

Article

Toward an Integrated Approach to Environmental and Prosocial Education

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Abstract: Environmental education programs neglect the aspect of prosocial behavior as a correlate of pro-environmental behavior. This article examines the possible benefits of increasing the emphasis on prosocial behavior as a way to reinforce environmental education. In our study, prosocial behavior was positively related to pro-environmental behavior ($r = 0.34$, $p < 0.001$), and even a combined scale consisting of prosocial and pro-environmental behavior items showed an acceptable reliability (separation reliability = 0.82, at the level of the separated scales), which implies that prosocial and pro-environmental behaviors are a similar class of behavior. We can assume that the two underlying propensities (prosocial behavior and pro-environmentalism) are probably only two facets of an overarching common propensity that supports both kinds of behavior. Therefore, promoting one facet will, through its relationship with the other facet, also foster the respective other facet. Even more so, it might be most effective to relate to both propensities equally.

Keywords: ecological behavior; pro-environmental behavior; environmentalism; altruism; prosocial; prosocial behavior; competition; cooperation

1. Purpose

With the increase in the global population and the expansion of technology, human beings are facing several environmental challenges on a global scale: climate change, ecosystem destruction, loss of biodiversity, soil erosion, decreased natural food resources, and energy and water scarcity, among others [1]. When examining the responses to this troubling reality, as educators, we are troubled, because hardly any response is based on educating people, even though environmental education seems to be necessary for sustainable development [2,3]. Most of the serious endeavors that aim to tackle environmental problems today are primarily technological. Additionally, global summits seek to prevent further environmental degradation by focusing on regulations and sanctions to ensure that pollution levels will not exceed certain norms.

In recent years, several authors have proposed seeking solutions to the environmental crisis not only in the technical realm, but also in the social/educational one, claiming that “environmental problems” are actually problems of human behavior [4]. However, the role of education in this process is still underestimated. In our opinion, the potential for education to serve as a reaction to the environmental crisis is being neglected and not countenanced sufficiently. We believe that today there is a pressing need to respond to the indifference surrounding the implications of irresponsible and sometimes egotistical behavior toward the environment, in its broadest context (nature and society), with educational means.

Environmental education has been around for five decades, but its focus is on human behavior and its impact on nature. In this paper, we propose that environmental education should broaden its focus to emphasize human relations. We call this addition “prosocial education” [5], education that promotes openness, compassion, care, and responsibility for the other, and argue that it can add an important perspective to environmental education. Moreover, it can become a pathway to cultivate pro-environmentalism as well as what some authors call “sustainable behavior”, which includes actions aimed at protecting both the natural and the human (social) environments [6,7].

Numerous studies have indicated that there is a troubling discrepancy between the possession of environmental knowledge and environmental awareness and the actual realization of pro-environmental behavior [8,9]. In an attempt to explain this discrepancy, this article will not deal with the first two correlates of pro-environmental behavior, i.e., increasing the student’s environmental knowledge and promoting the student’s sense of connectedness to nature. Instead, this article will examine the possible benefits of increasing the emphasis on prosocial behavior as a way to reinforce environmental education. Although similar attempts have already been made [7], we will emphasize some additional aspects.

2. Prosocial Behavior is Not Discussed Enough in Environmental Education

Researchers in the social sciences and in education have sought for decades to understand the factors that determine pro-environmental behavior [8,10,11]. Among multiple factors, pro-environmental behavior is related to environmental knowledge [12–14], connectedness to nature [15,16], and prosocial behavior [6,7,17]. It is important to note, however, that environmental education programs commonly focus on increasing students’ environmental knowledge [18,19] and promoting their sense of connectedness to nature [20,21]. Despite the existence of altruism and prosocial behavior models for the prediction of pro-environmental behavior [8], environmental education programs do not sufficiently discuss the aspect of prosocial behavior—which is defined as voluntary behavior intended to benefit others or promote harmonious relationships with others [22,23] as a correlate of pro-environmental behavior. Indeed, a search for the terms, “prosocial behavior”, “prosocial”, “altruism”, or “altruistic” in the leading journals dedicated to environmental education (Environmental Education Research, Journal of Environmental Education, Australian Journal of Environmental Education, and International Research in Geographical and Environmental Education) produced very few results [24,25].

