wrinkles), activity level (e.g. wheelchairs), health status (e.g. hearing aids), personality, roles, settings, facial expression, emotions and also on children’s responses on the interview.

Children’s knowledge and feelings toward older people and the ageing process were also assessed through the use of two qualitative methods: a word association task (brainstorm about words associated with the concept of *“young”* and *“old”*) and an attitude toward-ageing interview (e.g. *“What do most old people spend their time doing?”*) (Laney et al. 1999).

A very different approach has been used to assess the behavioral dimension of children’s attitudes. We found two studies measuring children’s behavior toward older people, both sharing similar methodology. These are based on personal interactions between children and older people. For example, in order to explore whether children as young as 4–8 years old already express negative stereotypes about older people, Isaacs and Bearison (1986) developed a behavioral measure based on a puzzle activity task ( $n = 144$ ): in the experimental condition, each child worked individually with an older person (approximately 75 years) and in the control group the puzzle activity was performed by dyads of a child and a non-aged person (approximately 35 years). Children’s attitudes regarding older people were assessed based on the scores on behavioral measures: proxemics distance (the distance between the confederate’s chair and the child’s placement of his or her chair); productivity (number of puzzles pieces placed); eye-contact initiation (number of times



children directed their gaze toward the confederate); verbal interaction (e.g. number of words spoken by the child). In the other study using a behavioral methodology (Kwong See et al. 2012), the Piagetian number conservation task was modified to assess young children's age stereotyping. This was done by manipulating the perceived age of the experimenter (younger and older) asking the second question. This task was based on the assumption that children held different beliefs about the motivations of the two experimenters for asking the second question.

Finally, very few studies have assessed all three dimensions of children's attitudes (cognitive, affective and behavioral). As far as we know, only two instruments attempted to achieve this goal: "The Children's Attitudes toward the Elderly Scale" (CATE) (Jantz et al. 1977) and the "Children's View on Aging" (CVOA) (Marks et al. 1985). The CATE (Jantz et al. 1977) is composed by three sub-scales: (1) word association questions regarding the affective (e.g. "*How do you feel about getting old?*"), behavioral (e.g. "*What do you do with that person?*" – referred to the older person the child knew) and knowledge (e.g. "*What can you tell me about older people?*") dimensions of attitudes; (2) semantic differential composed by ten items on a five-point bipolar scale rating the two concepts "young people" and "old people" (e.g. "*friendly-unfriendly*"); (3) picture series: four drawings representing men at four stages of life were presented to children to elicit responses about their knowledge and feelings regarding older people and the ageing process (e.g. "*Can you put these pictures in order from the youngest to the oldest?*").

The CVOA (Marks et al. 1985) includes four sections with open-ended questions: (1) children are asked to think about becoming an old person and to answer nine open-ended questions covering the three dimensions of their perceptions of the ageing process: cognitive ("*How can you tell when people are growing old?*"); affective ("*How will you feel when you are old?*") and behavioral ("*What will you do when you are old?*"). These questions were followed by a close-ended question: "*Do you think this is: (a) a good thing to happen?; (b) a bad thing to happen?; (c) neither a good or bad?*"; (2) children are asked for information regarding the frequency and quality of contact with their grandparents; (3) children are asked about having an older person in the classroom (e.g. "*Would you like having an old person in your classroom as a helper?*"); (4) using a semantic differential scale composed by twelve bipolar word pairs children are asked to indicate what characteristics they attribute to older people (e.g. "pleasant-unpleasant").

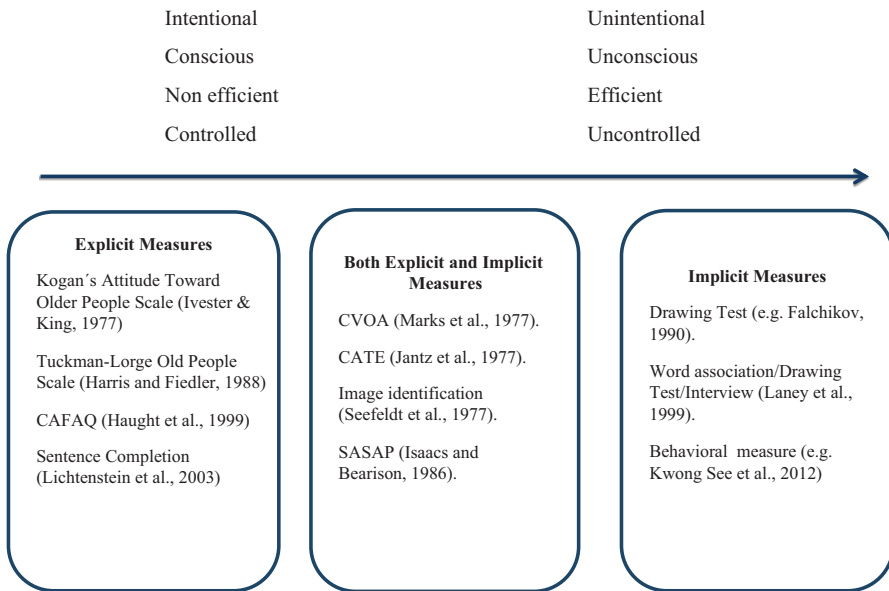
Despite the useful effort to cover the three dimensions of children's attitudes, both scales (CATE and CVOA) share a common limitation – they represent an overlap of two different attitudinal objects: children's attitudes about older people and about the ageing process. The attempt to measure two different constructs simultaneously should be taken into consideration when analyzing the results obtained to assess ageism among children. Moreover, both scales are also limited in their measurement of the behavioral dimension of ageism in the sense that they only evaluate the behavioral intentions of children regarding older people and not their actual behaviors as it was done in other measures such as the puzzle (Isaacs and Bearison 1986) and the Piagetian adapted task (Kwong See et al. 2012). These aspects limit the value of the results obtained by the use of these measures.

