Adolescent volunteering in Poland – contextual and individual determinants

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Abstract
Introduction and Objective. Studies on volunteering concern mainly the population aged over 16, and the results refer mainly to Western Europe. Adolescent volunteering in Eastern European countries is relatively understudied. The aim of the study was to investigate and discuss the scale of this phenomenon in Poland, the predictors of being a volunteer, and factors which explain how much time adolescents spend volunteering.

Materials and method. The study was conducted on a representative group of 3,545 respondents aged 14–15. 26.6% of the surveyed adolescents were involved in volunteering in the 12 months preceding the study.

Results. The probability of being a volunteer is explained by contextual factors (higher regional income per capita and higher unemployment rate decrease this probability, whereas it increases by living in a city), family factors (father’s work in agriculture and more children in the family), individual factors (higher self-esteem of physical fitness and less helplessness). The amount of time devoted to volunteering is explained by contextual factors (the higher the income from agriculture), family factors (mother’s work in agriculture; mother’s lower level of education), individual factors (greater self-efficacy, lower feeling of helplessness). Volunteering undertaken because of a passion for volunteering is associated with longer volunteering time, while undertaken because of the desire to be liked and respected – with shorter volunteering time.

Conclusions. The results are of practical importance, as they show the possibility to promote adolescents’ volunteering.

Key words
adolescents, motivation, volunteers, determinants of volunteering

INTRODUCTION

Volunteering has become the basis of modern society [1]. Volunteering is commonly understood as ‘any activity in which time is given freely to benefit another person, group or organizations’ [2]. Clary et al. [3] consider volunteering to be an important manifestation of human helpfulness. The economic importance of non-profit activities is constantly growing, especially in areas such as education, health and social services [4]. In view of the benefits which volunteering brings, recent years have seen a notable increase in interest in the phenomenon among researchers and policy makers [5]. Owing to those benefits, national authorities in many countries are aware of the need to popularize volunteering and to create favourable conditions for its development [6]. This requires diagnosing the factors which explain the decisions of individuals to become a volunteer, and have an impact on the amount of time devoted to volunteering. Although there have been many studies in this area, they mainly concern people aged over 16, and the issue is relatively understudied in younger age groups [7]. At the same time, investigating the scale and determinants of young adolescent volunteering seems to be especially important in view of its long-term consequences, such as educational attainment in young adults [8], and its great potential for the socialization of youth oriented towards pro-social behaviours [9].

Considering that studies on volunteering have been conducted mainly in North America, Australia and Western rather than Eastern Europe, the results refer mostly to Western Countries [10]. Despite the shared history and traditions of the volunteering sector, it was found that volunteering rates vary greatly across Europe [11]. It has been observed that factors related to the culture of a country are highly significant for the understanding of the phenomenon of volunteering [12]. Thus, it is important to investigate this phenomenon in particular countries, focusing on their specific cultural determinants in this respect. The existing studies do not provide adequate knowledge on the factors of adolescent volunteering in the post-Communist countries of Eastern Europe, including Poland. In an attempt to address this gap, this article aims to provide answers to the following research questions:

1. What is the scale of adolescent volunteering in Poland in the 14–15 age group?
2. What factors explain being a volunteer in this age group?
3. What factors explain the amount of time devoted to volunteering by adolescents aged 14–15?

LITERATURE REVIEW

Definition of volunteering. Volunteering is considered a form of pro-social behaviour [8, 13] which means voluntarily devoting one’s own time and services in order to help others without any financial or material remuneration [2, 14]. Taking into account the level of their formality, two major categories of volunteering can be distinguished:

...
formal and informal [15]. Formal volunteering is performed within an organization [16], while informal volunteering means assistance addressed directly to others (without the involvement of formal organizations), provided outside the family, place of work or charity organizations [12]. Studies indicate a positive correlation between these two forms of volunteering. It has also been noted that volunteering nowadays is characterised by a considerable flexibility, which means that individuals often change the form of volunteering they perform – from regular and long-term, to short-term, episodic or occasional [17, 18]. These changes are the case especially among young people [19].

Scale of volunteering. The scale of volunteering varies depending on the country. As reported in the United States, 26.4% of young people aged 16–19 and 18.4% of those aged 20–24 were involved in such work [20]. Between September 2020 – 2021, during the global COVID-19 pandemic, nearly 51% of Americans informally helped their neighbours at least once in the past year, and more than 23% of Americans formally volunteered [21]. A survey in Wales, United Kingdom, among early adolescents aged 13–14, found that 54% were involved in volunteering [22]. Research conducted by Mantovan, Sauer and Wilson [7] in the UK showed 55.7% of the early adolescents (aged 10–15) volunteered at some point in the past 12 months, although most of them infrequently. In 2018, a Polish study on volunteering revealed that during the preceding year, approximately 23% of Poles had carried out voluntary unpaid work for the benefit of their community, church, housing estate, village or town/city, or for the benefit of those in need [23]. Poles, like the residents of other European countries, tend to participate in informal rather than formal volunteering. The Polish Central Statistical Office (GUS) survey of 2016 showed that the number of participants in informal volunteering was four times higher than those who engaged in formal volunteering [24]. In Poland, in the first quarter of 2022, 28.4% of persons aged 15–89 engaged in volunteer work [25], more often provided individually (26.5%) than in an organization or institution (5.0%).