One could argue that the relationship between prosocial behavior and pro-environmental behavior is considered in educational programs for sustainable development (ESD). Indeed, while the main emphasis of environmental education is limited to the protection and/or preservation of the environment [26], EDS, or sustainability education, is usually defined as a tool for achieving sustainable development. It is thus interested in all three dimensions of sustainable development: economic, social, and environmental [27]. Although the focus of some ESD programs is equivalent to environmental education programs—education about, in, and for the environment—other ESD programs focus on three interdependent dimensions—economic, social, and environmental [28]—in accordance with the concept of sustainable development [29]. Nevertheless, the social dimension in most ESD programs is limited to the connection between the environment and society, [28]. Thus, ESD programs neglect a sufficient examination of the relationship between prosocial behavior and pro-environmental behavior, similar to environmental education programs.

In order to illuminate the relationship between prosocial and pro-environmental behavior, this study aims to demonstrate if and how these two classes of behavior are related. Human behavior is generally goal-oriented and driven by human motives. Thus, each motive will activate all behaviors that are useful to fulfill this motive. With respect to pro-environmental behavior, the General Ecological Behavior scale (GEB) forms a class of pro-environmental behavior, and thus, measures the individual propensity to act pro-environmentally [17,30]. Similarly, also other behaviors that form a class, such

as the altruism scale [31], can also be seen as an expression of a related propensity, in this case a prosocial propensity.

Thus, if we can empirically show that prosocial and pro-environmental behaviors are related and even form one consistent class of behavior, we can assume that the two underlying propensities are also related and are probably only two facets of an overarching common propensity that supports both kinds of behavior. Therefore, promoting one facet (i.e., the propensity for prosocial behavior or for pro-environmentalism) will, through their relatedness, also foster the other respective facet. Even more so, promoting both related propensities equally might be the most effective strategy.

3. Method and the Study Population

Data was collected using surveys consisting of the following two scales. The first scale assessed pro-environmental propensity based on 53 self-reported items of pro-environmental behavior [30]. The scale has been validated extensively [32–34]; the accuracy of self-reports of this scale was demonstrated by Kaiser et al. [35]. This scale is based on the Campbell paradigm, which describes individual behavior as a result of an individual's pro-environmental propensity and the costs the individual has to incur in order to show this behavior [36]. Within this paradigm, the relation between attitude, which determines a person's propensity, and behavior is axiomatic [37]. Thus, a propensity is a latent disposition which manifests itself not only in behavior but also in cognitions and emotions toward the environment [38]. The costs of a behavior are reflected in the difficulty of the respective behavioral items. For instance, donating to an environmental organization is much more demanding and costly than recycling, thus, only very few people donate to environmental organizations, but many recycle. Based on these behavioral costs, a person's pro-environmental propensity is inferred: A person who shows a behavior that is costly must have a higher pro-environmental propensity than a person who does not exhibit such demanding behavior. A small number of items on this scale were rephrased in order to be better understood in Chile. For instance, the item "I buy convenience foods" was rephrased to "I buy cooked and frozen foods, ready to heat". Likewise, three new items were generated: I participate by working in the university's organic vegetable garden; I buy organic products; I produce my own organic products (fruits and/or vegetables and/or honey, etc.).

The second scale of Rushton et al. [31], of 20 items, involved self-reported altruism, which we will refer to as "prosocial propensity" or "prosocial behavior" in this article. The validity of the scale was demonstrated by its authors. Instead of common introspective items or verbal statements on views and values, items on this scale demanded self-reports of prosocial behavior [39] and were thus technically quite similar to the items in the pro-environmental behavior scale. A small number of items on this scale were modified to better suit Chilean culture and geography. For instance, the item "I have helped push a stranger's car out of the snow" was rephrased to "I have helped push a stranger's broken car".

