Bridging Generation Gaps Through Service-Learning in Higher Education: A Systematic Review

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Advances in health care have led to an increased life expectancy for the older populations. An increasing body of research warns of the need to provide opportunities for older people to develop their potential for physical, mental, and social well-being during the aging process. In this context, universities have incorporated the service-learning (SL) methodology into their curricular and extracurricular programs. They attempt to offer their students experiences that allow them, from their experience and reflection, to advance in knowledge, skills and attitudes toward the older population group. Therefore, this methodology allows linking academic activities with social commitment, involving young people, as genuine agents of social change, in constructing a fairer, more inclusive, and supportive society. Despite the large body of research on the definition and benefits that students generally derive from SL, there are no systematic reviews of the full range of benefits that SL experiences, specifically with older people, provide to all participants. In this context, a rigorous systematic review was conducted by referring to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement and based on Web of Science (WoS), Scopus, and Education Resources Information Center (ERIC) databases, to answer one research question: What benefits do SL experiences that engage university students with older people, provide to the groups of participants? The analysis of the 28 selected research papers provides insights into the academic literature on the benefits of such experiences. On the one hand, they refer to the integral development of the student. On the other hand, they refer to the intergenerational relationships that promote the well-being of the elderly. Finally, the ethical commitment of the university, residences, agencies, and other organizations is mentioned. As a result, the positive impact on the community is highlighted.

Keywords: service-learning (SL), aging, intergeneration, benefits, higher education, systematic review

INTRODUCTION

The university students of today are the decision-makers of tomorrow. Higher education institutions cannot ignore their impact on society (Bringle and Hatcher, 2000) or neglect the increasingly complex challenges of an interconnected and constantly changing world. These changes are not strictly limited to the professional context but affect all areas of students'

relationships with their community. This responsibility may lead universities to reconfigure both their programs and teaching-learning methodologies (Santos Rego et al., 2021). The aim is to achieve graduate student profiles that recognize their social responsibility in building a more egalitarian world as an essential part of their professional training.

Service-learning is a methodology that promotes the integral development of the student. It combines the development of generic and specific student competences while students provide a service to the community (learning by doing) (Bringle and Hatcher, 2000; Furco and Norvell, 2019; Lewing, 2019). This systematic review is part of an international project that involves more than 20 universities worldwide and seeks to promote the institutionalization of the service-learning methodology in higher education institutions.

Advances in health care have led to increased life expectancy and a growing older population. The need to prepare university students to work with older adults and their families is increasing as the aging population grows (Faria et al., 2010).

Research has reported that nursing home residents spend most of their time being inactive; they have a sedentary daily routine and feel lonely and disconnected from the community (Giné-Garriga et al., 2019). In addition, several studies have investigated university students' attitudes toward older adults and observed considerable age discrimination. These negative perceptions are often due to insufficient positive contact with older adults (Chen, 2018).

Therefore, promoting intergenerational experiences that help reduce discrimination toward older adults is necessary to dispel myths related to aging and enable students to learn about age diversity (Hwang et al., 2013; Chen, 2018). There is also an urgent need for initiatives, inside and outside the nursing home that provide opportunities for older people to participate in meaningful activities that promote their health and mental well-being and help them engage in daily routines and connect with the community (Giné-Garriga et al., 2019). Notably, most educational programs do not provide specialized training to work with elderly individuals, despite learning to work with older adults being essential in health, socio-educational and business administration careers (Natvig, 2007; Heuer et al., 2019; Howell et al., 2020). Research shows that students who have little contact with older adults tend to have more negative views of and little intention to work with an older population in their careers (Howell et al., 2020).

In this sense, intergenerational experiences may help students learn about older adults, confront stereotypes about aging, and consider working with this population (Oakes and Sheehan, 2014). Engaging students in intergenerational service-learning (SL) experiences is a means of raising students' interest in the aging population and making learning experiences more meaningful (Oakes and Sheehan, 2014; Andreoletti and Oward, 2016; Yeung et al., 2019). The value of students gaining direct personal experience working with or providing services to older adults has long been recognized (Zucchero, 2010; Chen, 2018).

Intergenerational SL experiences combine skills and knowledge acquired in the classroom with real-world experiences (Tapia, 2010). In these experiences, relationships between adults and elders are built in a way that promotes meaningful learning, reflection, active participation, and attitudinal changes (Faria et al., 2010). SL helps students to advance beyond thinking about an issue and act on it (Lewis, 2002).These experiences can lead to mutually beneficial relationships that are intellectually stimulating for younger and older people (Natvig, 2007). On the one hand, these experiences offer students the opportunity to connect theory with practice (Kim et al., 2003; Fruhauf et al., 2004; Martin et al., 2016), increase empathy, improve professional skills, increase commitment to social justice, and develop a sense of citizenship (Gelfand and Firman, 1981; Kim et al., 2003). On the other hand, they may increase life satisfaction and self-esteem of older people, increase their knowledge, and allow them to share life's experiences with others (Anstee et al., 2008).

Despite the large body of research on the definition and benefits of SL for learners in general (Yeung et al., 2019), there are no systematic reviews of the full range of benefits of intergenerational SL experiences for older people, students, and organizations. Furthermore, Roodin et al. (2013) highlighted that despite studies that have reported on positive outcomes of SL, there is a need to improve the research by using reliable, valid measurement instruments to compare the results in the literature. Similarly, Yeung et al. (2019) highlighted that conducting research that evaluates the outcomes of intergenerational programs among elderly individuals becomes imperative to advancing knowledge in the intergenerational field.