Poland is in the group of Eastern European countries with the lowest proportion of those engaged in volunteering, both formal and informal [11, 12]. One of the main reasons behind this is the inhibition in volunteering during the Communist period (1944–1989). At that time, possibilities for the development of non-governmental organizations were considerably limited, and there were no favourable conditions for building a civil society [26]. Other obstacles to the development of volunteering included a low level of social capital in Polish society, caused by the loss of a considerable part of social elites as a result of the Second World War, and a low level of social trust [27]. The development of non-governmental organizations undertaking voluntary actions only became possible with the political changes initiated in the 1990s. Similar patterns were observed in other post-Communist Central and Eastern European countries [16]. What is specific to Poland and important for adolescent volunteering is a relatively large percentage of traditional rural families. Poland is one of the countries in the European Union with the largest number of agricultural households [28] and the highest percentage of those working in agriculture [29]. Families working in agriculture preserved the traits of traditional farming families [30], including strong bonds with the local community, readiness to provide help to others, and religiosity focused around Church institutions.

Predictors of volunteering. Volunteer research concerns not only the scale of the phenomenon, but also – and more importantly – factors which enable our understanding of reasons for people becoming involved in volunteering [5]. While such studies have been conducted mainly in the United States, Australia and Europe, especially the UK [17], those concerning Eastern Europe are few and far between. The results indicate that the determinants of volunteering vary in different countries, which means that it is necessary to investigate particular national contexts and their specific nature [12].

Studies reveal a wide range of factors that influence volunteering. According to the resources theory [15], formal volunteering and informal helping require human capital (e.g., education, income, functional health), social capital (e.g., number of children in the household, informal social interaction), and cultural capital (e.g., religiosity). Models considering the predictors of volunteering focus mainly on individual-level characteristics [12]. Much less is known about the impact of context on individual volunteering [2]. Context is understood here as ecological factors ranging from small (e.g. households) to large units (e.g. region). Wilson notes that at a higher level of abstraction, context can also refer to urban-rural differences [2]. Studies concerning the determinants of volunteering consider factors at the macro-, micro- and individual-level. Macro-level factors behind the decision to become involved in such activity include the size of the population in the place of residence, level of unemployment, wage level, and government expenditures on charity institutions [31]. Parboteeah et al. [32] observed a positive correlation between the wealth of a country and formal volunteering. Niebuur et al. [33] performed a meta-analysis of the results of studies conducted among adults (aged 18 and over) in 2010–2015 in the United States, Japan and the Pacific Islands. They considered such factors as: demographic characteristics, ethnic origin, parental status, socio-economic status, educational attainment, health status, social relationships and religiosity. It was established that participation in volunteering was significantly related to age, marital status, education, past volunteering experience, and functional efficiency. A positive relationship was also noted between volunteering and education in the area of volunteering, and past experiences related to volunteering gained as the result of the volunteering activity of family members or close friends, as well as religious engagement. A lower functional efficiency reduced interest in volunteering. Similar factors of volunteering were considered by Fényes & Pusztai [14] in their study of students from three countries of Central and Eastern Europe: Hungary, Romania and Ukraine. It was observed that a higher level of education of the mother and a better material standard of the student increased the probability of participation in volunteering, as did greater religious engagement and preference for happiness as a value; on the other hand, preference for material values, well-being and enjoyable life decreased this probability.

Gil-Lacruz et al. [34], based on the results of a study of young people in 20 European countries, concluded that macro-structural factors, such as welfare systems, influence decisions about youth volunteering, influencing government expenditures and employment. Damian [35]
in cross-sectional, longitudinal study concluded that church attendance had a negative effect on formal volunteering, while lower inequality had a positive effect, which means that people in secular and equal countries engage more in formal volunteering. Enjołras [11], based on the results of a study in 23 European countries, concluded that human, economic, and social resources at the individual level have a positive effect on the likelihood of volunteering, while at the contextual level, macro-structural factors (economic, political, social, and religious contexts) affect the ability of the individual to transform resources into volunteering activity.

Gil-Lacruz et al. [36] believe that differences in participation rates in volunteering can only be fully explained if contextual factors are taken into account alongside the importance of individual characteristics. An important individual-level factor that explains why a person engages in volunteering is connected with subjective dispositions, such as personality traits, motives, and self-conceptions, which predispose individuals to volunteer ‘because of the way they think about themselves and the world around them’ [37].