The surveys were given to students, undergraduates and graduates, and ex-alumni of the School of Agriculture, Pontifical Catholic University of Valparaíso, Chile. In total, 310 people answered the survey. The respondents' ages ranged from 17 to 41 years, with 22 ± 3.5 as the mean age. The gender distribution was about equal (41% females, 59% males). The respondents lived in urban areas (76%) and rural areas (24%). Their political preferences were distributed unequally (61% left, 39% right). The total family income per month varied widely: <400 US\$ (4%), 400–800 US\$ (22%), 800–1,200 US\$ (23%), 1,200–2,000 US\$ (21%), 2,000–6,000 US\$ (23%), and >6,000 US\$ (7%).

4. Data Analysis

A Rasch-type model was used to calculate each person's score for pro-environmental behavior [40,41]. Scores, fit measures, and the reliability of the two scales were calculated using Quest [41]. The person separation reliability for this scale was 0.76, which is similar to the 0.79 reliability of the original scale of Kaiser & Wilson [30]. The model predictions for the behavioral items fit the data well (weighted fit: $0.88 \leq \text{mean square, MS} \leq 1.21$), and there was one poorly fitting item

(MS = 1.32). Values of MS between 0.8 and 1.2 are good, while MS values between 0.7 and 1.3 are still acceptable [42]. Thus, all of the items showed a good fit, except for one item.

Classical data analysis was used for prosocial behavior, since the scale was designed for such analysis. The score for this scale corresponds to the mean score of all items, including “non-applicable” items (i.e., items that received no response). The Cronbach alpha for this scale was 0.85, which is similar to the internal consistency of 0.89 of the original scale of Rushton et al. [31].

Pearson correlations were calculated. Subsequently, the prosocial and pro-environmental behavior scales were merged into one combined scale of 73 items, which Rasch analyzed as one scale. The person separation reliability for this combined scale was 0.82.

Arguably, merging a scale with fewer items (i.e., the prosocial behavior scale) with a longer scale (i.e., pro-environmental scale) outweighs the content of the latter. However, this is actually a methodological advantage of our analysis. Merging a significant lower number of items of one scale with a scale containing substantially more items makes it easy to interpret how well the new items fitted to the behavioral class of the longer scale. If we would find that some or any of the prosocial behavior items (scale with fewer items) would not fit the combined overall scale, we could assume that the two scales measure different classes of behavior. However, in this study, all of the items of the prosocial behavior scale fit well. Thus, we can be certain that the items of the prosocial behavior scale overlap significantly with the pro-environmental behavior scale. Likewise, we can argue that any of the items of the prosocial behavior scale fit in as well with the pro-environmental behavior scale as any of its original items ($MS \leq 1.21$), except for one item of the pro-environmental scale that was within the acceptable range ($MS = 1.29$).

5. Results

Pearson’s correlations revealed that prosocial behavior was positively related to pro-environmental behavior ($r = 0.34$, $p < 0.001$), which is consistent with the findings of other authors, showing similar correlation coefficients ($r = 0.49$, $p < 0.05$) [6]. The combined scale of prosocial and pro-environmental behavior was reliable (separation reliability = 0.82), which implies that the combined scale measures a broader range of behavior. It is important to note that the results of the present study are consistent with the findings of Vllasaliu [43] for a sample of German students, using the same scales of Kaiser & Wilson [30] and Rushton et al. [31]. In this German sample, Pearson’s correlations revealed that prosocial behavior was positively related to pro-environmental behavior, showing a similar correlation coefficient as in the present study ($r = 0.33$, $p < 0.01$). Likewise, the reliability of the combined scale of prosocial and pro-environmental behavior in the German sample was good (separation reliability = 0.82). The findings of the present study seem to be stable in different cultures and economies, since Germany and Chile represent countries with different levels of economic development and different cultures. These results demonstrate that both prosocial and pro-environmental behaviors are facets of sustainable behavior, using the terminology of Juárez-Nájera et al. [44] and Tapia-Fonllem et al. [7], since protecting both natural and human (social) environments are driven by the same overarching propensity.

