

# The Concept of Prosociality in Later Life and Its Dimensions: A Scoping Review

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## Abstract

**Objective:** The aim of this study was to clarify various aspects and dimensions of the prosociality concept in later life as an important concept that gains significance in people as they age. This concept has been expressed through a variety of dimensions in different studies.

**Method:** This is a scoping review of the relevant literature on the concept of prosociality and its dimensions in later life, including quantitative and qualitative studies. The required data were collected from Web of Science, Scopus, PubMed, ProQuest, and Google Scholar databases between the years 1987 and 2022.

**Results:** First, 877 articles were identified, and after the screening phase, 57 eligible studies were reviewed. Two main categories, prosocial dispositions and prosocial behaviors, and seven subcategories were extracted. The subcategories of prosocial dispositions include empathy, prosocial norms, innate tendencies, and generative desires. Prosocial behaviors subcategories include informal spontaneous helping, formal planned helping, and pro-environmental behaviors.

**Conclusion:** The various aspects and dimensions of the prosociality concept in later life identified in this study can be used as a basis for assessing and planning the promotion of prosociality among older adults.

**Key words:** *Aged; Humans; Motivation; Prosocial Behaviors; Review*

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Along with the modernization of societies during recent decades, life expectancy and the number of healthy older adults have significantly increased. Therefore, their participation in social activities has also enhanced (1). Societies tend toward apathy and individualism, and people are less inclined to help each other as values and relationships have changed (2). However, the moral attitude of future generations depends on the establishment of a balance between one's own interests and those of others. In fact, the moral development of a society is described by the transition from self-orientation to other-orientation (3).

Humans display a complex set of positive dispositions, motivations, and behaviors that are referred to as "prosociality." Here the term refers to voluntary thoughts, feelings, and behaviors that benefit others or society as a whole (4, 5). According to the World Giving Index issued by the Charities Aid Foundation (CAF) (2020), Indonesia is recognized as the first prosocial country in the world. Further, Iran ranked 32nd position among the 114 countries surveyed, with 62% of its citizens helping strangers, 45% donating money to charitable organizations, and 11% volunteering their time to organizations (6).

Prosociality is crucial for having successful, active, and productive aging (7-9). Although most society members consider older adults incompetent and dependent, some studies indicate that prosociality and its various aspects increase with age (10, 11), and older adults engage in various prosocial behaviors (12).

The study of prosociality is significant in later life because prosocial tendencies and behaviors have positive impacts on older adults, others, and the community (13). Previous research has indicated that various prosocial tendencies and behaviors positively impact different aspects of psychological well-being in older adults, such as increased quality of life, happiness, life satisfaction, hope for life, and reduced depression (12, 13).

As an umbrella term, the concept of prosociality encompasses different dimensions (5, 11, 14). It refers to various phenomena, including empathy, altruism, generativity, reciprocity, cooperation, and trust (5, 15). Nevertheless, most studies in the field of prosociality have focused on only one or two dimensions of this concept (16-19). For example, Best and Freund (2021) considered donating behaviors, particularly its non-monetary form, and generativity as aspects of the prosociality concept (20). However, some researchers, such as Whillans *et al.* (2016), focused on the financial dimension of the prosociality concept (21). Some studies have addressed volunteering as a planned prosocial behavior in older adults (16, 22-27).

Prosociality is an important concept in behavioral sciences and a sociocultural construct. Thus, it is necessary to explain and clarify its various aspects (13). Numerous theories and models have described

prosociality in later life (28-32), one of which is Erikson's theory of psychosocial development which refers to generativity (29, 33). Some others, mentioned by Harvighurst (1957) in the context of activity theory, believe that older adults benefit themselves and their community when they are active (30). Social exchange theory (Dowd, 1975) refers to motivations in social relationships and intergenerational transfers, which attempts to explain the reciprocal behavior between people of different ages due to changing social roles and skills (32). The theory of planned behavior (Ajzen, 1991) assumes that the basis of behavior is a concept called intention, which is composed of theoretical constructs such as attitudes, subjective norms, and perceived behavioral control (28). In 1994, Midlarsky and Kahana proposed in their model of successful aging that prosocial behavior in later life is motivated by an age-related rise in empathic concern for others, religious commitment, and concern for moral norms (31). Each of the theories and models presented above focuses on a different aspect of the prosociality concept (34).

Due to the increase in the elderly population, it is critical to study their participation in prosocial activities, since these activities may contribute to the improvement of psychological and social well-being in their later life (12, 35). Despite the significant amount of research on prosociality throughout the lifespan and the growing interest regarding this concept in later life, there is no consensus on its definition and dimensions considering later life (12, 20). To measure and implement interventions to promote prosociality in older adults, it is necessary to determine its meaning and dimensions. Therefore, the aims of this study include 1) exploring the meaning of the prosociality concept in later life and 2) identifying its dimensions according to the existing literature using a scoping review study.

## Materials and Methods

This study utilized the scoping review framework on the prosociality concept and its dimensions in later life. Scoping review is a method of synthesizing knowledge that uses a systematic literature search to map the existing evidence on a subject and identify essential concepts, theories, sources, and research gaps in a particular area (36). Scoping reviews encompass all study types such as qualitative, quantitative, and mixed-method studies (37). In this study, the five-stage framework developed by Arksey and O'Malley (2005) was used (38). These stages include 1) identifying the research question, 2) identifying relevant studies, 3) study selection, 4) charting the data, and 5) collating, summarizing, and reporting the results.

### *Stage 1: Identifying the research question*

The first stage was to identify and link the objective with the research question. In modern societies, where more people are moving towards apathy and individualism, investigating the prosociality concept in later life, focusing on the participation of older adults in voluntary

actions, and transferring these altruistic values to future generations are indispensable steps. Consequently, this concept must be analyzed as there appear to be age-related differences in this area. Thus, prosociality and its aspects in later life must be explored and synthesized to measure it accurately. Therefore, the main review question was as follows: "What are the definition and dimensions of the prosociality concept in later life according to the existing literature?"