In this context, this paper undertook a rigorous systematic review to answer one research question: What benefits do SL experiences that engage university students with older individuals provide to the groups of participants? Therefore, this research work aims to identify the benefits of the intergenerational service-learning methodology for three relevant social agents: the students, the elderly and the organizations.

MATERIALS AND METHODS

Study Design and Protocol

The systematic review presented in this paper was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses statement (PRISMA) (Moher et al., 2009; Higgins and Green, 2011). This procedure helped us to comprehensively and accurately synthesize the evidence in the literature on the benefits of SL with older people.

The elaboration of the research question, the search strategy, and the inclusion and exclusion criteria considered the contributions of Gough et al. (2017) to the field of systematic reviews in educational research. In addition, the work of Lockwood et al. (2015) was used as a basis for compiling and interpreting the findings of the included studies.

In addition, to ensure the transparency, validity, and replicability of this study, we considered the assessment criteria list for systematic reviews developed by the Joanna Briggs' Institute (Lockwood et al., 2015) and the Critical Appraisal Skills Program (Critical Appraisal Skills Programme [CASP], 2018).

Research Question

We referred to the PICO framework (population [P]; intervention [I]; comparison, control, or comparator [C]; and outcome [O]) from the National Institute for Health and Care Excellence (Neal et al., 2017) to establish the research question that guided this systematic review. Accordingly, our research question is What benefits (Outcomes) do SL experiences (Intervention) that engage university students with older individuals provide to the groups of participants (Population)?

Search Strategy and Sources

The search for studies was conducted in December 2020. The databases used were Scopus, ERIC, and the main collection of the Web of Science (WoS). Only journal articles were searched; thus, book chapters, reports, and scientific conference proceedings were excluded.

Studies were identified through a systematic keyword search designed using the PICO strategy (**Table 1**).

The PICO strategy was used to design the criteria for inclusion and exclusion of the studies in a complete and unbiased way (Methley et al., 2014).

We excluded studies that (1) did not report on the implementation of SL methodology with older people; (2) were not conducted in higher educational contexts, and (3) in which no specific empirical studies were conducted on the benefits of SL methodology. Therefore, we included studies that (1) implemented the SL methodology with older people; (2) referred to higher educational contexts, and (3) reported on the benefits of implementing this type of methodology.

In the initial search, 260 studies were identified. All studies were exported to Mendeley and duplicate papers (n = 98) were removed. This resulted in a total of 162 bibliographic references to be reviewed.

Based on the 162 articles, our review of the titles and the abstracts proceeded according to the inclusion and exclusion criteria. We excluded from the results found in the three databases those from investigations whose titles (*n* = 30) and abstracts (*n* = 66) did not fulfill the inclusion criteria. The result of this last step yielded 66 articles to be analyzed.

Subsequently, the four researchers independently reviewed the full text of these 66 papers and eliminated those papers that did not fulfill the inclusion criteria (*n* = 38). The final result of the process generated 28 articles to review and read in detail.

The researchers unanimously agreed on the selection process of the studies, which may be the result of the use of simple, concrete selection criteria. In addition, the stepwise screening allowed the researchers to cooperate with each other in refining and clarifying these criteria repeatedly. **Figure 1** is a flow chart of the study selection process.

RESULTS

To define a frame of reference for the benefits of participating in an intergenerational SL experience in higher education, in this section, we provided the descriptors of the selected and analyzed studies.

Studies' Descriptors

The 28 articles we analyzed investigated the benefits that SL with seniors provides to the stakeholders: students, seniors, associations or agencies, and the community.

An examination of the profile of the students participating in these experiences demonstrated that their most frequently held degree is in health sciences (Young et al., 2002; Schoener and Hopkins, 2004; Hwang et al., 2013; Bullock, 2017; Bunting and Lax, 2019; Giné-Garriga et al., 2019; Heuer et al., 2019), followed by gerontology (Kim et al., 2003; Fruhauf et al., 2004; Anstee et al., 2008; Cook and Fruhauf, 2012; Oakes and Sheehan, 2014; Chen, 2018), and social work (Singleton, 2007; Faria et al., 2010; Andreoletti and Oward, 2016). Twelve papers provide data on the sex distribution of students, and in all of them, the majority of students are women (Kim et al., 2003; Fruhauf et al., 2004; Anstee et al., 2008; Faria et al., 2010; D'abundo et al., 2011; Cook and Fruhauf, 2012; Oakes and Sheehan, 2014; Andreoletti and Oward, 2016; Neal et al., 2017; Chen, 2018; Heuer et al., 2019; Morris et al., 2019). Thirteen papers provide data on the age of the participating students. In nine of those studies, the age range is between 18 and 24 years (Fruhauf et al., 2004; Anstee et al., 2008; Cook and Fruhauf, 2012; Hwang et al., 2013; Oakes and Sheehan, 2014; Andreoletti and Oward, 2016; Chen, 2018; Heuer et al., 2019; Morris et al., 2019). Hence, based on the available data, our conclusion is that the most frequent student profile, among the SL experiences analyzed that provide data on this issue, is that of a woman studying health sciences and aged between 18 and 24.

Seventeen papers provide data on elderly individuals. However, only six of the papers reviewed specify their samples'

TABLE 1 | Research questions and keywords formulated with PICO strategy.