### 30.4.2 *Explicit vs. Implicit Measures*

In order to organize the literature regarding children’s attitudes towards older people, we propose an alternative way to look at the measures and evidence. As far as we know, this is the first time such a classification has been proposed in order to classify children’s attitudes in the case of age. Based on the definition of measure as an “outcome of a measurement procedure” (De Houwer 2006), and following previous approaches in other domains (Maass et al. 2000), we present a framework for classifying children’s attitudes measures into three categories: explicit measures, both explicit and implicit measures and implicit measures.

Intergroup attitudes have been mainly measured through self-report questionnaires to assess participant’s attitudes regarding their in-group and out-groups members. However, there are some concerns regarding the validity of these measures because people can easily control their explicit responses and act in order to comply with social norms, making prejudice less likely. Consequently, implicit measures have been increasingly used in order to reduce participant control over responses (Maass et al. 2000). This is based on the assumption that participants cannot strategically control the outcome of the implicit measurement procedure (De Houwer 2006).

The classification of the measures into the three categories mentioned above (Fig. 30.1) was based on the following four automaticity features: (1) intentionality



**Fig. 30.1** Categorization of measures to assess children’s attitudes regarding older people according to the automaticity features

(whether one is in control over the instigation or “start-up” of processes); (2) awareness (one person can be aware of a stimulus event but also of its potential influence on subsequent experience and judgments); (3) efficiency (effects that are relatively effortless) and (4) controllability (one's ability to stifle or stop a process once started) (Bargh 1994). These automatic features do not necessarily occur together in the sense that automatic processing is not unitary. In fact, they are independent qualities that may appear in various combinations.

Explicit measures are more deliberative, mindful, and easily controlled (Maass et al. 2000). An example of an explicit scale is the Tuckman-Lorge Old People Scale (OP) (Harris and Fiedler 1988), in which participants were asked to circle “yes” or “no” for each item regarding misconceptions and stereotypes about old people (e.g. “*They are unproductive*”..”). In this case, the process is intentional because participants have the goal of engaging in a process, are aware of the stimulus (older persons), the process itself is nonefficient (it requires attentional capacity and time to answer the 137 items) and controllable in the sense that participants can stop the process at any time.

By contrast, implicit measures are automatic because they are more unintentional, efficient, non-conscious and uncontrolled (Bargh 1994). An example of an implicit measure is the puzzle activity task described above (Isaacs and Bearison 1986). Behavioral measures aim to create experimental situations that parallel contexts of daily life and to observe participant's interpersonal behavior (Maass et al. 2000). In the case of the puzzle activity, children in the experimental setting were not aware of what was being measured (their behavior toward older confederates) and, consequently, had little or no control of their own thoughts and behaviors. Moreover, the process is efficient in the sense that it requires minimal attentional capacity and is not time consuming.

The third category includes measures that are a blend of both explicit and implicit questions. An example is the CATE scale (described above) which is constituted by more explicit sub-scales (word association questions and semantic differential) and more implicit ones (picture series based on drawings representing men at four stages of life).

The classification of the measures into these three categories facilitates the interpretation of the complex pattern of results that emerged from the use of different instruments to measure children's attitudes regarding older people.

## **30.5 Analyses of Children's Attitudes Through Different Measures and Across Different Stages of Childhood**

### ***30.5.1 Explicit and Mixed Measures***

Studies using explicit measures or a combination of both explicit and implicit measures revealed more positive or mixed children's views of older people in comparison with those adopting an implicit approach. Explicit measures have predominantly

assessed the cognitive dimension of children's attitudes. Despite some variability, the most positive results were found in studies assessing children's attitudes in late childhood (8–10 years old) (e.g. CVOA) and in the adolescence period (13–19 years old) (e.g. Kogan's Attitude toward Older People Scale; Ivester and King 1977). For example, in a study using the "Child-Adolescent Facts on Ageing Quiz" (CAFAQ – Haught et al. 1999), children's knowledge and beliefs regarding older people were assessed through sentences on basic physical, mental and social facts about ageing. Adolescents (grade 12) showed positive attitudes whereas younger children (grade 3) showed a negative bias toward this age group. Younger children's misconceptions about older people were mainly focused on two dimensions: competence (not working as well as younger people) and social skills (being nice to other people).