#### **Stage 2: Identifying the relevant studies**

The main databases used for systematic search included Web of Science, Scopus, PubMed, ProQuest, and Google Scholar. The following keywords were used without a date limitation for articles: "prosocial\*," along with "older adults," "older people," "both spellings of ageing and aging," "later life," "senior," "third life," and "elderly." The search query used in the PubMed database was: ("prosocial\*" [tiab] AND ("older adults" [tiab] OR "older people" [tiab] OR "aging" [tiab] OR "ageing" [tiab] OR "later life" [tiab] OR "senior" [tiab] OR "third life" [tiab] OR "elderly" [tiab]), without time and language restrictions. The data search was conducted between January 2nd and March 6th, 2022, and was focused exclusively on articles published between 1987 and 2022. There were 877 studies collected in this research.

#### **Stage 3: Study selection**

In the scoping review, the third stage is the study selection, which determines whether the articles meet the inclusion criteria. The inclusion criteria included articles concerning prosociality in community-dwelling adults aged 60 years and older. Quantitative, qualitative, and mixed-method studies were collected for this review. Those articles that included samples of older adults with chronic diseases or those living in nursing homes were excluded at the screening stage. All explored articles were exported to Endnote software. Two authors independently performed the study screening and the data extracting from eligible research.

#### **Stage 4: Charting the data**

The collected data were charted in the fourth step. Quantitative or mixed methodologies were employed in a total of 52 articles, while five articles used qualitative methods or literature reviews. Table 1 outlines essential information extracted for each study including the name of authors, year of publication, country, study sample, study methodology, and dimensions of the prosociality concept in later life. The selected research findings were surveyed multiple times to evaluate the content that focuses on the definition and dimensions of the prosociality concept in later life. The first author extracted the data for each study and developed the relevant tables, whereas the other authors assessed the data and the decisions at each stage to ensure accuracy. Based on the scoping review guideline, a critical appraisal of the evidence was not executed (39).

#### **Stage 5: Collating, summarizing and reporting the results**

At this stage, the authors iteratively evaluated the statements and finally grouped them into two main categories and seven subcategories according to their derived definitions. Each component reflected the definition of the prosociality concept in later life, as presented in 57 reviewed studies. The research team discussed this process repeatedly until an agreement was reached.

### **Results**

A scoping review was conducted, using a systematic search, to investigate the concept of prosociality and its dimensions in later life and to synthesize the findings. After searching for relevant keywords, 877 studies were found by exploring the databases. Of these, 108 duplicate articles were removed due to data overlap and simultaneous indexing of an article in multiple databases. Subsequently, 672 articles were excluded based on the exclusion criteria. These articles included letters to the editor or those unrelated to prosociality in later life, literature on prosocial behaviors in young age groups towards older people, and those presented at congresses. Furthermore, some of them were removed due to lack of access to the full text of the articles. Finally, 97 studies remained. After reading the full text of these studies, 40 articles were also removed because they did not sufficiently address the prosociality concept in later life. Ultimately, 57 articles were reviewed in our study. The study stages were reviewed and confirmed by all authors. They also concurred with the final selection of these 57 studies. Figure 1 shows the number of eligible studies identified and selected in our review.

The number of articles examining the dimensions of the prosociality concept in later life using quantitative and cross-sectional approaches was greater than that of qualitative and review studies. In addition, most of the studies on prosociality in later life were conducted in the United States. The majority of the reviewed studies were conducted within the last decade. with many quantitative studies using experimental methods and cross-sectional studies. In terms of study methodology, 17 studies employed the behavioral method using economic games, such as the dictator game, ultimatum game, and prisoner's dilemma game, while 37 studies used the self-report method. In the aforementioned games, subjects were placed in an experimental or simulated environment to study a form of prosocial behavior in a controlled setting (18, 40-45). Other studies have employed longitudinal and mixed-method approaches. In all 57 reviewed studies, the dimensions of the prosociality concept in later life were coded.

Subsequently, open coding was synthesized into subclasses, subcategories, and main categories. The prosociality concept in later life includes two dimensions: prosocial dispositions and prosocial behaviors. Prosocial dispositions fall into four main

subcategories: empathy (perspective-taking and empathic concern), prosocial norms (social responsibility, social justice, and reciprocity), innate tendencies (agreeableness and other-oriented moral judgement), and generative desires (Table 2).

In Table 3, the dimensions of prosocial behaviors in later life includes informal spontaneous helping (helping close others and helping strangers), formal planned helping (helping charitable organizations, helping non-

charitable, non-profit organizations), and pro-environmental behaviors.

The dimensions of the prosociality concept in later life were integrated into a proposed conceptual model and fall into seven subcategories and two main categories (Figure 2).