One of the issues most often investigated is volunteer motivation [38]. The study of motivation is important because this factor makes an individual inclined towards seeking an opportunity for volunteering, devotion, and helping others, and makes them continue volunteering activity for some time [3]. Since volunteering plays various functions with respect to various people, identification of the motive enables a better understanding of why people become volunteers. Such studies have adopted the self-determination theory [39] (SDT), referring to the concept of intrinsic and extrinsic motivation. In this case, it is assumed that motivation for volunteering may remain under the impact of external factors, such as reward and punishment, and intrinsic factors, such as genuine enjoyment and interest; intrinsic motivation most strongly promotes engagement in actions and makes it more sustained.

Subjective dispositions include personality traits. Based on a review of study results, Kee et al. [40] established that volunteering is associated with conscientiousness, extraversion, agreeableness, openness, and lower neuroticism. A study of a representative sample of the Swiss population demonstrated that the most consistent predictor of various forms of volunteering is high extraversion [41]. Longitudinal studies of the relationship between childhood personality type and participation in volunteering eight and ten years later showed that children who belonged to the resilient type were more involved than those who were the over-controlled and under-controlled types [42]. During the period of early adolescence, self-perceptions (e.g. self-efficacy, absence of the feeling of helplessness) are of great importance for positive psycho-social adaptation and well-being [43, 44].

THE STUDY

Objective. The aim of the study was to fill gaps in the knowledge about adolescent volunteering in Eastern European countries by assessing its scale and investigating its predictors among 14–15-year-olds in Poland. Based on existing studies, it was assumed that the predictors for volunteering would belong to various levels. Following the resources theory [15], it was assumed that volunteering would be positively correlated with a higher level of capital – at the contextual and individual level. The resource theory assumes that people with a higher social status (higher education, occupational position, income) have more resources at their disposal in the form of human, financial and social capital, which means that participation in volunteering is less costly for them, and thus they find it easier to undertake selfless work for the benefit of others. In turn, the selective mobilization theory assumes that non-profit organizations direct their requests for participation in volunteering mainly to people who have more resources, and to those who have already participated in such activity. Based on the existing studies, it was assumed that the predictors for volunteering would occur at various levels. In view of the fact that the study was conducted among adolescents, for whom family is a very important developmental environment and taking into account the impact of the context [2], the characteristics of the environment were considered in two groups: (1) characteristics of the region where the adolescent lives (unemployment rate, income of the commune/town, share of agriculture in commune income; place of residence: city/town vs village); (2) family characteristics (structure and social status). Individual-level characteristics included: gender, self-reported state of health and self-reported physical fitness, personality traits, motives for being a volunteer. Consequently, it was expected that:

H.1. Living in a more prosperous region (higher regional income per capita, lower unemployment rate) would be associated with a higher probability of being a volunteer, and a greater amount of time devoted to volunteering.
H.2. Living in a rural region (higher percentage of income from agriculture in the region), i.e. a region with a greater tradition of benevolence, would be associated with a higher probability of being a volunteer and a greater amount of time devoted to volunteering.
H.3. Living in a city/town would be associated with a higher probability of being a volunteer, and a greater amount of time devoted to volunteering.
H.4. Living in a family with a higher level of social capital (family with several children; family with a higher social status of parents (higher education); rural family (mother/father working in agriculture), would be related to a higher probability of being a volunteer, and a greater amount of time devoted to volunteering.
H.5. A higher level of individual forms of capital (better self-reported state of health and physical fitness) would be related to a higher probability of being a volunteer, and a greater amount of time devoted to volunteering.

Following the theory of subjective disposition, extraversion was taken into account because it has been confirmed that a high level of extraversion is associated with various forms of volunteering [41]. In addition, taking into account the tremendous role of self-perceptions in the period of early adolescence [43, 44, 45], self-efficacy and the feeling of helplessness were considered. Therefore, it was expected that:

H.6. Higher extraversion and self-efficacy and a lower feeling of helplessness would be related to a higher probability of being a volunteer, and a greater amount of time devoted to volunteering.

It is assumed that motivation for volunteering may remain under the impact of external factors, such as reward and...
punishment, and intrinsic factors, such as genuine enjoyment and interest; intrinsic motivation most strongly promotes engagement in actions and makes it more sustained [14, 46]. It was expected that:

H.7. Intrinsic motives would be related to a greater amount of time devoted to volunteering.

H.8. Being a female would be related to a higher probability of being a volunteer, and a greater amount of time devoted to volunteering.

MATERIALS AND METHOD

The study was conducted in 2017 in a representative group of 3,545 adolescents, part of group of 4,568 adolescents aged 14–15, selected using stratified sampling. The basic territorial unit was a province. In each province, classes were selected in schools in proportion to the number of schools in the province. In the selected classes, all schoolchildren were surveyed who attended school on the day of the study. From the total number of 6,646 junior high schools in Poland, 116 were selected as the basic sample, and two corresponding schools (as far as possible in a given stratum) – as a reserve sample. The level of realization of the study in the basic sample was 63% (72 schools from the basic sample agreed to participate in the study); those which refused to take part were replaced by ones from the reserve sample. The study was conducted in 116 schools, which amounted to 1.75% of schools of this type in Poland. In each school, one first-grade and one second-grade class were randomly selected. Information concerning the classes and the sampling was collected at the stage of recruitment of schools for the study.