Table 1 shows all items of the combined scales sorted according to their difficulty. Specifically, 24 pro-environmental behavior items had positive delta values and can thus be considered as relatively hard (e.g., “I contribute financially to environmental organizations”; “I have purchased solar panels to produce energy”). On the other hand, 29 pro-environmental behavior items had negative delta values and thus can be considered as relatively easy (e.g., “I buy seasonal fruits and vegetables”; “I wait until I have a full load before doing my laundry”) (Table 1). In contrast, 15 prosocial behavior items had positive delta values and can thus be considered as relatively hard (e.g., “I have donated blood”; “I have given a stranger a lift in my car”), while only 5 prosocial behavior items had negative delta values and can thus be considered as relatively easy (e.g., “I have given directions to a stranger”; “I have offered my seat on a bus or train to a stranger who was standing”) (Table 1). Thus, the studied prosocial behavior can be considered harder to perform than the pro-environmental behavior.

Table 1. The combined scale of prosocial and pro-environmental behavior. Prosocial behavior is marked in **bold**.

| | Delta | MS Infit |
|--|-------|----------|
| I contribute financially to environmental organizations. | 3.60 | 0.98 |
| I participate in work in the organic vegetable garden of our university. | 2.42 | 0.95 |
| I have purchased solar panels to produce energy. | 2.34 | 1.04 |
| I am a member of an environmental organization. | 2.30 | 0.96 |
| I boycott companies with an unecological background. | 2.25 | 0.89 |
| I have donated blood. | 2.19 | 0.98 |
| At red traffic lights, I keep the engine running. | 1.81 | 1.06 |
| I buy organic products. | 1.75 | 0.93 |
| I have given a stranger a lift in my car. | 1.62 | 0.90 |
| I use renewable energy sources. | 1.50 | 1.00 |
| I have made change for a stranger. | 1.41 | 0.92 |
| I have, before being asked, voluntarily looked after a neighbor's pets or children without being paid for it. | 1.33 | 0.93 |
| I collect and recycle used paper. | 1.31 | 0.95 |
| If I am offered a plastic bag in a store, I take it. | 1.27 | 0.99 |
| I drive on freeways at speeds under 100 km/h. | 1.15 | 1.10 |
| I have helped carry a stranger's belongings (books, parcels, etc.) | 1.14 | 0.95 |
| I have done volunteer work for a charity. | 1.11 | 1.00 |
| I have helped push a stranger's broken car. | 1.10 | 1.00 |
| In the winter, I leave the windows open for long periods of time to let in fresh air. | 1.08 | 1.16 |
| I keep the engine running while waiting in front of a railroad crossing or in a traffic jam. | 1.04 | 1.03 |
| I requested an estimate on having solar power installed. | 0.99 | 1.03 |
| I have given money to a stranger who needed it or asked me for it. | 0.94 | 0.91 |
| I produce my own proper organic products (fruits and/or vegetables and/or honey, etc.). | 0.88 | 1.04 |
| In the shower, I get under the water, then I turn it off while I use the soap, and then I turn the water back on to rinse, without leave the water running the whole time. | 0.79 | 1.03 |
| I buy bleached toilet paper. | 0.77 | 1.29 |
| I have offered to help a handicapped or elderly stranger across a street. | 0.65 | 0.89 |
| I have let a neighbor whom I didn't know too well, borrow an item of some value from me (e.g., a dish, tools, etc.). | 0.65 | 0.88 |
| I have helped an acquaintance to move households. | 0.57 | 0.84 |
| I have pointed out a clerk's error (in a bank, at the supermarket) in under charging me for an item. | 0.51 | 1.03 |
| I bring empty glass bottles to a recycling bin. | 0.48 | 0.98 |
| I drive my car in or into the city. | 0.29 | 1.08 |
| I have given money to a charity. | 0.27 | 0.95 |
| I have delayed an elevator and held the door open for a stranger. | 0.26 | 0.92 |
| I buy products in refillable packages. | 0.22 | 0.93 |
| I refrain from owning a car. | 0.20 | 1.13 |
| I have donated goods or clothes to a charity. | 0.17 | 0.91 |
| I read about environmental issues. | 0.08 | 0.94 |
| I talk with friends about problems related to the environment. | 0.06 | 0.9 |
| I have pointed out unecological behavior to someone. | 0.05 | 0.94 |
| I buy prepared vegetables (washed, cut, and packed without cooking, ready to eat or cook). | −0.18 | 1.09 |
| I have allowed someone to go ahead of me (in a lineup, driving a car, etc.). | −0.19 | 0.96 |
| I use a chemical air freshener in my bathroom. | −0.24 | 0.95 |
| I kill insects with a chemical insecticide. | −0.4 | 0.95 |
| I buy beverages in cans. | −0.43 | 1.07 |
| I buy cooked and frozen foods, ready to heat. | −0.44 | 1.04 |
| I own a fuel-efficient automobile (more than 14.5 km/L). | −0.46 | 1.12 |
| I wash dirty clothes without prewashing. | −0.52 | 1.01 |
| I have bought 'charity' Teletón products. | −0.56 | 1.15 |
| I have given directions to a stranger. | −0.71 | 0.86 |
| I have helped a classmate whom I did not know that well with a homework assignment when my knowledge was greater than his or hers. | −0.72 | 0.94 |
| In winter, I turn down the heat when I leave my apartment for more than 4 hours. | −0.75 | 1.21 |
| I use fabric softener with my laundry. | −0.83 | 1.03 |
| I buy soft drinks and beer in returnable bottles. | −0.85 | 1.01 |