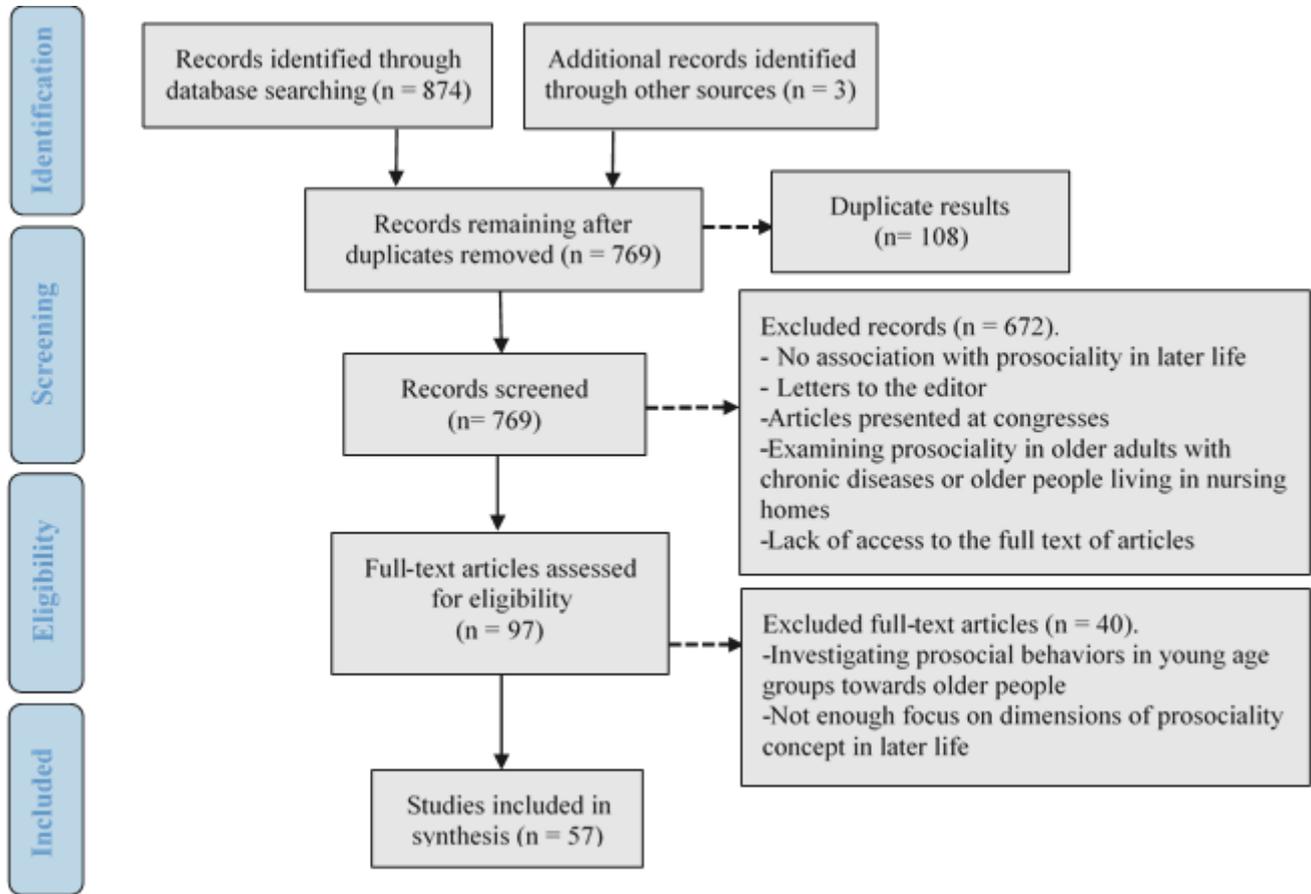


Figure 1. The Number of Identified and Included Articles in the Study of Prosociality Concept in Older Adults

Table 1. Reviewed Studies of the Concept of Prosociality in Later Life and Its Dimensions

No	Author (year)	Country	Study sample	Study methodology	Dimensions of prosociality in later life
1	Bailey <i>et al.</i> (2020)	Australia	79 people (39 older adults aged 61-82, 64.1% women)	Experimental, Behavioral	Helping collect paper sheets for a person; emotional empathy and concern for the unfortunate people
2	Bailey <i>et al.</i> (2021)	Australia	10 articles	Review	Intra-individual (individual differences in prosocial tendencies/dispositions), inter-personal (one person helping another), activity in socio-cultural and organizational contexts (volunteering and cooperation)
3	Bailey <i>et al.</i> (2013)	Australia	69 people (34 older adults aged 65-92, 70.5% women)	Experimental, Behavioral	Donating money to a stranger in need
4	Beadle & De La Vega (2019)	USA		Review	Cognitive empathy (perspective taking, theory of mind, empathy accuracy); emotional empathy or sympathy
5	Beadle <i>et al.</i> (2015)	USA	48 people (24 older adults aged 67-93, 62.5% women)	Experimental, Behavioral	Donating money to charity; emotional empathy (empathic concern, personal distress)
6	Best & Freund (2021)	USA and Switzerland	658 people aged 18-89 (58.6% women)	Experimental, Behavioral	Non-monetary helping; donating physical energy, donating years of life, and providing social support; non-monetary helping or spending time in charity; generativity; pure altruistic motives or altruistic concern for others
7	Bjälkebring, <i>et al.</i> (2016)	USA and Sweden	461 people aged 19-89 (58.9% women)	Cross-sectional, Self-report	Affective motivations for charitable giving: experiencing emotions such as sympathy, compassion, worry, upset, and sadness by helping a person in need, willingness to donate to help people in need
8	Bjälkebring, <i>et al.</i> (2021)	Sweden	1123 older adults aged 60-66 (56.7% women)	Longitudinal, Self-report	Volunteering or spending time on different activities, e.g., team sports and religious activities
9	Bonner, <i>et al.</i> (2003)	USA	68 older adults aged 66-90 (66% women)	Cross-sectional, Behavioral	Helping someone who needs directions and needs to borrow a pencil
10	Bruine de Bruin & Ulqinaku (2021)	USA	5376 people aged 18-100 (1798 older adults aged +60, 57% women)	Experimental, Behavioral	Contributing to national or international charities targeting the next generation (to improve the well-being of children nationwide/worldwide through education and health programs) and the national and international charities that do not specifically target the next generation (providing disaster relief, food, and shelter to people nationwide/worldwide)