The application of two scales that blended both explicit and implicit measures – the "Children's Attitudes Toward the Elderly Scale" (CATE – Jantz et al. 1977) and the "Children's View on Aging (CVOA – Marks et al. 1985) revealed a more complex pattern of results. More specifically, the CATE was applied to children aged between three and 11 years old and revealed that children's attitudes toward older people were mixed. In affective terms, their descriptions of older people tend to be positive (e.g. "*they are nice*"; "*friendly*"; "*wonderful*"). However, the inverse pattern was observed regarding attributes of older people's physical (e.g. "*ugly*") and behavioral characteristics (e.g. "*they can't really walk very fast*"). Moreover, children's attitudes regarding their own ageing process tended to be negative (e.g. "*I don't want to get old*"), ascribing negative feelings to old age (e.g. "*sad*"; "*depressed*"). Nevertheless, older children (fifth and sixth graders) were the most positive about their future as older persons.

Some of these results are in line with those obtained through the application of the "Children's Views of Ageing" (CVOA – Marks et al. 1985), namely the negative perception children hold regarding their own ageing process ("*you are sad*"; "*nobody cares*"). Responses in the semantic differential scale highlighted the positivity attributed to older people in the affective dimension, while young people were evaluated more positively based on the cognitive domain. In this study, children attributed negative characteristics to older people at both physical and psychological levels (e.g. "*lonely*"; "*scary*"; "*people no longer care about you*"). However, children also showed positive behavioral intentions expressing motivation to interact with old people in their classrooms. It is nevertheless important to emphasize that children tested in this study were already 8–10 years old.

Taken together, these results suggest that, although some evidence shows that views of ageing tend to become more positive as children grow older, at least based on more explicit measures (e.g. Haught et al. 1999) a mixed and complex pattern of results still occurs depending on the dimension being assessed. Overall, it seems that children are more positive when we assess explicitly affective and behavioral aspects instead of cognitive representations of older people. Children also seem to be more negative when they are considering their own ageing process as opposed to making judgments about older people. However, the most important finding to emerge is the fact that these sort of explicit measures do not yield a significant and consistent pattern of results. One possibility is that, similar to what happens in other

domains such as, for instance, racism, older children are able to control their answers and show ageistic intentions in a more strategic manner depending on task domain, thus limiting our ability to measure their more intrinsic attitudes (Olson and Dunham 2010). Given this complex pattern of results, attention to the type of procedure used and the dimensions covered in the measurement of children's attitudes should be given wider attention than has been so far.

### **30.5.2 *Implicit Measures***

Ageism among children has been consistently found in studies using implicit measures. For example, in a puzzle activity task (Isaacs and Bearison 1986), four-, six- and eight-year old participants distinguished aged from nonaged individuals and responded differently to them. More specifically, participants in the experimental condition (those working individually with an older person) initiated less eye contact, spoke less to confederates, initiated less conversations with them and required less appeals for assistance or verification. Interestingly, results showed an increase in ageism between the ages of 4 to 6/8 years, with a decrease in the amount of eye contact in the aged confederate experimental condition, thus contradicting the pattern found with more explicit measures.

In another study, Kwong See et al. (2012) used a modified Piagetian number conservation task in order to assess interpersonal relationships between children and older people. In its original form, a child is asked if two aligned rows of objects have the same number of objects or if one of the rows has more. After the child agrees regarding the equality of the lines, the experimenter makes one of the lines longer and the child is then asked a second time if the two rows have the same number of objects or if one of the rows has more. According to the Piagetian theory, the second time asked, preoperational aged children (with an age between 4 and 7 years old) usually answer that the rows are different in the sense that they cannot conserve number. However, a different interpretation is provided by the conversational account for conservation errors according to which asking the same question twice is usually interpreted as a request for new or different information. Based on this assumption, Kwong See et al. (2012) hypothesized that when an adult experimenter asks if the two rows are the same a second time, a child infers that the experimenter wants to know if he/she is aware of the perceptual modification that has occurred. In this case, children are expected to consider that the experimenter is more cognitive capable by virtue of being an adult and therefore must know that the transformation did not change the number of objects in the line and is asking about something else. An opposite pattern of response is expected to occur when the experimenter is an older person: in this case, age stereotyping (e.g. poor vision or memory, cognitive impairments) is expected to become associated with the question asked by the experimenter. Thus, children might infer that the older experimenter is asking the second question because he needs to clarify if the number of objects in the rows is truly the same. As predicted

by the authors, children held different beliefs about the motivations of the two experimenters and gave different answers according to these beliefs. When the experimenter was a younger adult, the majority of children gave an answer focused on length rather than number. The opposite pattern was found in the older adult experimenter condition, therefore highlighting the similarity of the rows. These results showed that children as young as 5 years old have already internalized age stereotypes believing that ageing is associated with decline. Unfortunately, this study did not include older children so we can not reach any conclusions regarding this aspect.