The analysis considered replies from 4,568 respondents aged 14–15, which amounted to 0.74 % of the Polish population at this age. In the study group, the percentage of girls was 51.2%, and boys – 48.8%; the percentage of adolescent 14-year-olds was 50.8%, and 15-year-olds – 49.2%; the percentage of urban residents – 52.3%, and residents of rural areas – 47.7%. Assuming that gender, age, place of residence (urban, rural), and province of residence are important structural characteristics, compliance of the sample structure with the structure of the population of Polish adolescents aged 14–15 was subject to investigation. Data concerning the source population were taken from statistics provided by the Central Statistical Office. A chi² compliance test showed that the proportions of individual categories in the sample of the examined schoolchildren and in the Polish population did not significantly differ (chi² = 82.496; p > 0.05). Therefore, it may be concluded that the examined group was representative of the population with respect to the above-mentioned characteristics.

An auditory study was conducted by qualified researchers from the Laboratory for Social Studies during a regular school day. The respondents were informed about the confidentiality of the answers and about the possibility to refuse to participate in the study. Before the study, parents provided their written consent for their children to participate.

OPERATIONALIZATION OF VARIABLES

Dependent variables. Two dependent variables were operationalized: being a volunteer and time devoted to volunteering. The study adopted a comprehensive definition according to which volunteering means activity undertaken on a voluntary basis and without payment, performed for the benefit of any institution, organization, community or person outside the family, irrespective of nature (formal or informal), time (long- or short-term) and regularity (regular or occasional). This allowed consideration of the range of forms of volunteering. The adopted criterion for considering a person a volunteer was volunteering at least once in the 12 months preceding the study. The respondents answered the question: ‘In the last 12 months, did you perform any work for the benefit of institutions or people outside your family without receiving any payment or gifts in return?’ (0 – No; 1 – Yes).

Time devoted to volunteering is the mean time of volunteering a month (in hours), calculated by taking into account the time devoted to volunteering in the month preceding the study and during summer holidays (which last for 2 months), according to the following formula:

\[ \text{time devoted to volunteering in the month preceding the study} + 1/2 \times \text{the time devoted to volunteering during summer holidays} \times 2 \]

The distribution of the created variable, i.e. the average time of volunteering a month, proved to be significantly different from normal distribution (skewness=3.079; kurtosis=10.888). Transformation of the raw data (natural logarithm) resulted in a distribution which did not significantly differ from normal distribution (skewness=0.058; kurtosis=0.344; K-S test=0.034; p=0.078).

Independent variables. Two main groups of predictors were considered: characteristics of the context in which the adolescent lives, and characteristics of the adolescent. In view of the fact that family is a very important developmental environment for adolescents, the characteristics of context were considered in two groups: (1) characteristics of the region where the adolescent lives, and (2) family characteristics. Individual-level characteristics included: (1) self-reported state of health and physical fitness, (2) personality traits, (3) motives for being a volunteer, and demographic characteristics that may be related to volunteering (gender).

The region of residence was characterized based on data provided by the Central Statistical Office [49], taking into account: income per capita (PLN), percentage of income from agriculture in the overall regional income, and unemployment rate (%). The place of residence (1 – village; 2 – city/town) was taken into account.

For the family, the following characteristics were considered, type of family structure: 1 – two-parents; 2 – single-parent, number of children in the family; education of the mother/father: 1 – primary, 2 – vocational, 3 – secondary, 4 – higher; mother/father working in agriculture: 0 – No; 1 – Yes; mother/father not working: 0 – No; 1 – Yes.

Characteristics of adolescents include gender: 1- female, 2 – male; self-reported state of health and self-reported physical fitness: 1 – bad, 2 – fairly bad, 3 – average, 4 – fairly good, 5 – good; personality traits: extraversion, self-efficacy, feeling
of helplessness, were assessed using selected statements from a questionnaire [50, 51]. Table 1 shows descriptive statistics for study variables.

Table 1. Descriptive statistics for study variables

<table>
<thead>
<tr>
<th>Predictor (coding)</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>M</th>
<th>SeM</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional income per capita</td>
<td>3,545</td>
<td>2.66</td>
<td>8.23</td>
<td>4.05</td>
<td>1.37</td>
<td>1.49</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>3,545</td>
<td>1.6</td>
<td>18.4</td>
<td>6.54</td>
<td>2.91</td>
<td>1.02</td>
</tr>
<tr>
<td>% of income from agriculture</td>
<td>3,545</td>
<td>0</td>
<td>31.8</td>
<td>1.85</td>
<td>3.81</td>
<td>5.08</td>
</tr>
<tr>
<td>Number of children in the family</td>
<td>3,545</td>
<td>1</td>
<td>14</td>
<td>2.29</td>
<td>1.26</td>
<td>2.96</td>
</tr>
<tr>
<td>Self-reported state of health</td>
<td>3,545</td>
<td>1</td>
<td>5</td>
<td>4.48</td>
<td>0.80</td>
<td>-1.65</td>
</tr>
<tr>
<td>Self-reported physical fitness</td>
<td>3,545</td>
<td>1</td>
<td>5</td>
<td>4.40</td>
<td>0.84</td>
<td>-1.31</td>
</tr>
<tr>
<td>Extraversion</td>
<td>3,545</td>
<td>1</td>
<td>4</td>
<td>3.20</td>
<td>0.64</td>
<td>-0.78</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>3,545</td>
<td>1</td>
<td>4</td>
<td>3.21</td>
<td>0.61</td>
<td>-0.88</td>
</tr>
<tr>
<td>Absence of helplessness</td>
<td>3,545</td>
<td>1</td>
<td>4</td>
<td>2.13</td>
<td>0.63</td>
<td>0.48</td>
</tr>
</tbody>
</table>