11	Caprara & Steca (2005)	Italy	512 people aged 20-87 (50.5% men, 127 older adults)	Cross-sectional, Self-report	Support and cooperation with friends and colleagues; helping, taking care of, and comforting a person in need
12	Caprara & Steca (2007)	Italy	1324 people aged 20-90 (412 older adults aged +60 (54.6% women)	Cross-sectional, Self-report	Support and cooperation with friends and colleagues; helping, taking care of, and comforting a person in need
13	Cavallini, <i>et al.</i> (2021)	Italy	150 older adults aged 55-86 (64.6% women)	Cross-sectional, Self-report, Behavioral	Informal helping to close others; informal helping to distant others; giving money to strangers in need; agreeableness; empathic concern; altruism
14	Chi, <i>et al.</i> (2021)	USA	2790 people aged 25-84 (56.5% women)	Cross-sectional, Self-report	Formal volunteering, providing unpaid assistance, providing emotional support
15	Cho, <i>et al.</i> (2021)	USA	330 people aged 18-89 (83.3% women, 69 older adults aged +60)	Cross-sectional, Self-report	Formal and informal prosocial behaviors in Covid-19 pandemic situations toward close or distant others; empathy
16	Foy, <i>et al.</i> (2013)	USA	300 older adults aged 55-80 (75% women)	Randomized controlled trial, Self-report	Participating in charity events to raise funds for a regional food bank, volunteerism, and giving contributions
17	Gaesser, <i>et al.</i> (2017)	USA	70 people (39 older adults aged 65-86)	Experimental, Self-report	Willingness to help needy people in different situations
18	Gong, <i>et al.</i> (2019)	China	155 people (66 older adults aged 60-84, 57.5% women)	Experimental, Behavioral	Donating money and time to relatives and non-relatives when they are hospitalized and need care
19	Gottlieb & Sevigny (2016)	Canada	20 older adults aged 61-96 (11 men, 9 women)	Qualitative, Self-report	Involvement in and commitment to family and community prosocial activities; types of social usefulness and relationship properties (cognitive guidance or information, emotional support, practical help, indirect support, positive presence, invisible support or help, mutuality or reciprocally benefited, close or intimate relationship, time involved or relationship duration, etc.), identity activation or motivation (sense of responsibility or duty, need to give back, etc.),
20	Han, <i>et al.</i> (2020)	USA	9697 people aged 51-74 (54.49% women)	Longitudinal, Self-report	Dedicating one's time to religious, educational, health-related, or other charitable organizations
21	Hao & Liu (2016)	China	204 people (49 older adults aged 60-70, 51.02% men)	Experimental, Behavioral	Voluntary helping in answering a person's questions; theory of mind
22	Hubbard, <i>et al.</i> (2016)	USA	80 people aged 18-67	Cross-sectional, Behavioral	Donating money to charity with altruism; prosocial dispositions: empathic concern, perspective taking, agreeableness, and altruistic behavior

23	James (2011)	USA	331 older adults aged 68-95	Longitudinal, Self-report	Donating money, property, or possessions to religious or other charitable organizations
24	Jiraneck, <i>et al.</i> (2013)	Switzerland	513 people aged 16-85 (63.5% men)	Cross-sectional, Self-report	Volunteering in nursing/ care for non-relatives in need; campaign work in a humanitarian organization; strategic/ organizational/ administrative office work in an organization that helps people in need; assistance for non-relatives in need; and counseling and competence building for non-relatives in need; empathy altruism motivation and social justice altruism motivation
25	Juhl, <i>et al.</i> (2020)	USA	234 people aged 20-79 (51.28% men)	Cross-sectional, Behavioral	Donating a portion of participation earnings to a charitable non-profit organization; agreeableness, and affective empathy
26	Kahana, <i>et al.</i> (2013)	USA	585 older adults aged 72-98 (66% women)	Cross-sectional, Self-report	Altruism, volunteering, and informal helping as instrumental supports provided by the respondent for friends and neighbors
27	Kahana, <i>et al.</i> (1987)	USA		Review	empathy, social responsibility, and moral judgment; the norms of reciprocity, giving, and social responsibility
28	Kettner & Waichman (2016)	Germany	439 people (167 older adults aged +60, 50.3% men)	Experimental, Behavioral	Donating money to a needy stranger
29	Konrath & Handy (2021)	USA	2744 older adults aged 57-85 (51.6% women)	Cross-sectional, Self-report	Giving time or volunteering; giving affection, and caregiving
30	Krause (2015)	USA	1535 people aged +50 (60.6% men)	Longitudinal, Self-report	Providing tangible support to strangers; providing tangible support to close others
31	Livi, <i>et al.</i> (2020)	Italy	116 people with a mean age of 42.32 years (62.06% women)	Cross-sectional, Self-report	Volunteering in a non-profit organization; empathic concern; social responsibility
32	Lockwood, <i>et al.</i> (2021)	UK	187 people (92 older adults aged 55-84, 53.26% men)	Experimental, Behavioral	Willingness to exert physical effort and spend more energy that benefits others - donating money to charity; reciprocity norm
33	Mann, <i>et al.</i> (2022)	USA	165 older adults (60-88 years, 58% women)	Longitudinal, Self-report	Formal volunteering in programs related to education, youth, and poverty; leadership positions in prosocial programs; formal volunteering through a local or national organization

34	Mayr & Freund (2020)	Switzerland		Review	Charitable donations or volunteering for charities and others or future generations; concern for the ecology; prosocial dispositions (emotional empathy, perspective taking, agreeableness, and altruistic motivation); motivational orientations (generativity, socioemotional selectivity, ego-transcending perspectives, materialism, warmth vs. competence, and cultural norms); resources and constraints (working memory/self-control, theory of mind, financial resources, health, remaining time to live); benefits (pure and impure altruism)
35	Midlarsky & Hannah (1989)	USA	2715 people under the age of 75	Experimental, Behavioral	Donating money to a charity related to helping infants with congenital disabilities
36	Motamedi (2019)	Iran	338 older adults aged +60	Cross-sectional, Self-report	Social responsibility, empathic concern, perspective taking, personal distress, mutual moral reasoning, other-oriented moral reasoning, and altruism
37	Motsenok & Ritov (2021)	19 European countries and Israel	36267 people aged +50 (55% women)	Cross-sectional, Self-report	Volunteering or charity work (formal and informal helping); prosocial motives
38	Nakamura, <i>et al.</i> (2021)	USA	165 older adults aged 60-88 (58% women)	Longitudinal, Self-report	Donating time to do voluntary formal work addressed a variety of social issues such as education, youth, and poverty
39	Nelson-Coffey, <i>et al.</i> (2017)	Southern California	159 people aged 23-93 (77.4% women)	Randomized controlled trial, Self-report	Acts of kindness directed toward another individual; acts of kindness directed toward the world or humanity at large
40	Nguyen, <i>et al.</i> (2020)	USA	520 people aged 34-92 (61.3% women)	Longitudinal, Self-report	Social contribution (believing that a person is a vital member of society, with something of value to give to the world); generativity
41	Perez, <i>et al.</i> (2021)	Mexico	761 people aged 18-75 (53.7% women)	Cross-sectional, Self-report	Volunteering, emotional helping, instrumental helping (providing physical or material assistance), donating money to needy people
42	Pornpattananangkul, <i>et al.</i> (2017)	Singapore	78 people (39 older adults, 53.8% women)	Experimental, Behavioral	Giving money to close others and distant others
43	Qu, <i>et al.</i> (2020)	USA	3544 older adults aged 64-67 (53% women)	Cross-sectional, Self-report	Giving money to close others; giving money to charity; giving emotional, tangible, and informational support to close others; volunteering, and caregiving; prosocial motivations (empathy, compassion, or other-oriented concerns)