In another study using three qualitative and implicit methods – word association task, projective drawings and an attitude toward-ageing interview –first and second grade-students showed negative attitudes toward older people and the ageing process (Laney et al. 1999). More specifically, in the word association task, the words associated with “old” were mostly negative at different dimensions: psychologically (e.g. “*weak*”), mentally (e.g. “*bored*”), and low levels of activity (e.g. “*retired*”). The opposite pattern was found regarding young people who were characterized in a positive way (e.g. “*happy*”; “*active*”). Children’s drawings depicted older persons performing sedentary and passive leisure activities (e.g. “*watching out window*”; “*watching TV*”). In addition, drawings revealed the physical characteristics attributed to older people (e.g. “*gray hair*”; “*wrinkles*”). This negative view of older people was also evident in children’s responses to the interview: they considered that older persons perform passive activities (e.g. “*lying in bed*”) and need help from young people because they are physically disabled and/or sick. In addition, children expressed negative attitudes regarding the ageing process (e.g. “*the body quits working*”) associating ageing with the “*imminence of death*”.

Older children’s (ages between 10.5 and 11.5 years) attitudes regarding older people were assessed through a comparative analysis of children’s four drawings: a young man, an old man, a young woman and an old woman (Falchikov 1990). Results revealed that pictures of old people were more negative in content than those of young people, revealing a clear association between old age and a lack of human contact and loneliness. Drawings of old people frequently included characters such as glasses, wrinkles, canes or wheelchairs, hearing aids and slippers. Moreover, these pictures were significantly smaller than those of young people.

From the analyses of the literature, the only case in which the use of implicit measures yielded more positive views of ageing by children was when they were asked to draw older people in greater detail (e.g., within different scenarios). Specifically, in a study where students from two middle schools were asked to draw a typical older person in a setting (Lichtenstein et al. 2005), the drawings demonstrated the great variability of children’s attitudes regarding older people, including both positive and negative traits. The most positive drawings were those depicting someone relevant to the students, namely a grandparent. The relevance of asking children to draw someone they knew was also shown in a study where children between the ages of eight and 12 were asked to produce a drawing of an old person they see in real life (in a setting) (Robinson et al. 2014). Overall, the drawings portrayed an older person (namely, a family member) who was “*happy, healthy, active*

*and with positive physical characteristics*". Hence, these results suggest that children have a more positive view of older people that they know in their daily lives such as their grandparents. The target used to assess ageism against older people should be then carefully chosen.

Given their more consistent pattern of results, implicit measures seem like an interesting avenue to pursue in the study of children's attitudes regarding older people. In this sense, it would be extremely important to understand how more implicit and explicit attitudes develop throughout childhood and what are the main factors influencing these different aspects of ageism. A more complete and valid assessment of ageism during childhood would have many important implications to promote more meaningful prevention efforts against the wide negative representations of older people in our societies.

### ***30.5.3 Limitations of Available Measures***

We identified a range of measures that have been employed to assess children's attitudes regarding older people (summarized in Table 30.1). Although there is a reasonably large volume of work produced in this domain, it is nevertheless difficult to reach a firm conclusion of the developmental trajectory of ageism in children. In fact, a more thorough analysis of the measures used clarifies that they have important limitations that need to be overcome in the future.

The first limitation is the lack of psychometric consistency that is particularly relevant in the case of some studies (e.g., Harris and Fiedler (1988); Haught et al. (1999)). The lack of information about psychometric indicators (e.g. validity, reliability) jeopardizes the possibility of reaching conclusions about the meaning of these measures. Secondly, there is frequently an ambiguity or inconsistency in the attitudinal object that is measured. In some measures, there is an overlap of two different attitudinal objects: children's attitudes about older people (e.g., "what do you think about older people?") and the actual ageing process (e.g., "how do you perceive your own ageing will be?") (e.g. Jantz et al. 1977). This makes it difficult to compare the results obtained across the different studies. Third, most of the measures only provide a partial assessment of children's attitudes. As we have seen, several of the measures identified covered only the cognitive dimension of children's attitudes (their knowledge and beliefs regarding older people and/or the ageing process) (e.g. Issacs and Bearison (1986)), disregarding with few exceptions the affective and behavioral dimensions of attitudes. Given the fact that older children are more able to control their answers to these sorts of measures (Olson and Dunham 2010), it is important to diversify the methodologies used.

Further important limitation of integrating evidence from measures are attributed to the poor and incomplete description of the participants in the studies (i.e., age and grade level), the considerable variability of age range and low sample sizes (e.g. Falchikov 1990; Lichtenstein et al. 2005). This lack of transparency in the methodological affects the quality of the conclusions that may be drawn from such studies.