Considering the fact that the available scales of motivation for volunteering are designed for people aged over 16, the presented study used a scale developed based on the results of previous studies of adolescents aged 11–14 [52]. This scale includes ten motives for undertaking volunteering activity (motive not selected – 0; motive selected – 1). The respondents were asked to indicate the three most important motives for volunteering.

Data analysis. The data obtained in the study were analysed using IBM SPSS software version 26. The Kolmogorov–Smirnov test with Lilliefors significance correction was applied to check the normality of variables, and Pearson’s r correlation to examine the correlation between independent variables. A five-stage hierarchical logistic regression (with enter selection) was performed to investigate factors that predict if an adolescent had volunteered at least once in the 12 months preceding the study (Tab. 2). A hierarchical linear regression (with forward stepwise selection) was used for the ‘time devoted to volunteering activity’ as the dependent variable (Tab. 3). Due to the lack of data concerning some independent variables, the regression analysis was based only on the complete data, which were obtained from 3,545 respondents.

The analysed model of probability of being a volunteer included five blocks of independent variables, which were introduced using the stepwise method. These were: (1) characteristics of the region of residence, (2) characteristics of the family, (3) gender and place of residence of adolescents, (4) health and fitness of adolescents, (5) personality traits of adolescents. The analysed determinants of the average amount of time devoted to volunteering included six blocks of independent variables, which were introduced using the stepwise method. The first five blocks contained the same variables which were considered in logistic regression analysis. The last, sixth, block of variables included the motives for volunteering.

RESULTS

In the surveyed group of Polish adolescents aged 14–15, every fourth respondent (26.6%) had been involved in volunteering in the 12 months preceding the study.

Table 2 shows the predictors that affected the probability of engaging in voluntary work, in the framework of a logistic regression model. Seven predictors were found to contribute to the probability of volunteering. Considering the characteristics of a region where the adolescent lives, higher regional per capita income and higher unemployment rate showed a significant decrease in the probability of volunteering. In the group of family characteristics, the father’s work in agriculture and the number of children in the family showed a significant increase in the probability of adolescent volunteering. Living in a city/town increased the probability of being a volunteer. Being a volunteer was related to a higher self-reported physical fitness and to a lower feeling of helplessness.

The average time of performing voluntary work per one volunteer a month was 15.62 hours, with 28.5% of respondents volunteering for less than three hours a month, 30.5% – between 4 – 9 hours, 25.2% – between 10 – 25 hours, and 15.4% – over 60 hours.

There was a significant relationship between the amount of time devoted to volunteering and the structure of regional income: the higher the income from agriculture, the greater the amount of time devoted by adolescents to volunteering. Children of mothers working in agriculture and children of mothers with a lower level of education, devoted more time to voluntary work. A longer time devoted to volunteering was related to greater self-efficacy, and a lower feeling of helplessness. Considering the motives, passion for volunteering was related to a longer time devoted to this activity, while the willingness to be liked and respected – to a shorter time of volunteering.

Table 2. Summary of Hierarchical Regression Analysis for Variables predicting probability of being a volunteer. Among the value variables only the significant impacts are shown