44	Romano, <i>et al.</i> (2021)	Austria	359 people (118 older adults aged 60-90)	Experimental, Behavioral	Giving money to stranger needy people, and mutual cooperation with each other to achieve the desired result (e.g., earning more money)
45	Rosen, <i>et al.</i> (2016)	Germany	197 people aged 19-86 (61.9% women)	Cross-sectional, Self-report	Emotional empathy (empathic concern), and cognitive empathy (perspective-taking); reasoning; moral decision making; theory of mind
46	Rosi, <i>et al.</i> (2019)	Italy	96 people (48 older adults aged 61-82, 79.1% men)	Cross-sectional, Behavioral	Giving money to needy strangers; empathic concern; theory of mind, reasoning
47	Serrat Graboleda, <i>et al.</i> (2019)	Spain	198 older adults aged +65 (58.6% women)	Cross-sectional, Self-report	Participating in activities or community associations; informal helping to others; generativity
48	Serrat Graboleda, <i>et al.</i> (2021)	Spain	106 older adults aged 59-86	Mixed method, Self-report	Volunteering in mutual support and self-help activities, providing formal services and other forms of civic engagement, provided by organizations
49	Shane, <i>et al.</i> (2021)	USA	6176 people aged 24-92 (54% women)	Longitudinal, Self-report	Doing works, in terms of time, money, or concern, for close others, and the community; agreeableness; generative desires
50	Sin, <i>et al.</i> (2020)	Canada and USA	1028 people (262 older adults aged 60-91, 83.2% women)	Cross-sectional, Self-report	Formal volunteering; providing support related to Covid-19: emotional support, and tangible support
51	Sommerlad, <i>et al.</i> (2021)	UK	30033 people (16059 older adults aged +55, 75% women)	Cross-sectional, Self-report	Empathic concern, perspective taking
52	Steele, <i>et al.</i> (2008)	USA	12064 people (1316 older adults aged +55, 56.6% women)	Cross-sectional, Self-report	Providing monetary and non-monetary helping to strangers; volunteering in charitable organizations; empathic concern; altruistic behavior; social responsibility
53	Sze, <i>et al.</i> (2012)	USA	213 people (70 older adults aged 60-80, 67% women)	Cross-sectional, Self-report	Donating money to charitable organizations; emotional empathy; empathic concern, personal distress, and perspective taking
54	Vecina & Fernando (2013)	Spain	251 people aged 16-78 (68% women)	Cross-sectional, Self-report	Volunteering in non-profit organizations; pressure-based prosocial motivation; volunteer satisfaction; hedonic well-being; eudemonic well-being
55	Wenner & Randall (2016)	USA	188 people aged 37-89 (85.6% women)	Cross-sectional, Self-report	Helping close others, monetary helping charitable organizations, volunteering, emotional and financial support for someone
56	Whillans, <i>et al.</i> (2016)	USA	259 older adults aged +55 (50.1% women)	Longitudinal and experimental, Self-report	Providing financial support to family members and/or friends, as well as charitable organizations, religious groups, political organizations, and similar entities

USA: United States of America  
UK: United Kingdom

**Table 2. Dimensions of Prosocial Dispositions in Later Life Extracted from Scoping Review**

Main categories	Subcategories	Meaning summary
Empathy	Perspective-taking	The ability to adapt to and understand others' thoughts and concerns
	Empathic concern	The tendency to experience feelings of compassion and concern for others
Prosocial norms	Social responsibility	Sense of responsibility to relatives (i.e., children, parents, family, employers, neighbors, friends, and acquaintances), the community (i.e., desirable citizenship, appropriate treatment of vulnerable groups such as children, concern for the welfare of the community and the world), the environment (i.e., plants, animals, soil, and climate), and posterity
	Social justice	Efforts to eliminate unequal conditions or promote equal opportunities for people through prosocial behavior
	Reciprocity	The tendency to respond mutually to someone's help
Innate tendencies	Agreeableness	The tendency to care about the welfare of others rather than enforcing one's own decisions
	Other-oriented moral judgment	The intrinsic tendency to respond to a moral dilemma by adhering to moral principles rather than personal preferences
Generative desires		The individual's desire to leave a legacy and help the future generation and have a good impact on people's lives

**Table 3. Dimensions of Prosocial Behaviors in Later Life Extracted from Scoping Review**

Main categories	Subcategories	Subclasses	Codes	Meaning summary
Informal spontaneous helping	Helping close others	Tangible support	Financial support	Donating or lending money to close others (i.e., family members, friends, and neighbors)
			Instrumental support	Providing physical or material assistance to those in need (e.g., bringing food, medications, or other goods to their homes, providing transportation, shopping, and borrowing or donating books or clothing)
		Emotional support	Kindness/love expression	Giving kindness, love, encouragement, comfort, or talking to a depressed person; giving gifts; greeting with close physical contact (e.g., hug, kiss, or pat on the shoulder) with another adult
			Custodial care	Unpaid non-medical care that helps people with basic daily care (e.g., eating, bathing); care of a person's children, pets, or house while the person is away
		Informational support	Giving advice and information, guiding someone in finding a job, giving feedback	