Research questions	What benefits (Outcomes) do SL experiences (Intervention) that engage university students with older individuals provide to the groups of participants (Population)?		
PICO	**[1] Population**	**[2] Intervention**	**[3] Outcomes**
Keywords	"Higher education" OR universit* OR college*	"Service-Learning" OR "Service-Learning" AND age* OR aging OR elder* OR "the old" OR old* OR dotage* OR senior* OR "senior citizen*" OR geront* OR ancient OR senescence*	benefit* OR profit* OR aid* OR help* OR assist* OR boost* OR favor* OR utili*
Searches	**In Scopus:** TITLE [2] AND TITLE/ABS/KEY [1] AND TITLE/ABS/KEY [3] **In WoS:** TITLE [2] AND TOPIC [1] AND TOPIC [3] **In ERIC:** TITLE [2] AND ABSTRACT [1] AND ABSTRACT [3]		

FIGURE 1 | Flow chart of the study selection process.
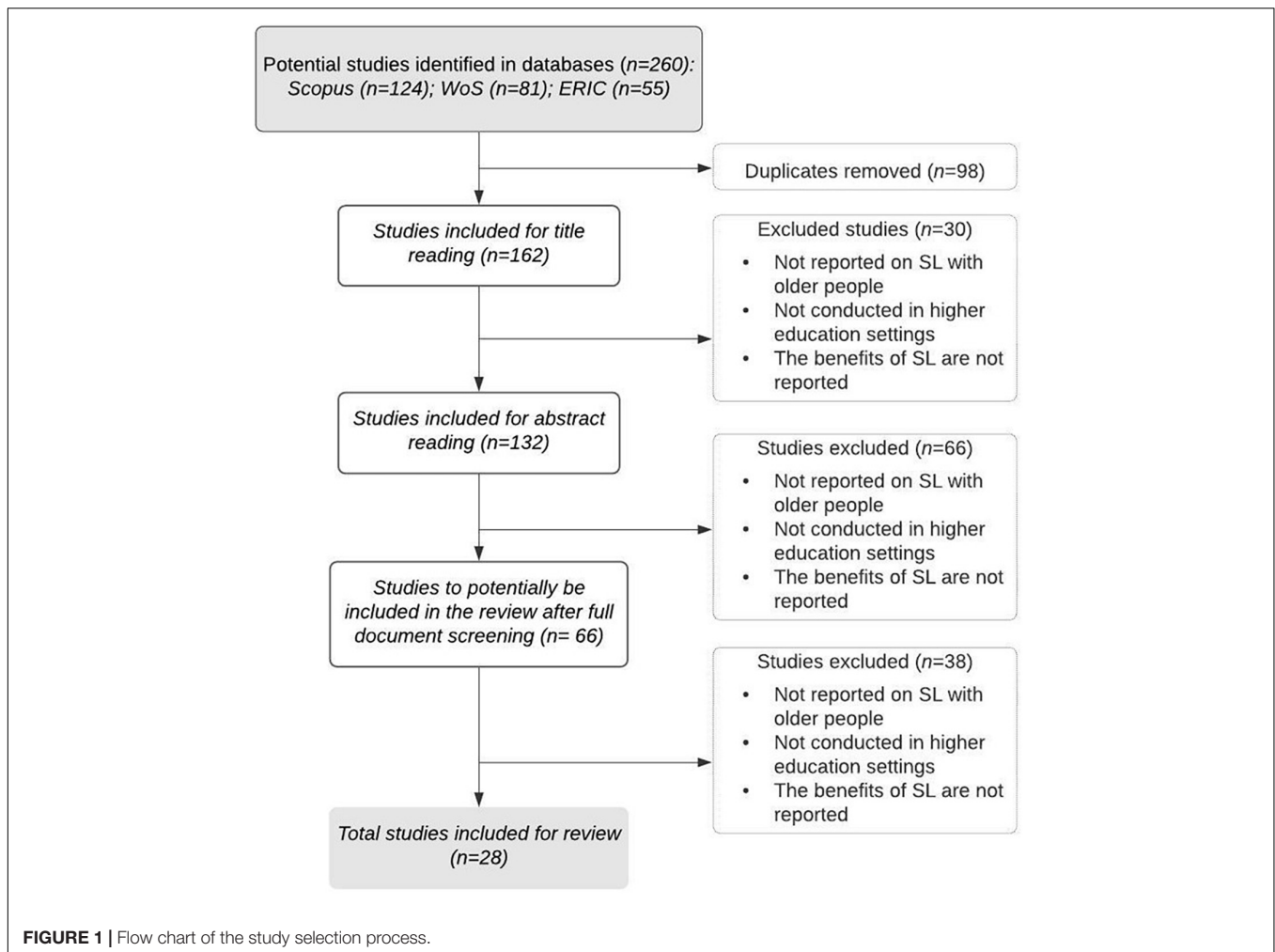
distribution by sex, and in five of those, women are the majority (Underwood and Dorfman, 2006; Natvig, 2007; Oakes and Sheehan, 2014; Andreoletti and Oward, 2016; Giné-Garriga et al., 2019). The health condition of the seniors participating in the SL experiences is mentioned in 12 of the papers: six cases investigate elderly individuals in good health (Natvig, 2007; Zucchero, 2010; Andreoletti and Oward, 2016; Chen, 2018; Giné-Garriga et al., 2019; Yeung et al., 2019) and six cases investigate seniors in various health states, including cases of cognitive deterioration (Fruhauf et al., 2004; Schoener and Hopkins, 2004; Wallace et al., 2014; Neal et al., 2017; Heuer et al., 2019; Morris et al., 2019). The income level of elderly individuals is indicated in seven of the cases: three are high-income (Natvig, 2007; Oakes and Sheehan, 2014; Yeung et al., 2019) and four are very low-income (Gelfand and Firman, 1981; Kim et al., 2003; Singleton, 2007; Neal et al., 2017).