<table>
<thead>
<tr>
<th>Block</th>
<th>Predictor (coding)</th>
<th>B</th>
<th>SE B</th>
<th>Wald x2</th>
<th>p</th>
<th>Exp (B)</th>
<th>95% CI OR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional characteristics</td>
<td>Regional income per capita</td>
<td>-0.077</td>
<td>0.015</td>
<td>9.446</td>
<td>0.002</td>
<td>0.956</td>
<td>[0.929, 0.984]</td>
</tr>
<tr>
<td></td>
<td>Unemployment rate*</td>
<td>-0.041</td>
<td>0.032</td>
<td>5.415</td>
<td>0.020</td>
<td>0.929</td>
<td>[0.872, 0.988]</td>
</tr>
<tr>
<td>Family characteristics</td>
<td>Number of children in the family</td>
<td>0.074</td>
<td>0.032</td>
<td>5.979</td>
<td>0.014</td>
<td>1.081</td>
<td>[1.016, 1.150]</td>
</tr>
<tr>
<td></td>
<td>Father working in agriculture</td>
<td>0.477</td>
<td>0.150</td>
<td>11.546</td>
<td>0.001</td>
<td>1.664</td>
<td>[1.241, 1.233]</td>
</tr>
<tr>
<td>Demographic characteristics of adolescents</td>
<td>Place of residence (1– village; 2– city/town)</td>
<td>0.198</td>
<td>0.092</td>
<td>6.329</td>
<td>0.012</td>
<td>1.260</td>
<td>[1.052, 1.508]</td>
</tr>
<tr>
<td>Health and fitness</td>
<td>Self-reported physical fitness</td>
<td>0.125</td>
<td>0.055</td>
<td>9.296</td>
<td>0.002</td>
<td>1.184</td>
<td>[1.062, 1.320]</td>
</tr>
<tr>
<td>Personality traits of adolescents</td>
<td>Absence of helplessness</td>
<td>0.184</td>
<td>0.070</td>
<td>10.723</td>
<td>0.001</td>
<td>1.257</td>
<td>[1.096, 1.442]</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td>-1.938</td>
<td>0.668</td>
<td>18.601</td>
<td>0.000</td>
<td>0.156</td>
<td></td>
</tr>
</tbody>
</table>

* Odds ratio given for increase in unemployment rate by 1%
Test Hosmera i Lemeshowa chi² 11,113, p=0,195
### Table 3. Determinants of the mean amount of time devoted to volunteering a month (multivariate hierarchical linear regression). Among the value variables only the significant impacts are shown.

<table>
<thead>
<tr>
<th>Block</th>
<th>Predictor (coding)</th>
<th>B</th>
<th>SE</th>
<th>p</th>
<th>95% CI for B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional characteristics</td>
<td>% of income from agriculture</td>
<td>0.034</td>
<td>0.019</td>
<td>0.017</td>
<td>[0.008, 0.082]</td>
</tr>
<tr>
<td>Family characteristics</td>
<td>Mother working in agriculture</td>
<td>0.460</td>
<td>0.144</td>
<td>0.002</td>
<td>[0.155, 0.720]</td>
</tr>
<tr>
<td></td>
<td>Education of the mother</td>
<td>-0.167</td>
<td>0.072</td>
<td>0.014</td>
<td>[-0.317, -0.035]</td>
</tr>
<tr>
<td>Personality traits of adolescents</td>
<td>Self-efficacy</td>
<td>0.287</td>
<td>0.100</td>
<td>0.011</td>
<td>[0.058, 0.450]</td>
</tr>
<tr>
<td></td>
<td>Absence of helplessness</td>
<td>0.261</td>
<td>0.101</td>
<td>0.021</td>
<td>[0.036, 0.434]</td>
</tr>
<tr>
<td>Motives</td>
<td>Passion for volunteering</td>
<td>0.423</td>
<td>0.118</td>
<td>0.001</td>
<td>[0.168, 0.632]</td>
</tr>
<tr>
<td></td>
<td>Willingness to be liked and respected</td>
<td>-0.370</td>
<td>0.165</td>
<td>0.013</td>
<td>[-0.734, -0.087]</td>
</tr>
<tr>
<td></td>
<td>Constant</td>
<td>0.700</td>
<td>0.519</td>
<td>0.191</td>
<td>[-0.340, 1.699]</td>
</tr>
</tbody>
</table>

ANOVA for Regression: F=7.150, p<0.001; explained variability of dependent variable: Adjusted R Square = 0.108

### DISCUSSION

The aim of this study was to assess the scale of adolescent volunteering in Poland in the 14 -15 age group, and to determine the factors related to being a volunteer and factors explaining how much time adolescents devote to voluntary work. Although the study follows the stream of research concerning the determinants of volunteering, it provides new knowledge by focusing on early adolescents and on volunteering in an Eastern European country. It is underlined that volunteer work among early adolescents has been neglected as a research topic [7]. The current study partially fills this gap.

The advantage of this study is that all forms of voluntary work have been considered, in line with the observation that young people are characterized by variety and flexibility in this respect [19]. This enables a better assessment of the phenomenon of volunteering and its determinants among the youth. It was found that in the 12 months preceding the study, 26.6% of Polish adolescents aged 14–15 had participated in volunteering activity. Thus, the percentage of volunteers among early adolescents was 3.6 percentage points higher than in an older age group (over 16), examined in Poland in 2018 (23%) [23]. This suggests that the interest in volunteering in Poland is slightly greater among early adolescents than in the older population. In this study, young volunteers devoted an average of 15.62 hours a month to voluntary work, with 15.4% of them working over 60 hours. Taking into account their school duties, this engagement should be viewed as relatively high.

The importance of factors related to the context in which the adolescent grows up (region and family) and the adolescent’s characteristics were examined. Following the resources theory [15], it was assumed that volunteering would be positively correlated with a higher level of capital – in the region where the adolescent lives, in his family and in the adolescent himself/herself.