Helping strangers	Monetary assistance		Donating or lending money to needy strangers
	Non-monetary assistance	Helping in typical situations	Lending or giving valuable items to a needy stranger, giving him directions, allowing him to go ahead in line, offering one's seat to him, and carrying his belongings
		Helping in serious situations	Direct or indirect helping of a needy person in serious situations
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Formal planned helping	Monetary assistance		Making monetary donations to national or international religious and non-religious charities
Helping charitable organizations	Non-monetary assistance	Volunteerism	Volunteering or spending time in a non-monetary way for the benefit of poor and needy religious and non-religious charities
		Goods donation	Donation of goods, clothing, or household items to a charity for the benefit of the needy
Helping non-charitable, non-profit organizations	Monetary assistance		Donating money to non-charitable organizations (e.g., religious groups and political organizations)
	Non-monetary assistance	Volunteerism	Volunteering to assist poor and needy people in community projects, cultural or arts organizations, houses of worship, health care organizations, religious organizations (e.g., mosques and churches), schools or youth groups, senior centers, or other organizations; administrative office work in prosocial programs; and tutoring
		Organ donation	Voluntary donations of blood, platelets, plasma, bone marrow, or other physical organs (e.g., kidney, liver)
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Pro-environmental behaviors			Environmental protection and recovery: individual or group efforts to create good conditions for the environment and reduce the harmful effects of environmental damage (e.g., use of public transportation, and recycling, etc.)
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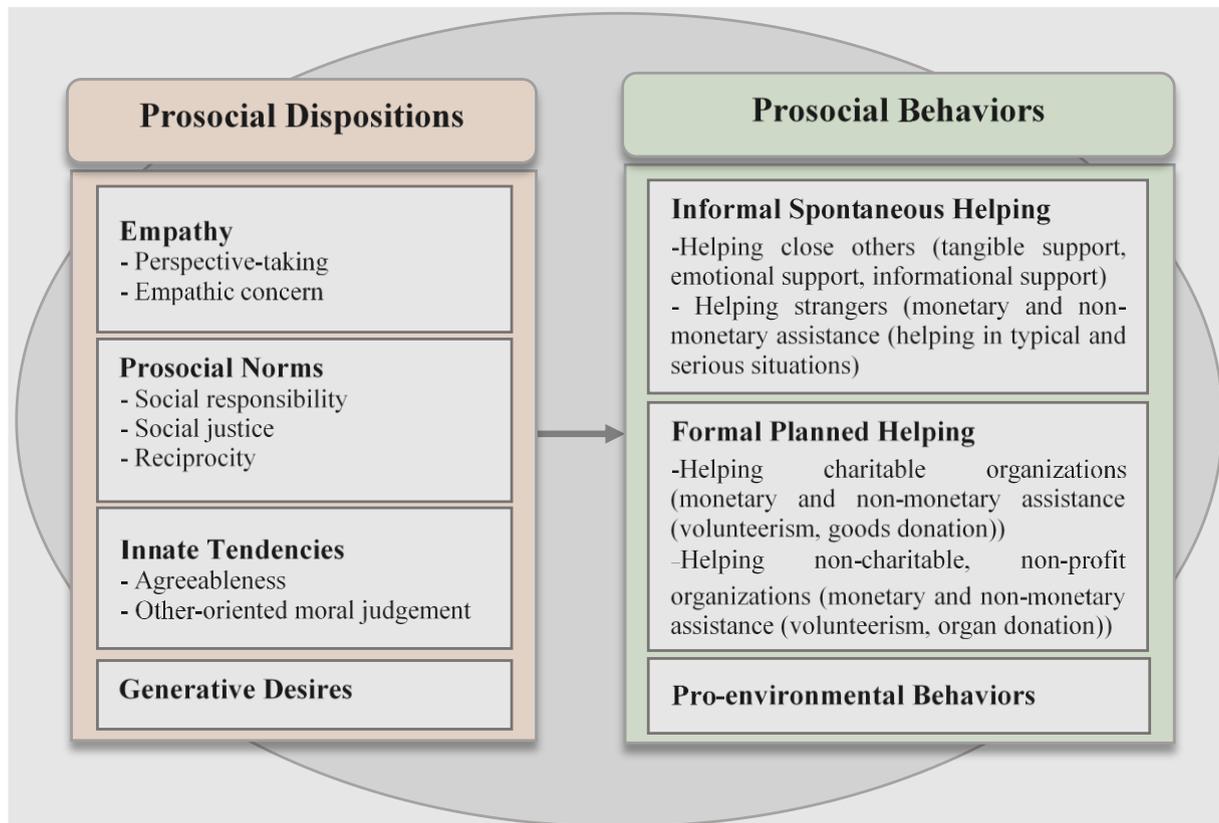


Figure 2. Proposed Conceptual Model of Prosociality and its Dimensions in Later Life

### Prosocial Dispositions

The main category of prosocial dispositions, which includes all attitudes, beliefs, personality traits, and tendencies that lead to benefiting others, consists of four subcategories: empathy, prosocial norms, innate tendencies, and generative desires. The definitions and dimensions were extracted from 23 studies and then coded.

The subcategory of empathy includes two key components: perspective-taking and empathic concern (40). Perspective-taking means understanding the thoughts of others (11, 13, 40-43), while empathic concern refers to the tendency to experience feelings of compassion and concern for others (11, 13, 16, 18, 25, 40-49).