Most of the articles are concentrated in three journals. Gerontology & Geriatrics Education published nine articles (Fruhauf et al., 2004; Faria et al., 2010; Zucchero, 2010; Oakes and Sheehan, 2014; Andreoletti and Oward, 2016; Neal et al., 2017; Bunting and Lax, 2019; Heuer et al., 2019; Howell et al., 2020). Educational Gerontology, four

(Gelfand and Firman, 1981; Anstee et al., 2008) and the Journal of Intergenerational Relationships, two (Underwood and Dorfman, 2006; Chen, 2018). Most papers are recently published: 11 of the 28 articles are published between 2016 and 2020 (Andreoletti and Oward, 2016; Martin et al., 2016; Bullock, 2017; Neal et al., 2017; Chen, 2018; Bunting and Lax, 2019; Giné-Garriga et al., 2019; Heuer et al., 2019; Morris et al., 2019; Yeung et al., 2019) five between 2011 and 2015 (D'abundo et al., 2011; Cook and Fruhauf, 2012; Hwang et al., 2013; Oakes and Sheehan, 2014; Wallace et al., 2014), six between 2006 and 2010 (Underwood and Dorfman, 2006; Natvig, 2007; Singleton, 2007; Anstee et al., 2008; Faria et al., 2010; Zucchero, 2010) four between 2001 and 2005 (Young et al., 2002; Kim et al., 2003; Fruhauf et al., 2004; Schoener and Hopkins, 2004) one in 1983 (Firman et al., 1983), and one in 1981 (Gelfand and Firman, 1981).

Supplementary Table 1 summarizes the objectives pursued in each article, the country of the experience, the content of the service, the research method and sample used, and the general results.

The predominant study method used to measure benefits is qualitative (13 papers). Ten cases use a mixed method, and three cases use a quantitative method. In addition to

those 13 papers, two papers present a theoretical model. In **Supplementary Table 1**, the sample sizes are generally small, even in the quantitative studies. Hwang's study is an outlier, with a sample of 126 students. The other two quantitative cases use a sample of 23 students (Cook and Fruhauf, 2012) and 16 students (Fruhauf et al., 2004).

The United States is the most frequently cited country (in 20 of the 28 papers), followed by China (4 cases), Australia (1 paper), Scotland and Spain (1 paper each), and Nicaragua (1 paper); additionally, in one paper, no country is specified. The contents of the cases analyzed focus, in most cases, on intergenerational communication, by examining the preparation of discussions, debates, or focus groups (Anstee et al., 2008; Faria et al., 2010; Andreoletti and Oward, 2016; Howell et al., 2020); conversations or life reviews (Underwood and Dorfman, 2006; Zucchero, 2010; Hwang et al., 2013; Oakes and Sheehan, 2014; Bunting and Lax, 2019) or creative and collaborative storytelling sessions (Heuer et al., 2019). A second large group of experiences is based on offering training, such as preventive training on medicines (Bullock, 2017) illnesses (Young et al., 2002) nutrition (Kim et al., 2003) reducing sedentary lifestyles (Martin et al., 2016; Chen, 2018; Giné-Garriga et al., 2019) language classes (Cook and Fruhauf, 2012), computers (Natvig, 2007), or recycling (D'abundo et al., 2011). Third, there are medical care services (Schoener and Hopkins, 2004) and dental hygiene (Wallace et al., 2014), various care services for elderly individuals with cognitive disabilities (Fruhauf et al., 2004), or various care services for individuals living in poverty (Gelfand and Firman, 1981; Neal et al., 2017). Finally, students also participate in dog-assisted therapy (Morris et al., 2019), develop an outreach plan and an evaluation of a program (Singleton, 2007) or collaborate as peers with seniors in transmitting knowledge and education to Ocean Park visitors (Yeung et al., 2019).

The results of these studies refer mainly to the intergenerational relationship between the two age groups and to the students' learning, but the benefits of other key actors, such as the community, are not investigated. The results of the experiences analyzed are positive for older and younger individuals and for their relationships with each other. The exception was that one of the experiences (Wallace et al., 2014) obtained a negative result for the students in the first stage of the experience, but this was later overcome.

Studies' Content Analysis

The results collected were classified into five categories: benefits for students, benefits for older people, benefits for the university, participating organizations and the community, difficulties in implementing the experiences, and recommendations for the SL experiences' success. Each group is developed as follows.

Benefits of Intergenerational Service-Learning for Students

Twenty-four of the 28 scientific studies examined the impact of participating in SL experiences with older people on the integral development of university students. They highlight the experience suitability for developing greater awareness and social commitment to aging (15 papers), more positive attitudes that

help promote coexistence (11 papers), and relevant qualities and skills (10) that contribute to improving students' academic (13), and professional performance (9) (**Figure 2**).