The results indicate that living in a more prosperous region with a lower unemployment rate, increased the likelihood of being a volunteer (in line with H.1). At the same time, it was found that adolescents living in a region where the per capita income is higher, are less likely to engage in volunteering, which is contrary to the expected results. This could be related to presence of demand for help in a given community. The demand for help seems to be an important factor that influences volunteering, and it can be expected that it is lower in more prosperous regions, with better the economic situation of those living in such regions, and more developed network of support institutions.

Thus, the results of this study show that the likelihood of being a volunteer is increased by living in a region with lower regional per capita income, and with lower unemployment rate. In addition, adolescents living in town/cities are more likely to become volunteers (which supports H.3). This may be related to the fact that in cities/towns there are more volunteer institutions and programmes offering different forms of volunteer activity. Other studies [17] demonstrate that youth volunteering is focused around educational institutions, and in Poland there are more such institutions in urban regions. These results are consistent with the SDM model [53], according to which one important factor promoting civic development is the presence of opportunities for involvement in activities and interactions with others.

Growing up in a farming family (father/mother working in agriculture) is associated with a greater probability of being a volunteer, and with more time devoted to volunteering (as predicted in H. 4). In Poland, families working in agriculture have preserved the traits of traditional farming families, the most important of which are readiness to help, strong bonds with the local community and religiosity focused around Church institutions [30] (Lachowski, 2016). It can be stated that the culture of benevolence is a crucial element of the identity of such families. Wilson & Musick [15] believe that the culture of benevolence is an important resource upon which to draw for volunteer work. This culture is passed on to children by their parents in the process of socialization and role modelling. Adolescents are more likely to volunteer if their parents volunteer [54]. Families working in agriculture may contribute to the development of attitudes in adolescents conducive to volunteering through the socialization process and role modelling [37]. The researchers found that identification with a group is a key factor in explaining volunteering intentions [55]. The family is a significant reference group which shows its role in explaining adolescent volunteering.

The probability of volunteering is significantly higher also when there are more children in the family (H. 4). More children in the family means that there are more social connections, which translates into more opportunities for voluntary activity and knowing more people who are in need of help. This finding confirms the positive role of social and cultural capital [2] in explaining engagement in volunteering.

The findings that confirm the importance of resources related to the adolescent health (H.5) are consistent with
the predictions of the authors of this study based on the concept of human capital [2]. Higher self-reported physical fitness is associated with a greater likelihood of being a volunteer. This result is consistent with the theory and the results of existing studies. According to the integrated theory of volunteering [15], the above-mentioned characteristics of an individual belong to human capital, one of the three types of resources which decide about volunteering. An analytical study by Niebuur et al. [33] concerning adult volunteering, suggests that such indicators as poor state of health, especially lower functional fitness, result in a decrease in volunteering activity. The presented study demonstrates that a negative assessment of one’s own physical fitness reduces the probability of engagement in volunteering, also among early adolescents.

The amount of time devoted to voluntary work is influenced by the rural character of the region. Adolescents who live in more rural regions (i.e. regions with a higher percentage of income from agriculture in the regional income) are likely to devote more time to volunteering (which confirms H.2). Contrary to the expectations (H.4) of this study, it was found that devoting more time to volunteer work by adolescents is associated with the lower education of the mother. This result requires further research. It is possible, that the mother’s lower education is typical for living in a rural community and working in agriculture.

The significance of subjective disposition [10] for adolescent volunteering has been supported (H.6). The findings of the current study confirm that the less the sense of helplessness increases the probability of being a volunteer, and is associated with devoting more time to volunteer work, and with a greater self-efficacy associated with devoting more time to volunteer work. This result seems to confirm that during the period of early adolescence (14–15), self-perceptions (e.g. self-efficacy, absence of the feeling of helplessness) are of great importance for positive psychosocial adaptation [43] and well-being [44]. Positive self-evaluation (including the belief in self-efficacy and the absence of the feeling of helplessness) is viewed as a resource conducive to successful adaptation during adolescence.

Personal characteristics observed in this study which favour young adolescent volunteering (belief in self-efficacy, absence of the feeling of helplessness) may be assigned to the category of skills that enable integration with others. According to the social development model (SDM) [53], these skills are one of the four components important during the socialization process, including especially, the promotion of civic development, with volunteer work as one case in point.

In the presented study, no relationship was observed between volunteering (being a volunteer and time devoted to volunteering) and extraversion, that has been found in many studies in adults [41]. This result also confirms that during the period of early adolescence, it is self-perception rather than more general personality traits, such as extraversion, that plays the key role in social functioning.

The results of the current study indicate that adolescents engage in volunteering for various motives. However, only two of these motives are related to the amount of time they devote to volunteering: performing voluntary work out of passion (‘I like working as a volunteer’) is related to a larger amount of time, and volunteering to be liked and respected – to a smaller amount of time. While the first of these motives may be assigned to the category of ‘intrinsic motivation’, the second one is ‘extrinsic in nature’ [56]. Intrinsic motivation for volunteering is the case when this work is rewarding for an individual, as such, when it is performed for the pleasure it gives, and extrinsic motivation – when it is undertaken in the expectation of external reward, such as liking and respect. This finding is of practical importance as it shows the positive role of promoting intrinsic motivation among early adolescents. It also indicates the potential negative effects of extrinsic motivation in the process of their socialization with respect to the shaping of pro-social attitudes, the manifestations of which include participation in volunteering. The results of studies conducted by other researchers confirm such a role of intrinsic and extrinsic motivation with respect to volunteering [46]. This finding is of practical importance as it shows the positive role of promoting intrinsic motivation among early adolescents [57]. The adolescent’s gender and the type of family structure do not affect adolescents’ engagement in volunteering.