**Table 30.1** Description of measures that assessed ageism among children

Authors	Country	Methodology	Participants	Main findings	Dimensions of ageism	Originally developed to be applied with:	Psychometric qualities
Harris and Fiedler (1988)	EUA	The Tuckman-Lorge Old People (OP) Scale (1953) is a questionnaire composed by 137 statements of misconceptions and stereotypes about older people covering a total of 13 categories (e.g., physical, mental deterioration). Participants were asked to circle “yes” or “no” according to their agreement to each sentence (e.g. “Old people need glasses to read”).	Sample size: n = 157	The quantity of contact preadolescents reported to spend with older persons was not significantly related with their attitudes.	Cognitive	Originally developed to be applied with adults (Tuckman and Lorge 1953).	Not specified.
		Participants also answered a self-report contact questionnaire (quantity of time spent with an older person in the past year).	Participant’s age: Mean age of 12.8 years	Regarding race, white preadolescents expressed the most positive attitudes toward older people in comparison with the black or Mexican-American preadolescents.		Adapted to be used with preadolescents.	



Ivester and King (1977)	EUA	Kogan's Attitude Toward Older People Scale is a likert-type instrument constituted by 34 items aiming to assess attitudes toward old people regarding both norms and individual differences. The 34 items are 17 matched positive-negative pairs which reflect stereotypes and feelings about old people in society (e.g. "residential aspects of old people's lives," "the extent to which old people vary among one another").	Sample size: n = 413	The results showed that the attitudes of the students toward old people tend to be more positive than negative.	Cognitive	Originally developed to be applied with adults (Kogan 1961).	Demonstrated reliability and validity (Kogan 1961): -Odd-even reliabilities ranging from .66 to .83 with the negative scale having higher reliability.
			Participant's age: 13-19 years old	Besides, there weren't significant differences between negative attitudes toward older people from 12th and 9th graders.		Adapted to be used with adolescents.	- Good content validity: significant correlations between OP scale scores and attitudes toward ethnic minorities and physically disabled groups.
Haught et al. (1999)	EUA	"The Child-Adolescent Facts on Ageing Quiz" (CAFAQ) is the adaptation of the "Facts on Ageing Quiz" (FAQ – Palmore 1977) to be applied to children and adolescents. This scale is constituted by statements on basic physical, mental, and social facts about aging and common misconceptions that people have about aging. Students had to mark the 16 items as "true" or "false" (e.g. " <i>Most older workers do not work as well as younger workers</i> ").	Sample size: n = 954 (three separate experiments)	A different pattern of results was found according to participant's age: adolescents (grade 12) showed positive bias regarding older people; however, school-age children (grade 3) showed negative bias regarding this age group.	Cognitive	The "Facts on Ageing Quiz" (FAQ) was developed to be used with adults (Palmore 1977).	Not specified

(continued)

**Table 30.1** (continued)

Authors	Country	Methodology	Participants	Main findings	Dimensions of ageism	Originally developed to be applied with:	Psychometric qualities
Lichtenstein et al. (2003)	EUA	Prompts were presented to students and they were asked to write responses (e.g. "Old is..."; "When I am old I...").	Participant's age: Grades 3, 6, 9 and 12.  Sample size: n = 1874	Female adolescents showed more positive bias in comparison with male adolescents.  Hispanic adolescents tended to show more negative bias than White or Black adolescent students.  The most part of student's descriptions of older persons were based on physical characteristics: wrinkles, gray hair or being bald.  Students had a much more positive view of their future compared with their views about other's ageing process.		CAFAQ is the adaptation of this scale to be used with children and adolescents.	
			Participant's age: Children from 6°, 7° and 8° grades		Cognitive	Children	Test-retest repeatability in the pilot phase of the project: the responses were not repeatable from Time 1 and to Time 2.
<i>Both explicit and implicit measures</i>							
Jantz et al. (1977)	EUA	The CATE – "The Children's Attitudes Toward the Elderly Scale" is composed by four sub-scales:	Sample size: n = 180	Children's attitudes toward older people are complex and mixed. They expressed positive feelings toward older people (e.g. "They are nice") but have negative attitudes about the physical (e.g. "ugly") and behavioral characteristics associated with older persons (e.g. "They can't really walk very fast, they are not very strong").	Cognitive	Children	1 sub-test: word association Coefficients of inter-rater reliability (2 raters) on category scoring for the sub-test ranged from .7977 to .9838.