SL experiences promote intergenerational relationships and raise awareness of aging among learners (Kim et al., 2003; Faria et al., 2010; Oakes and Sheehan, 2014; Neal et al., 2017). As a result, learners develop a more realistic perspective of older people's lives and overcome negative stereotypes and preconceived fears (Gelfand and Firman, 1981; Firman et al., 1983; Young et al., 2002; Fruhauf et al., 2004; Natvig, 2007; Andreoletti and Oward, 2016; Chen, 2018; Bunting and Lax, 2019; Heuer et al., 2019; Yeung et al., 2019). Additionally, these experiences offer students the opportunity to increase their social commitment to older people in their community (D'abundo et al., 2011; Andreoletti and Oward, 2016; Chen, 2018), and to highlight their basic rights (Faria et al., 2010; Chen, 2018).

The experiences we reviewed were thought provoking and had a positive effect on students' attitudes. Thus, they promote the disposition to work in challenging environments and with racially and ethnically diverse individuals (Kim et al., 2003; Natvig, 2007). SL enables students to listen to the concerns and expectations of elderly individuals, helping students become aware of the need to care for and increase their concern for their families (Faria et al., 2010; Hwang et al., 2013; Chen, 2018) and rethink their lives and ambitions (Cook and Fruhauf, 2012; Hwang et al., 2013; Chen, 2018). Other research has highlighted students' admiration for certain qualities of older people such as strength, sportsmanship, creativity, optimism, life experience, wisdom, and a desire for lifelong learning (Firman et al., 1983; Faria et al., 2010; Martin et al., 2016; Neal et al., 2017; Chen, 2018; Heuer et al., 2019; Morris et al., 2019).

The reviewed papers highlight the opportunity to develop "soft skills" in SL; communication skills (Cook and Fruhauf, 2012; Howell et al., 2020) that make interacting with other generations easier (Firman et al., 1983; Chen, 2018), creating new friendships (Faria et al., 2010), and public speaking (Bunting and Lax, 2019).

FIGURE 2 | Frequency of coded segments in each category: students' benefits.
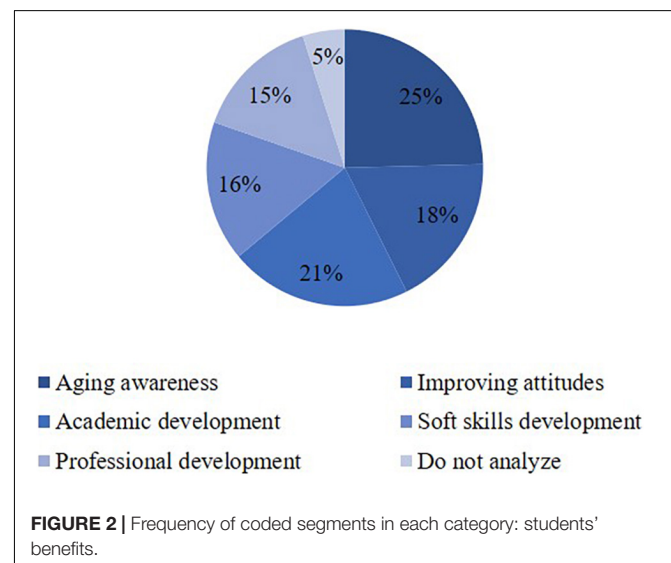
SL's suitability for developing social participation skills has also been highlighted (Firman et al., 1983), e.g., teamwork (Anstee et al., 2008; Cook and Fruhauf, 2012; Neal et al., 2017; Howell et al., 2020), conflict resolution (Firman et al., 1983; Faria et al., 2010), confidence (Oakes and Sheehan, 2014), patience (Natvig, 2007), and stress reduction (Faria et al., 2010).

In terms of academic development, while providing a service, this methodology allows students to share with others and apply the content they learn in class in real situations (Firman et al., 1983; Young et al., 2002; Schoener and Hopkins, 2004; D'abundo et al., 2011; Oakes and Sheehan, 2014; Andreoletti and Oward, 2016). In structured reflective work, students learn by doing, deepening, and broadening their knowledge (Young et al., 2002; Singleton, 2007; Anstee et al., 2008; Faria et al., 2010; Cook and Fruhauf, 2012; Neal et al., 2017). This results in more meaningful learning by helping to contextualize the theoretical content and understand what is needed in the community and what tools can address these needs (Kim et al., 2003). Thus, this implies that their involvement will increase in the following years, during their careers (Bullock, 2017).

Finally, some studies also indicate that through SL, certain professional values and ethical principles are learned that advance beyond an individualistic conception and take on a more social, human, and responsible perspective (Faria et al., 2010; Martin et al., 2016). Thus, SL stands out for students because it offers them intrinsically rewarding experiences that enhance professional preparation (Gelfand and Firman, 1981; Young et al., 2002; D'abundo et al., 2011), provides them with experiences (Firman et al., 1983; Schoener and Hopkins, 2004; Anstee et al., 2008), and helps them learn about programs and organizations involved in their professional field (Firman et al., 1983). Furthermore, studies have shown the importance of these projects in enabling students to identify new career paths (Neal et al., 2017).

Benefits of Intergenerational Service-Learning for Older People

Nineteen of the SL experiences reviewed analyze their benefits for older people. Specifically, the opportunities they offer to older individuals are: building intergenerational relationships (8 papers); increased well-being (9); learning new knowledge (5); and receiving personalized, quality care that helps to fulfill their needs and concerns (3) (**Figure 3**).