Table 1. Cont.

| | Delta | MS Infit |
|---|-------|----------|
| For longer journeys (more than 500 km), I take an airplane. | −0.88 | 1.14 |
| I put dead batteries in the garbage. | −0.91 | 0.93 |
| I am a member of a carpool. | −0.98 | 1.11 |
| In hotels, I have the towels changed daily. | −1.05 | 0.93 |
| I use a clothes dryer. | −1.06 | 0.95 |
| I drive to where I want to start my hikes. | −1.15 | 1.1 |
| I have offered my seat on a bus or train to a stranger who was standing. | −1.28 | 1.02 |
| I ride a bicycle or take public transportation to work or school. | −1.33 | 1.15 |
| I bathe in the tub, instead of taking shower. | −1.41 | 1.07 |
| I have looked into the pros and cons having a private source of solar power. | −1.43 | 1.03 |
| In nearby areas (around 30 km), I use public transportation or ride a bike. | −1.54 | 1.08 |
| I drive in such a way as to keep my fuel consumption as low as possible. | −1.71 | 0.99 |
| I own energy-efficient household devices. | −1.76 | 1.01 |
| I use an oven cleaning spray to clean my oven. | −2.01 | 1.06 |
| I reuse my shopping bags. | −2.22 | 0.98 |
| I buy seasonal fruits and vegetables. | −2.26 | 0.97 |
| I wait until I have a full load before doing my laundry. | −2.36 | 0.94 |
| In the winter, I keep the heat on so that I do not have to wear a sweater. | −2.67 | 0.92 |
| After meals, I dispose of leftovers in the toilet. | −3.48 | 1.01 |
| After a picnic, I leave the place as clean as it was originally. | −3.77 | 1.00 |