	<p>1. Word association questions regarding the affective, behavioral and knowledge components of attitudes (e.g. <i>"How do you feel about getting old?"</i>).</p> <p>2. Semantic differential composed by 10 items on a 5 point bipolar scale rating the two concepts "young people" and "old people" (e.g. <i>"friendly-unfriendly"</i>).</p> <p>3. Concept of age sub-test: four drawings representing men at four stages of life were presented to children to elicit responses about their knowledge and feelings regarding older people and the ageing process (e.g. <i>"Can you put these pictures in order from the youngest to the oldest?"</i>).</p> <p>4. This sub-test was administered together with three Piaget-based conservation tasks from the Goldschmid and Bentler Concept Assessment Kit.</p>	<p>Participant's age: 3–11 years old</p>	<p>Children have few contacts with older people outside of their families.</p> <p>Children's attitudes regarding their own ageing process tended to be negative (<i>"I don't want to get old"</i>), ascribing negative feelings to be old (e.g. <i>"sad"</i>; <i>"depressed"</i>).</p> <p>The older children were the most positive about being old.</p>	<p>Affective</p> <p>Behavioral</p>	<p>2. semantic differential: the evaluative adjectives had obtained high factor loadings through other investigations into how children in grades two through seven rated more than 100 concepts.</p> <p>3. picture series: validation of the drawings was established by asking graduate students in the fields of gerontology and human development to rate each drawing by giving it an estimated age.</p>
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**Table 30.1** (continued)

Authors	Country	Methodology	Participants	Main findings	Dimensions of ageism	Originally developed to be applied with:	Psychometric qualities
Marks et al. (1985)	EUA	The Children's Views of Aging (CVOA) is an instrument aimed to assess children's attitudes toward older people and the ageing process. It's constituted by 4 sections with a variety of open-ended questions:	Sample size: n = 256	In the open-ended questions, mostly of the children described negatively older people at both physical and psychological level (e.g. "lonely", "scary", "people no longer care about you"). Regarding their own aging process, children also revealed a negative perception of their future (e.g. "you are sad"; "nobody cares").	Cognitive	Children	Concurrent validity coefficient of the semantic differential: 0.64;
		Section 1: children are asked to think about becoming an old person and to answer nine open-ended questions regarding their perceptions of aging (e.g. "How they will feel when they are old"). These questions are followed by a close-ended question: "Do you think this is: (a) a good thing to happen?; (b) a bad thing to happen?; (c) neither a good or bad?".	Participant's age: 8–10 years old	A different pattern was found regarding behavioral intentions, suggesting children's desire to interact with old people in their classrooms.	Affective		Test-retest reliability coefficient of the semantic differential = 0.70;

Newman et al. (1997)	EUA	<p>Section 2: asks for information regarding the frequency and nature of children's contact with their grandparents.</p> <p>Section 3: Asks the child questions related to having an older person in the classroom (e.g. "Would you like having an old person in your classroom as a helper?").</p> <p>Section 4: Semantic differential scale composed by twelve bipolar word pairs that describe characteristics of older adults and asks the child to indicate what characteristics they attributed to older people (e.g. "pleasant-unpleasant").</p>	Sample size: n = 71	<p>In the semantic differential scale, old people were evaluated more positively than young people on the affective dimension, while young people were evaluated more positively on cognitive dimension.</p>	Behavioral	Children	The alpha (internal consistency) coefficient of the semantic differential was 0.81.
		<p>The Children's Views of Aging (CVOA) is an instrument aimed to assess children's attitudes toward older people and the ageing process. It's constituted by 4 sections with a variety of open-ended questions:</p>		<p>When describing older people, children often referred physical characteristics (e.g. "graying hair and wrinkles") without attributing a value on these characteristics.</p>	Cognitive	Not specified	

(continued)

**Table 30.1** (continued)

Authors	Country	Methodology	Participants	Main findings	Dimensions of ageism	Originally developed to be applied with:	Psychometric qualities
		Section 1: children are asked to think about becoming an old person and to answer nine open-ended questions regarding their perceptions of aging (e.g. <i>“How they will feel when they are old”</i> ). These questions are followed by a close-ended question: <i>“Do you think this is: (a) a good thing to happen?; (b) a bad thing to happen?; (c) neither a good or bad?”</i> .	Participant’s age: 4th and 5th grades	When asked to describe how it would feel to be old, almost half of them describe negative conditions commonly associated with old age (e.g. <i>“lonely”</i> ; <i>“sad”</i> ).	Affective		
		Section 2: asks for information regarding the frequency and nature of children’s contact with their grandparents.			Behavioral		
		Section 3: Asks the child questions related to having an older person in the classroom (e.g. <i>“Would you like having an old person in your classroom as a helper?”</i> ).					
		Section 4: Semantic differential scale composed by twelve bipolar word pairs that describe characteristics of older adults and asks the child to indicate what characteristics they attributed to older people (e.g. <i>“pleasant-unpleasant”</i> ).					