Another important subcategory of prosocial dispositions in later life is prosocial norms which consist of social responsibility, social justice, and reciprocity. Social responsibility refers to a sense of responsibility towards close people, needy people in society, environment, and posterity (1, 13, 25, 52, 53). Reciprocity refers to the tendency to respond mutually to someone's help (10, 11, 53, 54). The norm of social justice refers to efforts made to eliminate unequal conditions or promote equal opportunities for people through prosocial behaviors (16).

The subcategory of innate tendencies includes two dimensions: agreeableness and other-oriented moral

judgement. Agreeableness is a personality trait that describes the tendency to care about the welfare of others rather than enforcing one's own decisions (11, 45, 46, 50, 51). Furthermore, other-oriented moral judgement refers to an older person's inherent tendency to respond to a moral dilemma by adhering to moral principles rather than personal preferences (13, 42, 52).

“Generative desires” as a form of prosocial dispositions is the desire of older individuals to leave a legacy for future generations and have a good influence on their lives (51, 53).

### Prosocial Behaviors

The second key aspect of prosociality in this study was revealed as prosocial behaviors, which have three subcategories that are important for understanding this category: informal spontaneous helping, formal planned helping, and pro-environmental behaviors. These subcategories were addressed in 52 studies.

Informal spontaneous helping included helping close others and helping strangers. Helping close others consists of three dimensions: tangible support, emotional support, and informational support. Tangible support includes two dimensions: financial and instrumental support (54). Financial support is defined as donating or lending money to close others in times of need (8, 21, 45, 47, 51, 54-56). Instrumental support is defined as behaviors that provide physical or material assistance to those in need (45, 47, 51, 54, 57-60). Emotional support

is assumed to be actions that provide verbal support, attention, and companionship to those who have a problem (57, 59). Emotional support includes two dimensions of kindness/love expression and custodial care. Expressing kindness/love includes showing kindness, love, encouragement, comforting or talking to a depressed person (8, 45, 51, 58, 61). Custodial care refers to the unpaid, nonmedical care that helps people with basic daily needs, and caring for children, pets, or taking care of house while the person is away (7, 27, 45, 47, 61-63). Informational support is recognized as giving advice and information such as helping someone find a job or giving feedback to others (45, 47, 51, 58, 59).

Helping strangers includes monetary and non-monetary forms of assistance in typical and serious situations. Monetary assistance involves donating or lending money to needy strangers (8, 22, 45, 48, 49, 53-57, 64-66). Non-monetary assistance to strangers in typical situations may consist of lending or giving valuable items to a needy stranger, giving directions, allowing them to go ahead in line, offering a seat, and carrying their belongings (20, 44, 45, 49, 54, 62, 63, 66-69). Non-monetary help for strangers in serious situations means assisting a needy person in serious situations directly or indirectly by finding someone who can help, or contacting the police, fire department, and other relevant agencies (1, 70).

Formal planned helping is an essential dimension of prosocial behaviors. It includes helping charitable as well as non-charitable, non-profit organizations. Helping charitable organizations includes monetary and non-monetary assistance. Monetary assistance is an ordinary and easily appreciable form of prosocial behavior (17). It involves financially contributing to charitable organizations (8, 10, 11, 17-19, 21, 45, 46, 50, 71, 72). Non-monetary assistance involves volunteerism and the donation of goods to a charity. A special type of formal planned helping is volunteerism, defined as a continuous action of non-monetary aid in favor of the poor and needy to religious and non-religious charities (11, 16, 45, 57, 61, 73). Goods donation refers to the donation of clothing or household items to a charity that benefits people in need (59, 66).

Another dimension of prosocial behavior involves supporting non-charitable, non-profit organizations such as hospitals, schools, and research institutions. In the present study, helping the non-charitable, non-profit organizations encompasses two dimensions: monetary and non-monetary assistance. Monetary assistance is defined as donating money to these organizations (21). Non-monetary assistance refers to volunteerism and organ donation. Volunteerism is the voluntary and planned participation in organizations or groups that seek social benefits (4, 8, 23-27, 35, 47, 57, 59, 61, 73-75). Another formal prosocial behavior is organ donation, such as donating blood, platelets, plasma, bone marrow, or other physical organs (e.g., kidney, liver) to patients in need (45, 49, 66, 73).

Pro-environmental behaviors are defined as individual or group actions taken to protect and recover the environment. These behaviors include the use of public transportation, recycling, green purchasing behavior, energy conservation, and commitment to environmental organizations (11, 69).

## Discussion

The results of this study indicate that there are two main dimensions of prosociality in later life: prosocial dispositions and prosocial behaviors. Prosocial dispositions refer to older people's motives to help others and include empathy, prosocial norms, innate tendencies, and generative desires. On the other hand, prosocial behaviors represent the behavioral aspect of prosociality and refer to behaviors that benefit others in both typical and serious situations. These behaviors include informal spontaneous helping, formal planned helping, and pro-environmental behaviors. They can be voluntary and intentional, directed toward close and distant others, charitable and non-charitable organizations, and the environment (11, 20, 23, 26, 27, 55, 56, 66, 69).

In most studies, a reciprocal relationship has been observed between prosocial dispositions, prosocial behaviors, and well-being (meaningfulness, perceived competence, positive emotions, and relieved negative states) (19, 35, 76). In short, prosocial behaviors are about people contributing to the well-being of others (15). Bailey *et al.* (2021) define prosociality as both dispositions and behaviors that are directed toward the well-being of other people (4). Penner *et al.* (2005) also noted that prosociality has three micro-, meso-, and macro-levels, encompassing the level of the older adult's prosocial and psychological tendencies, the level of exchanges between helpers and help recipients in specific contexts, and the broader implications for families, groups, institutions, and communities (77). Following these definitions, prosociality is a phenomenon that includes two dispositional and behavioral aspects. Some studies indicate that the prosociality concept in later life is multifaceted (5, 11), with each aspect consisting of some dimensions (45, 78). As for the dispositional aspect of the prosociality concept, it should be noted that older people exhibit prosocial behaviors under the influence of different motives. These motives may be different for each person who helps (4). The motives of those who engage in these behaviors are not the fulfillment of professional duties (34). Most studies on prosociality in later life deal with empathy, as a commonly recognized prosocial disposition (11, 13, 16, 18, 25, 40-49, 66). According to the empathy-altruism hypothesis, people have a strong tendency to show empathy to others and help people in need when they encounter them (79).