6. Significance of the Study

The analysis of the present study shows that prosocial and pro-environmental behaviors are actually more connected than one might initially think. The results of the present study are consistent with the existing value-based models of environmental concern [45,46]. Specifically, egoistic values predispose people to protect aspects of the environment that affect them personally, or to oppose protection of the environment if the personal costs are perceived as high. On the other hand, altruistic values make people want to engage in pro-environmental behavior on the basis of costs or benefits for a human group, such as community, ethnic group, nation-state, or humanity. Finally, biospheric values are prominent in the thinking of many ecologists and environmentalists who judge phenomena on the basis of costs or benefits to ecosystems or the biosphere. In their study, Stern & Dietz [45] demonstrated that the biospheric value orientation did not differentiate from the altruistic value orientation in a general population sample and can be combined into one factor of biospheric–altruistic values. In other words, in the consciousness of the general public, there was no clear distinction between valuing nature by itself and valuing nature because of the benefits it provides humans. Thus, building on the work of Stern & Dietz [45] considering values, our assumptions on the relation between prosocial and pro-environmental behaviors are consistent with a broader theory. We assume that values that give substance to a prosocial behavior can be seen as very similar to values related to a pro-environmental behavior. The difference between these two categories is only the “recipient”: other human beings, in one case, or all the living beings and non-living nature, in the other.

Probably, the most elaborate psychological explanation for the empirical relatedness of prosocial and pro-environmental behaviors stems from the individual construction of the self. Schultz et al. [47] argued that it is not the values per se that lead to environmental concerns. These authors suggested that people who include aspects of nature within their cognitive representation of self tend to be concerned with more than just themselves. Self-enhancement reflects a narrow self-construct, one that is less inclusive of other people or of other aspects of the living world. Finally, Schultz et al. [47] argued that models and theories of environmental concern and behavior must be tested empirically in different cultural environments. Thus, the present study provides an important contribution from Chilean culture.

Building on the work of Schultz et al. [47], we argue that there is a need to cultivate the development of an internal regulating mechanism within a person, a care and sense of responsibility

toward others, which will prevent irresponsible behavior. One possible way to promote such a relationship is prosocial education, which aims to increase our sense of responsibility towards others [22]. According to Cohen [48], prosocial education is an idea that encompasses a broad range of educational endeavors focused on cultivating a core set of social, emotional, ethical, civic and intellectual skills, knowledge, and dispositions that will allow K-12 students to work, live, and participate in a democratic, reciprocal, just, and sustainable society. The main tenet that is promoted by the proponents of prosocial education is that social climate and culture in public education have a decisive role in shaping students' minds and approaches to life. Because of the fact that often the instrumental race for academic achievements sets the tone in public educational systems (and later results in an individualistic public climate), scholars of prosocial education claim that the road toward social change runs through a more socially oriented education. On the basis of a growing body of empirical evidence directly and indirectly connecting prosocial behavior and the cultivation of a positive social climate in schools [49,50], we believe that there is room to consider a positive correlation between prosocial education and the cultivation of prosocial behavior, and, following our research, also pro-environmental behavior. Thus, in what follows, we would like to make some reflections from an educational perspective.

7. Reflections from an Educational Perspective

This study is an important step towards generating scientific proof for the claim that educating people to be concerned for others to the same extent as they are concerned for themselves not only is an important step toward creating a prosocial society, but also contributes to people's environmental awareness. Building on the work of Schonert-Reichl and O'Brien [51], who reviewed several social-emotional learning programs and empirically showed their effectiveness, demonstrating that it is possible to promote prosocial behavior by creating a prosocial classroom environment that emphasizes caring for others, mutual respect and cooperation, our findings may indeed imply that the traditional emphasis of environmental education on protecting and/or preserving the environment can be reinforced with cooperative and collaborative educational practices that aim at cultivating a better ecological environment among students. We suggest that prosocial education can reinforce environmental socialization [24] which links informal experiences with nature and like-minded people to value the outdoors, nature, and environmental topics.