SL experiences offer opportunities to create environments that broaden and strengthen the social networks of older people (Young et al., 2002; Underwood and Dorfman, 2006; Anstee et al., 2008; Faria et al., 2010; Zucchero, 2010; Andreoletti and Oward, 2016; Yeung et al., 2019). As seniors interact with students, they can share skills, ideas, and knowledge in a caring way, as well as work and learn with community members (Gelfand and Firman, 1981; Underwood and Dorfman, 2006). These interpersonal relationships reduce feelings of social isolation and promote intergenerational understanding (Underwood and Dorfman, 2006). In this manner, older people also change their perspective on their lives and those of the young individuals they share the experience with (Zucchero, 2010; Andreoletti and Oward, 2016).

**FIGURE 3 |** Frequency of coded segments in each category: older people's benefits.
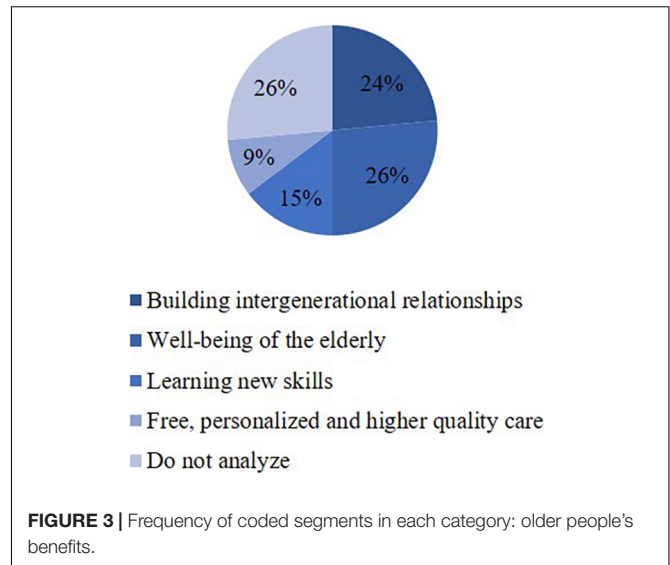
Service-learning experiences provide spaces for seniors to contribute to student learning. This phenomenon increases the well-being of seniors, namely, self-esteem (Underwood and Dorfman, 2006; Natvig, 2007; Anstee et al., 2008), affectivity (Chen, 2018; Morris et al., 2019), and generativity (Zucchero, 2010; Andreoletti and Oward, 2016). Other experiences aimed at enhancing the mobility and nutrition of elderly individuals are related to psychological-, health-, and life-quality benefits (Giné-Garriga et al., 2019; Morris et al., 2019; Howell et al., 2020). All these components are essential for successful aging and maintaining or developing personal identity.

Service-learning experiences help older people to learn new knowledge, reflect on it, and to be cognitively stimulated (Natvig, 2007; Bullock, 2017; Bunting and Lax, 2019). This benefit is achieved in conversations in which individuals share personal stories (Bunting and Lax, 2019; Yeung et al., 2019) or in specific courses on various areas of knowledge such as technology or health care (Young et al., 2002; Natvig, 2007). Finally, a possibility is that SL offers older individuals free, personalized, and higher-quality attention to their needs and concerns (Fruhauf et al., 2004; Schoener and Hopkins, 2004; Neal et al., 2017).

Benefits of Intergenerational Service-Learning for the University, Participating Organizations, and the Community

Fourteen studies focus on the benefits that SL experiences provide for residences, agencies, and other organizations (5 studies); to the university (2); and to the community (7).

In **Figure 4**, some research highlights the suitability of SL for building bridges between universities and organizations in their attempts to jointly respond to social challenges (Singleton, 2007). This cooperative work makes possible mutual benefits from scientific, economic, social, and cultural knowledge (Anstee et al., 2008) and progress in the fulfillment of the social objectives of each institution (Schoener and Hopkins, 2004; Natvig, 2007; Yeung et al., 2019).

FIGURE 4 | Frequency of coded segments in each category: universities,' organizations', and communities.'
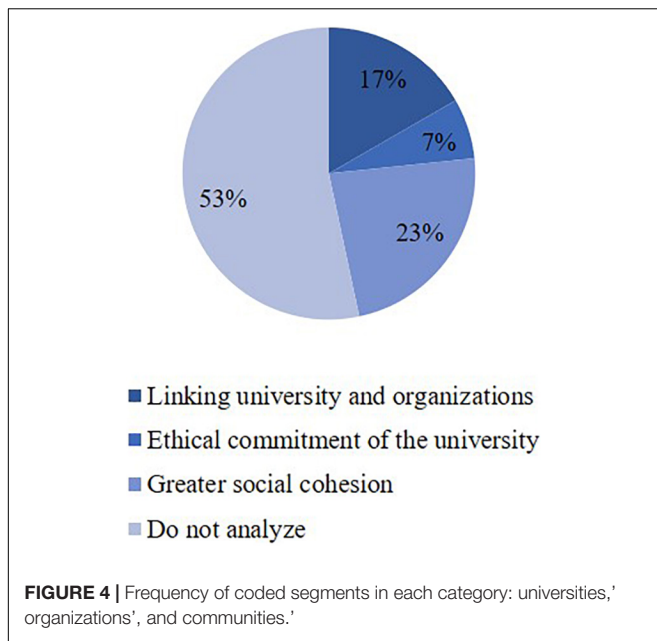
Other studies point out that the university can address its commitment to sustainable development and social transformation through SL in aging. On the one hand, the university would improve its educational programs that affect students' personal learning, and on the other hand, the institution responds to the social challenges of the moment (Firman et al., 1983). Additionally, higher education institutions, by providing community services for older individuals, fulfill their fundamental task of democratizing and socializing knowledge to address society's most urgent problems (Gelfand and Firman, 1981).