Issacs and Bearison (1986)	Not specified	Social Attitude Scale of Ageist Prejudice (SASAP): Children were shown pairs of photographs, one of a middle-aged person (35–50 years) and the other of an aged person (70–85 years) and were asked to select the picture of the person that they regarded as the recipient of either positive or negative social events (46 items). Example of a positive stated event: <i>“One of these people is always invited to all the parties because everyone likes him. Which person does everyone like?”</i> ; The stated events included statements about a person’s personality traits or abilities.	Sample size: n = 144 Participant’s age: 4, 6 and 8 years old	The mean scores of the youngest group (4-years old) did not indicate prejudice. The frequency of prejudicial responses increased significantly from this age group to 6 years but remained stable between 6 and 8 years. At these ages, participants showed significant prejudice against older people in their SASAP scores.	Cognitive	Children	Reliability = .87 Validity = item-remainder Alpha scores ranged from .65 to .70.
Seefeldt et al. (1977)	EUA	Children were presented with four pictures of one man drawn to represent four different stages of life (ages 20-35, 35-50, 50-65, and 65-80). An individual structured interview was conducted in order to assess the three components of children’s attitudes toward older people and the ageing process: cognitive, affective and behavioral.	Sample size: n = 180 Participant’s age: 3–11 years old	The majority of the children (69%) were able to place the pictures in correct sequential order. By the first grade they demonstrated an understanding of relative age. Children expressed negative attitudes toward the physical characteristics of the image of the oldest man (e.g. wrinkles) and toward their own ageing process.	Cognitive Affective Behavioral	Children	Interrater reliability = .99

(continued)

**Table 30.1** (continued)

Authors	Country	Methodology	Participants	Main findings	Dimensions of ageism	Originally developed to be applied with:	Psychometric qualities
<i>Implicit measures</i>							
Laney et al. (1999)	EUA	Children's attitudes about older people and the ageing process were assessed using three instruments:	Sample size: n = 20	In the word association task, the words associated with "old" were mostly negative at different dimensions: physiological (e.g. "weak"), mental (e.g. "bored"), and low levels of activity (e.g. "retired"). The opposite pattern was found regarding young people who were characterized in a positive way (e.g. "happy").	Cognitive	Children	Not specified
		1. Word association task: brainstorm of words associated with two concepts: "young" and "old".	Participant's age: 1st and 2nd graders	Children's drawings depicted older persons performing sedentary and passive leisure activities (e.g. "watching out window"). Besides, the drawings revealed the physical characteristics attributed to older people (e.g. gray hair, wrinkles).	Affective		
		2. Children's human figure drawings: children were asked to draw a picture of an old person and a young person. The students were individually interviewed regarding the content of their drawings.		In the interview, children expressed a negative attitude regarding the ageing process ("the body quits working"). Children considered that older persons perform leisure activities (e.g. "lying in bed") and need help from young people.			
		3. Students were orally interviewed using an attitude-toward-ageing questionnaire (e.g. "How old is an old person?")					



Falchikov (1990)	Scotland	Children's drawings:		Sample size: n = 28	Pictures of old people were more negative in content than those of young people. Older people portrays frequently included glasses, wrinkles, wheelchairs.	Cognitive	Children	Reliability (inter-rater average agreement = 87.9%)
		(1) Young man;	Participant's age: 10.5–11.5 years old					
		(2) Young woman;	Pictures of old people were significantly smaller than those of young people.					
		(3) Old man;						
(4) Old woman.								
Lichtenstein et al. (2005)	EUA	Children's drawing of a typical older person in a setting. Interview regarding characteristics of the drawn person (e.g. the person's age, feelings, thoughts, possible relation to the student).		Sample size: n = 1944	Children's drawings depicted older persons who were "diverse and multidimensional".	Cognitive	Children	Interrater agreement (weighted $k = 0.73$ ) and Intra-rater agreement (weighted $k = 0.74$ )
		Participant's age: Two middle schools						
Villar and Fabà (2012)	Spain	Children's drawings with written tags:		Sample size: n = 60	Older persons were represented in varied and multidimensional ways.	Cognitive	Children	Not specified
		(1) Young man;						

(continued)

**Table 30.1** (continued)

Authors	Country	Methodology	Participants	Main findings	Dimensions of ageism	Originally developed to be applied with:	Psychometric qualities
Robinson et al. (2014)	EUA	<p>(2) Young woman; (3) Old man; (4) Old woman.</p> <p>Children's drawing of an old person that children see in real life (in a setting); Interview.</p>	<p>Sample size: n = 141</p> <p>Participant's age: 8–12 years old</p>	<p>The drawings depicting older persons were more homogeneous and less complex than those representing younger persons.</p> <p>The drawings produced a generally positive image (94.8% of older people). Most of the drawings depicted a family member who was happy, healthy, active and with positive physical characteristics.</p>	Cognitive Affective	Children	Not specified
Isaacs and Bearison (1986)	Not specified	<p>Children were asked to participate in a puzzle task with aged (experimental group) and non-aged (control group) persons.</p> <p>Behavioral measures: proxemics distance; productivity measure; eye-contact initiation measure; verbal interaction measure (e.g. number of times a child initiated conversation).</p>	<p>Sample size: n = 144</p> <p>Participant's age: 4, 6 and 8 years old</p>	<p>Regardless of their age, participants showed preference for nonaged confederates compared to the aged confederates. This finding is based on the scores on all the behavioral measures assessed with the exception of the productivity measure.</p> <p>Children as young as 4 years old are already able to make categorizations based on individual's age and acted differently to them in a behavioral context.</p>	Behavioral	Children	Not specified