In this study, the most commonly investigated norms that regulate prosocial behaviors were prosocial norms including social responsibility, social justice, and

reciprocity (80). Therefore, these norms occupied a critical place in the research on prosociality in later life (35) and were found to influence prosocial behavior due to differences in urban culture or subcultures (11). Some theorists emphasize the role of these prosocial norms in explaining prosocial behaviors, claiming that such behaviors are rooted in the internalization of these norms (80). These norms represent perceived social pressures to engage (or not) in prosocial behaviors and are determined by societal beliefs (28). The reciprocity norm is a universal rule that can stimulate prosocial behaviors (81). This norm refers to the tendency of an individual to respond to another's help. In other words, people must return the affection of others with love (10, 11, 52, 58). The social exchange theory describes this norm and examines the reciprocal motivations for supportive relationships between elderly parents and their adult children or grandchildren (58). According to the norm of social responsibility, individuals must help the underprivileged, especially those who depend on outside help without expecting anything in return (82). On the other hand, the justice norm implies that people tend to help those who have worked hard for society but have not received adequate benefits. Moreover, based on this rule, people do not help those who are responsible for their plight (83). Justice theory explains this norm based on the principle that people tend to reduce inequalities in their community (16, 34).

Regarding the subcategory of innate tendencies consisting of agreeableness and other-oriented moral judgement, it should be noted that these tendencies are distinct from self-oriented motives such as the attainment of material benefits (52). An agreeable older person exhibits behavioral traits such as kindness, compassion, cooperation, warmth, and consideration (51). Several studies treat agreeableness as an essential disposition related to prosocial behaviors (11, 45, 46, 50, 51). The dimension of other-oriented moral judgement can be explained by moral judgement theory developed by Sherif *et al.* (1965). According to this theory, individuals with a positive attitude toward prosociality would most likely accept requests for donations. In contrast, individuals who do not have a positive attitude toward prosociality will refuse requests for help. Additionally, individuals who do not have strong judgement will not engage in prosocial behaviors (84).

In relation to the dimension of generative desires, Erikson's theory of psychosocial development states that as people age, they tend to become more interested and involved in others, such as future generations (12, 31, 33, 85).

Prosocial behaviors refer to a broad category of behaviors that are generally perceived as beneficial to others (77). They involve an interaction between the person providing assistance (i.e., the helper) and one or more individuals receiving the help (i.e., the recipient) (15, 77). In this behavioral aspect of the prosociality concept, helping close others refers to activities through

which a person provides physical and material help, emotional support, supervision, or general assistance to relatives (34). Cialdini *et al.* (1997) found that people help those who are close to them more than others who are far from them (86). This finding is attributed to the evolutionary theory (e.g., kin selection), developmental processes of prosocial tendencies, and personality factors (77, 86). According to the principle of inclusive fitness, prosocial behaviors may evolve between relatives by directing help toward those likely to share similar genes (87). However, prosocial behavior is not limited to close relatives but also includes anonymous help to strangers and various forms of monetary and non-monetary support in typical and serious situations (34). A serious situation occurs unexpectedly, without specific expectations or plans for how to respond properly (88). In such a situation, when someone needs help, older people may (or may not) respond prosocially to the situation. Their reactions may range from heroism to apathy (89).

Formal planned helping is an institutionalized action intended to benefiting people other than one's family members and close friends (5). Unlike spontaneous helping, formal helping requires planning, prioritization, and matching individual skills with voluntary tasks (34). It includes helping charitable as well as non-charitable, non-profit organizations. Charitable organizations at the national or international level, such as UNICEF and the International Committee of the Red Cross, aid those in need (19). Helping non-charitable, non-profit organizations is a dimension of formal planned helping. The main purpose of these organizations is to achieve a goal other than seeking personal profit (34). Volunteerism in non-profit organizations involves social and religious areas (8, 59, 73). The theory of planned behavior explains engagement in formal planned helping, particularly volunteering, using the concept of intention. This theory illustrates that the probability of engaging in prosocial activities is higher among older adults who have planned to do so, compared to those without prior planning or a predetermined goal (28).

Finally, concerning the dimension of pro-environmental behaviors, it should be noted that these behaviors are based on benevolence and a sense of concern and responsibility towards the environment (90). The value-belief-norm theory describes these behaviors (91) by studying general human behavior and the specific behavior of people concerning the environment (92). This theory proposes dimensions of biosphere value orientation (appreciation of all plant and animal species) and social altruism (welfare of others) toward the environment (93).

### Limitation

As with the majority of studies, the current study was subject to certain limitations. To begin with, the full text of some identified articles in the first stage was inaccessible. Furthermore, since most of the reviewed

studies were conducted in the United States and Europe, the present work mainly represents the views of people from these regions. Another limitation of the current research was that some studies did not focus exclusively on the older population. These gaps suggest that future research should attempt to provide a better understanding of the prosociality concept regarding older adults in different countries around the world.

## Conclusion

In this study, the conceptual dimensions of prosociality in later life were identified through a scoping review. Due to the multifaceted and multidimensional nature of this concept and the various determinants that form this phenomenon, especially in older adults, there is no consistent definition in the relevant literature. Prosociality in later life has been defined as the tendency of an older person to voluntarily engage in activities for the benefit of others or society. This tendency consists of empathy, prosocial norms, innate tendencies, and generative desires of an older person, leading to various prosocial behaviors for the benefit of others or society. In summary, according to the conceptual model proposed in this research, prosociality in later life is a multi-faceted concept composed of prosocial dispositions and behaviors. The various dimensions of the prosociality concept in later life identified in this study can serve as a basis for assessing and planning prosociality promotion among older adults.

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## Conflict of Interests

None.

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