Finally, some studies argue that intergenerational SL has a positive impact on the community. These educational practices help reduce the intergenerational gap (Andreoletti and Oward, 2016) and improve social cohesion among community members (Neal et al., 2017). SL is also appropriate for building socially active citizenship (Kim et al., 2003; Anstee et al., 2008; Heuer et al., 2019) and awareness of the environment (D'abundo et al., 2011; Yeung et al., 2019).

Difficulties Faced in the Experiences

The papers also provide information on the difficulties observed during the SL experiences: three papers refer to practical obstacles, six papers to difficulties related to students, four to difficulties related to teachers, and one to difficulties related to seniors.

Practical problems are space and transport (Andreoletti and Oward, 2016), schedules outside the usual classroom time (Andreoletti and Oward, 2016; Howell et al., 2020), or a network connection in the case of online SL (Cook and Fruhauf, 2012). For students, their difficulty in managing adults (Young et al., 2002; Wallace et al., 2014; Chen, 2018), as well as their lack of training and motivation (Gelfand and Firman, 1981; Young et al., 2002; Underwood and Dorfman, 2006; Singleton, 2007),

are pointed out. Regarding teachers, their lack of interest due to insufficient recognition of their efforts is observed (Gelfand and Firman, 1981; Firman et al., 1983; Singleton, 2007; Neal et al., 2017). Finally, one paper refers to obstacles from the side of the elderly individuals, highlighting the possible emotional involvement of the elderly individual with the student during the experience, which could lead to distress at the end of the service (Gelfand and Firman, 1981).

Recommendations for a successful experience are described and grouped into five steps of the experience process as follows.

First, institutional support from the university is necessary, through the investment of the necessary funds to enable a wide range of SL placements to be offered (Gelfand and Firman, 1981), administrative support for the necessary formalities (Gelfand and Firman, 1981), and the recruitment of staff or the recognition of hours spent by teaching staff (Firman et al., 1983).

Second, the context in which the SL experience is to occur must be analyzed, which involves assessing the needs of the local population to ensure that the program fits them (Howell et al., 2020) and finding spaces that are easy to access and comfortable for all individuals, especially the elderly (Andreoletti and Oward, 2016; Bunting and Lax, 2019).

Third, the SL practice needs to be organized and designed. This aim involves setting service objectives that are mutually beneficial for the university and its community environment (Gelfand and Firman, 1981; Underwood and Dorfman, 2006; Chen, 2018), planning a service-aligned curriculum design with explicit tasks and assessment criteria (Singleton, 2007; Cook and Fruhauf, 2012; Chen, 2018), and including different stakeholders to strengthen links between the university and its local communities (Gelfand and Firman, 1981; Anstee et al., 2008; Chen, 2018; Howell et al., 2020).

Fourth, in implementing SL, students must be encouraged to participate (Young et al., 2002; Andreoletti and Oward, 2016) trained in the concept of SL and in the service to be addressed (Singleton, 2007; Oakes and Sheehan, 2014; Wallace et al., 2014; Neal et al., 2017; Chen, 2018; Howell et al., 2020), and actively involved; these requirements also apply to elderly individuals. This approach incorporates a "doing with" instead of a "doing for" attitude (Underwood and Dorfman, 2006; Faria et al., 2010; Morris et al., 2019; Yeung et al., 2019), reflection throughout the process (Fruhauf et al., 2004; Chen, 2018), and continuous coordination and communication between the stakeholders— community partnerships (Cook and Fruhauf, 2012; Chen, 2018; Bunting and Lax, 2019).

Finally, the SL experience should be evaluated throughout and at the end of the program (Bullock, 2017), to monitor, mentor, and guide the process (Gelfand and Firman, 1981; Singleton, 2007) and to conduct research to expand the knowledge of SL (Oakes and Sheehan, 2014).

DISCUSSION AND CONCLUSION

In this systematic review, our aim is to determine the benefits that SL with elders at university provides to the groups involved. On the one hand, SL contributes to the integral

development of the student, in terms of increased social awareness and commitment and the development of relevant attitudes and skills that contribute to improved academic and professional performance. On the other hand, SL also promotes intergenerational relationships that help increase the well-being of older individuals, in terms of health and psychology, by reducing their sense of isolation, improving their self-esteem and generativity, helping them learn new knowledge about themselves, and receiving personalized and quality care. Finally, SL fosters the ethical commitment of the university, residences, agencies, and other organizations to social sustainability. As a result, positive impacts on the community are observed.

The authors identify the difficulties observed during the experiences: those of a practical nature due to timetables, travel, and space; those of the students due to their insufficient preparation for interacting with elderly individuals or their extrinsic rather than intrinsic motivation; those of the teachers due to a cost–benefit imbalance; and those of elderly individuals due to the possible feeling of loss at the end of the service. Notably, the profile of the teaching staff is not analyzed, and their benefits are not highlighted in the reviewed papers; however, their difficulties are. Because the effort to organize an SL is significant, a certain institutional incoherence is identified between a notable acceptance of SL in the university and its lack of recognition of the teaching staff.

To ensure the success of the experience, the authors make recommendations related to the need for institutional support, prior analysis of the context in which the experience will occur, planning, coordination and accompaniment, and evaluation based on reflection.