By starting the day in discussion circles where students discuss their goals and expectations, and by generating a warm atmosphere among students, a spirit of caring is created in the classroom. Since there is a correlation between prosocial behavior and pro-environmentalism, we can assume that the generation of such an atmosphere in class might also result in greater concern for the environment among students. Indeed, a study by Cuadrado et al. [25] demonstrated that cooperative contexts, as opposed to competitive contexts, appear to stimulate pro-environmental behavior in a population with a low level of environmental knowledge. Thus, to promote greater pro-environmental behavior in students, there is a need for a greater emphasis on prosocial education.

Building on this assumption, we would like to make an even bigger claim in this article. We believe that people's disregard for nature is only a symptom of a much broader phenomenon—their disregard for anything that doesn't bring them direct benefit—and this applies to the broad concept of the environment, i.e., both to natural resources and to human society. Therefore, one of the main educational challenges today, from the perspective of the authors, is developing the capacity to care for the other, to free some space within oneself where concern for the desires and needs of the other could enter [52]. The development of such tendencies is the goal of prosocial education, which educates people with the aim of building friendships, cooperation, sharing with acquaintances and strangers, and developing a sense of self as a moral person [5].

In our research, people reported that prosocial behavior was relatively hard to perform compared to pro-environmental behavior. We assume that it is because most of the items in the scale of Rushton et al. [31] refer to one's propensity toward strangers. It can be further assumed that prosocial

behavior would be easier to perform in cases of affinity and kinship. Prosocial education could thus help to gradually bridge the gap of “otherness”, with the aim of helping students overcome social alienation. Students would be taught how to emerge from themselves toward others by learning to be concerned for others as they are concerned for themselves [53,54].

Since, as we have shown, on the individual level, prosocial and pro-environmental behaviors are facets of the same behavior, prosocial and environmental educational approaches can reinforce each other by cultivating a greater commitment to everything outside the person. Thus, we propose that the traditional emphasis of environmental education on protecting and/or preserving the environment could be reinforced with prosocial education. Such a combined educational approach would also promote sustainable behavior, which was proven to consist of both prosocial and pro-environmental behavior [7], contributing to multi- and interdisciplinary efforts to create an ecologically and socially sustainable society.

Developing a sense of community, belonging, and obligation toward others will be manifest in the way a person manages their life. Prosocial education should thus become an important ingredient in education for sustainable development. Cultivating a more socially oriented propensity to the world in students can result in sustainable behavior in local and global social networks [55,56]. Such an approach is aligned with the proposals of UNESCO [57] that promote the Decade of Education for Sustainable Development (DESD, www.desd.org), stressing that education must provide specific skills, such as learning to live together (en.unesco.org/themes/learning-live-together).

8. Future Research Needs

The sample used in the present study is small and represents a very specific group. Future studies should consider a larger sample of Chile’s overall population in order to strengthen our findings. However, we believe that the present article is an initial study in an area—prosocial education—that will gain much more emphasis heading into the future. There is already research about the way social and emotional learning can create a prosocial and emotional atmosphere in the classroom. Still, there is a need to conduct extensive research before and after tests as to whether using prosocial methods in environmental education actually contributes to the improvement of students’ pro-environmental behavior. Since prosocial education is an umbrella concept, conceptually overlapping with other terms, such as soft-skills development, social-emotional learning, collaborative or cooperative learning, whole child education, service learning, civic education, character education, and moral education, as well as multicultural education, global education, and cosmopolitan education [22], there is a need to examine various methods in order to understand which work best. One promising approach might be to incorporate prosocial aspects in nature-based environmental education, which already addresses environmental knowledge and connectedness to nature, both of which are correlates of pro-environmental behavior [16]. If this proves to be successful, another interesting aspect will be to determine the psychological mechanism that actually makes people develop pro-environmental relations as a result of environmental education reinforced by prosocial education.

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