Based on the results of existing studies concerning volunteering, it was assumed that the predictors of being a volunteer and of the time devoted to volunteering by adolescents would be complex, and would belong to various levels: characteristics of the place of residence, family, and the adolescents themselves. These assumptions have been confirmed in the case of both explained variables, as predictors belong to each of the considered levels. The variables related to adolescents’ families and the adolescents themselves are of the greatest importance. This result is not surprising. It is in line with the theory and results of previous research confirming the great role of the family environment in the period of early adolescence [58].

Growing up in a farming family (mother/father working in agriculture) and an agricultural region (higher commune income from agriculture) is conducive to volunteering. The relationship observed in this study between coming from agricultural family and a greater engagement in volunteering, may be explained by referring to the characteristics of such families. In Poland, the traits of traditional farming families have been preserved [30], including strong bonds with the local community, readiness to provide help to others, and religiosity focused around Church institutions. Growing up in such a family increases the probability of becoming a volunteer, and is related to devoting a larger amount of time to volunteering. This finding is contrary to the concept of economic capital as a major factor at play, but confirms the positive role of social capital [2] (strong social and family bonds, a larger number of children in the family, many friends, trust in others, religiosity) in explaining engagement in volunteering. This finding is also confirmed by the impact of the context [2], in this case – urban-rural differences. According to this concept, the place of residence may exert an effect on the reasons for volunteering. It is reported that in small communities solidarity benefits and the norm of reciprocity are of importance, whereas in larger centres self-development is emphasized [59]. Rural families living in small communities may contribute to the development in adolescents of attitudes conducive to volunteering through the socialization process [60].

Advantages and limitations of the study. The advantage of this study is that all forms of voluntary work have been considered, in line with the observation that young people

"The Annals of Agricultural and Environmental Medicine (AAEM) is a peer-reviewed journal covering a wide range of topics in agricultural and environmental medicine. It publishes research on the impact of environmental factors on human health, the effects of agricultural practices on the environment, and the role of agricultural workers in disease transmission. The journal is a valuable resource for researchers, policymakers, and practitioners in the field of agricultural and environmental medicine."
are characterized by variety and flexibility in this respect [19]. However, the fact that the adolescents participating in the survey were asked only one question, i.e. whether they had ever performed voluntary work, might have influenced the results. Longer, more detailed prompting could have led respondents to recall volunteering at higher incidence rates and at higher levels [61]. Moreover, this approach may have influenced the results, as the leisure perspective of volunteering was excluded [62]. Moreover, Wilson & Musick [15] believe that formal and informal volunteering are related to different forms of capital in different ways. Therefore, it seems important to study not only volunteering in its broad sense, but also its specific forms and determinants in various communities.

One of the limitations of the study is the cross-sectional nature of the data which made it impossible to determine the direction of the relationships between the variables. It is possible that the belief in self-efficacy and the feeling of helplessness exert an effect on the engagement in volunteering; however, it is equally probable that experiences associated with volunteering shape these self-perceptions. Another limitation is that the sample was composed only of schoolchildren aged 14–15, which limited the generalization of the findings: at various stages of the life cycle the variables may affect the decision to become a volunteer and the level of engagement in volunteering in a different way. Longitudinal studies would enable an assessment of the role of individual predictors of volunteering (e.g. characteristics of an individual) at various stages of development of the respondents, and would make it possible to determine the direction of the relationships between variables.

CONCLUSIONS

The results of the study show that the predictors of adolescent involvement in volunteering are complex and belong to different levels, both contextual and individual. Growing up in a farming family (mother/father working in agriculture) and in a farming region (higher commune income from agriculture) are important factors that increase adolescent volunteering through socialization and modelling processes. Among the contextual factors, those related to the adolescent’s family are of great importance. The probability of being a volunteer is explained by contextual factors (higher regional income per capita, and higher unemployment rate decrease this probability, whereas living in the city increases it), family factors (father’s work in agriculture, and more children in the family), individual factors (higher self-esteem of physical fitness, and less helplessness). The amount of time devoted to volunteering are explained by contextual factors (higher income from agriculture), family factors (mother’s work in agriculture, mother’s lower level of education), individual factors (greater self-efficacy, lower feeling of helplessness). Volunteering undertaken out of passion for volunteering is associated with longer volunteering time, while undertaken out of a desire to be liked and respected – with shorter volunteering time. The results are of practical importance, as they show the possibility to promote adolescents’ volunteering.

Acknowledgements

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REFERENCES