The papers also suggest further lines of research: obtain information on the possible increase in the self-esteem of students and older adults (Anstee et al., 2008); consider, in addition to the effects of SL on students' learning, the effects of students' knowledge and training on their SL experiences (Fruhauf et al., 2004); analyze samples with diversity in gender, background, and culture of students and elderly individuals (Morris et al., 2019); study whether there are differences by age in the degree to which intergenerational SL programs benefit elders (Underwood and Dorfman, 2006); use qualitative focus-group methodology to inquire into the experience (Zucchero, 2010); and to analyze in depth the forms of intervention performed.

In all the cases, the authors point out that the results of the experiences analyzed are positive. However, some issues make generalization difficult. For example, that students' reflections were part of the grading (Morris et al., 2019) could prevent negative issues from being observed, that the contact time with the elders was too short (Oakes and Sheehan, 2014), or that the elders who signed up for the experience did so with a strong desire to cooperate (Yeung et al., 2019). The predominant profile of the experiences—women aged between 18 and 24 studying health sciences—could also have conditioned the results.

The validity of the analyses may also be affected by the absence of control groups (only used in the case of Fruhauf); by the difficulty of measuring results in the "community," or in the group of elderly individuals with cognitive disabilities;

and by there being too few long-term studies to would allow us to judge whether the SL experiences affected already practicing professionals. The research method used and the sample size are also two factors that condition the quality of the analyses. Except in the cases of Bullock (mixed, 219 elders), Heuer (mixed, 145 students), and Hwang (quantitative, 126 students), the remainder use small samples, as some of the authors admit (Kim et al., 2003; Oakes and Sheehan, 2014; Bunting and Lax, 2019; Howell et al., 2020). Cases are also reported in which it was difficult to collect data from elders (Bullock), especially when surveys were administered online (Yeung et al., 2019). Moreover, no data were collected to provide profiles of the elderly individuals (Heuer et al., 2019), or, this time related to the evaluation of the students, questionnaires were completed six months later (Yeung et al., 2019). No studies have collected evaluations from the families of the elderly participants nor the care staff. In addition, the fact that the experiences were short (Hwang et al., 2013) or that the students did not report all their experiences of interactions with the elders because they were asked to indicate only the outstanding experiences (Morris et al., 2019) does not help to extrapolate the results either.

Additionally, we observed that the studies focus on participants' recent perceptions of the experiences, which, as our paper has shown, are positive. However, no studies investigate over time how these learners and the community they served were affected, namely, transformed, to a greater or lesser extent by the SL experience. Notably, only two papers explicitly provide as an outcome an increased sense of social responsibility by students and in motivation toward civic engagement (Kim et al., 2003; D'abundo et al., 2011). Also remarkable is that on only one occasion do students work with elders and not for elders (Yeung et al., 2019). This finding reflects the passive rather than active conception of elderly individuals by students and teachers. Roodin's systematic review in 2013 presented the same result. Finally, it is striking that three of the SL experiences analyzed investigate high-income elders (Natvig, 2007; Oakes and Sheehan, 2014; Yeung et al., 2019). In these cases, there is likely an imbalance in the objectives pursued by the SL experiences, which are more oriented toward improving students' learning than toward the service provided to the community with the joint aim of transforming social reality.

Finally, we highlight the absence of SL experiences in which students and/or associations or agencies representing the community play a leading role in the design and development of the experience.

Our review has limitations: only three databases (Scopus, ERIC, and WoS) were used for the selection of papers; only articles were considered and no other types of publications such as conference papers, doctoral theses, or books; only papers written in English were considered; and the search date ended in December 31, 2020. These limitations suggest that future research should expand the search and review of related studies in other languages and other high-impact databases, both national and international.

Because the university is an institution with a significant power to influence society, its responsibility cannot only be to

train responsible citizens; contribute to economic, social, and cultural development; or generate and transmit new knowledge. The university must integrate all these aspects toward social transformation, focusing on social and economic vulnerability (De la Cruz and Sasia, 2008). In this sense, according to the results obtained in this review, SL is a tool that makes it possible to orientate students' learning toward this horizon of social justice, facilitating the inclusion of elderly individuals and social cohesion between the two age groups.

These results are consistent with those in other systematic reviews, for example, that of Ruiz-Montero et al. (2019), who also found benefits for students and seniors. According to Tapia (2015), SL makes it possible for higher education to cease being considered as a formality for finding employment or an "ivory tower" in which research does not connect with the social sphere. SL makes it possible for the university to be a place of science that links knowledge with the needs and aspirations of the community and where individuals learn to be professionals oriented toward the common good and not merely self-serving interests. In this sense, SL would advance beyond an exchange of mutual benefits between the educational community and the social community. What stands out is SL's potential to transform individuals, their beliefs, attitudes, and desires, and through this, their contribution to a more harmonious society. It is the combination of knowledge, experience, and reflection what enables the desired transformation. The interaction between theoretical and practical knowledge and living-feeling with the community is precisely what makes this methodology so special.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/**Supplementary Material**, further inquiries can be directed to the corresponding author/s.

AUTHOR CONTRIBUTIONS

MA and AD-I: conceptualization, methodology, and investigation. AD-I, MA, AE, and MG-F: formal analysis. AE and MG-F: resources, visualization and funding acquisition. MA: project administration. All authors writing –original draft, writing-review and editing, and read and agreed on the published version of the manuscript.

SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/feduc.2022.841482/full#supplementary-material

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