Kwong See et al. (2012)	Not specified	The Piagetian number conservation task was modified to assess young children's age stereotyping. This was done by manipulating the perceived age of the experimenter (puppets in experiment 1 and real persons in experiment 2) asking the second question.	Sample size:	In the young adult experimenter condition, the majority of children gave an answer focused on length rather than number.	Behavioral	Children	Not specified
			Experiment 1 (n = 23); Experiment 2 (n = 28)	In the old adult experimenter condition, the majority of children gave an answer focused on number rather than length.			
			Participant's age: 5 years old	Children held different beliefs about the motivations of the two experimenters for asking the second question and acted differently accordingly to these beliefs.			

Another limitation is that the procedures used in the testing are not well described and appear very time consuming. For instance, the replicability of the studies using the behavioral methodology seems difficult in the sense that it requires the participation of older persons (for example, in a classroom context) in order to engage in interpersonal activities with younger participants (e.g. Isaacs and Bearison 1986). Another issue that requires further attention is that studies may use measures, such as scales, which may not be sensitive enough to capture the presence of ageism in very young children (e.g. Isaacs and Bearison 1986). This is particularly relevant in cases where scales were originally applied to adults, and have been used with children or adolescents with little or no adaptation (e.g. the “Tuckman –Lorge Old People Scale” – Harris and Fiedler 1988; “Kogan’s Attitude toward Older People Scale” – Ivester and King 1977).

Finally, other aspects that have not been taken into consideration in these sort of studies are the need to control for important factors that may have an association with attitudes to age in children. For instance, in some studies, the prior contact between children and older people, namely their grandparents, was not assessed either in terms of quantity (Robinson et al. 2014) or quality (e.g. Harris and Fiedler 1988). This constitutes an important limitation in the sense that children’s relationships with relevant older persons could reasonably serve as an important evidence for their cognitive, affective and behavioral overviews towards older people.

The recognition of these limitations is crucial for the refinement of currently available measures and for the development of more complex techniques in the future. New measures should be adapted and created that overcome some of the major limitations identified in this field.

### **30.6 Future Directions & Recommendations.**

Children’s attitudes regarding older people represent a multidimensional construct (e.g. Lichtenstein et al. 2005) and, consequently, can be fully explored only if the three dimensions of attitudes (cognitive, affective and behavioral) are taken into account. Future studies aiming to explore children’s attitudes regarding older people and/or the ageing process also should be based on a triangulation of both explicit and implicit measures. At the very least, research should be clear about the focus and type of measurement when formulating hypotheses. This will allow for a better evidence base to develop new theories on how implicit and explicit attitudes towards age and older people emerge and develop in childhood. More specifically, the use of this framework will help to establish a more systematic account on how ageism develops across childhood and how it is expressed by children of different age groups. For instance, if there is a social norm to not discriminate someone based on his or her age, one can hypothesize that older children will show less explicit ageism but, probably, their implicit ageism level will remain the same as happens, for instance, in racism (Rutland et al. 2005). This complex pattern of prejudice development across childhood should also be considered in studies on the development of

ageism. Thus, a possible avenue to pursue is to explore the existence of an anti-discrimination norm based on people's age in children and adults. This will allow to address important topics in the field of ageism such as: the early origins of ageism, the development of self-presentation concerns and executive control and the ability to inhibit prejudicial responses (Olson and Dunham 2010).

Future measures of ageism in childhood should also have better psychometric qualities (i.e., test-retest reliability, concurrent validity, predictive validity, construct validity and content validity) and better sampling procedures. It is fundamental that specific information regarding participant's demographic characteristics be provided, e.g., their age. The measurement of other related factors such as prior relationships with grandparents or other significant older people is also of paramount importance in this domain and should be further considered as a necessity (Robinson et al. 2014).

Finally, we believe that it would also be important to conduct subsequent literature reviews, namely meta-analyses in this field. Although we tried to be as inclusive as possible, and we present the main studies in this domain, it would be important to consider other databases (e.g., Scopus, Web of Science) not included in this study. This would allow further exploration of the field, through a systematic procedure.

The improvement of measures of children's attitudes regarding older people is crucial and urgent. One important route will be to explore the instruments that have been used in other types of prejudicial attitudes (e.g., racism and sexism) and see how they can be applied to the case of ageism. It will allow further understanding of how ageism develops in childhood and the development of effective intervention programs (Marques et al. 2014b) to reduce ageism at an early age. In an ageing society, understanding how children think, feel and behave regarding older people is fundamental for preparing a better and more inclusive future for all age groups.

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