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Increasing Autonomy in Charitable Giving: The Effect of Choosing the Number of Recipients on Donations

Martina Fehérová, Stephanie Heger, Jana Péliová, Maroš Servátka & Robert Slonim*

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Abstract

In many contexts people can choose how many charities to help. This paper presents results from a laboratory experiment that varies whether the subjects have a choice in the number of charities to donate to and whether they are given an option to opt out. We find that the choice increases donation frequency, but does not influence donation amounts. If the choice also includes the opt-out option, there is no increase in the donation frequency or amount.

Keywords: Altruism, Choice, Charitable Giving, Choice Architecture, Opt-out
JEL: C91, D64, D91

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1. Introduction

Donors frequently have a choice between charities that help a different number of recipients. By choosing a particular charity, they effectively decide how many people to help. The choice of how many recipients to help might itself influence the extent and frequency of altruistic behavior as the donors can sort into their preferred scenario. Similarly, if people prefer not to donate, they can often optout of the process (Lazear et al., 2012) or avoid the ask (Andreoni et al, 2017; Trachtman et al., 2015) rather than enter into a situation where they can donate but then choose not to, which might matter in situations where not donating is seen as socially unacceptable.

In this paper, we experimentally examine whether having the choice of the number of charities to help, rather than the experimenter exogenously assigning the number, affects donation behavior. Giving people a choice regarding how many recipients to help, relative to exogenous assignment, may increase other-regarding behavior due to the positive effects of autonomy of choice and intrinsic motivation (Langer 1975; Charness et al. 2012); an increased sense of control, stemming from whether to contribute to one or multiple recipients, may increase the motivation to behave pro-socially. For example, Slonim & Garbarino (2008) document that choosing with whom to interact increases engagement in the donation process. As such, having this choice can have a major impact on donations by increasing donor's utility from altruism and satisfaction without changing preferences or costs (Lacetera, et al. 2012; Heger et al. 2020).

While our main focus is comparing people who have a choice to people who do not have a choice in the number of recipients to donate to, our paper is related to a small literature that looks at the effect of multiple recipients on helping behavior. While Bolton et al. (1998) find no difference between the distribution of the total amount given to one recipient vs multiple recipients, Andreoni (2007) and Soyer & Hogart (2011) find that total giving increases with the number of recipients, but at a decreasing rate.

Our paper departs from the existing literature in three important ways. First, unlike Bolton et al (1998) and Andreoni (1997), recipients in our setting are charities rather than other subjects in the experiment. When other subjects in the experiment are used as the recipients it is not clear what type of preferences drive the results but are typically modeled in the literature assuming preferences for inequality aversion, fairness and/or efficiency (Bolton & Ockenfels 1999; Fehr & Schmidt 2000). On the other hand, giving to charities is typically characterized in the literature by pure and impure altruism (Lilley & Slonim 2013). Second, in contrast to Soyer & Hogart (2011), we hold constant the total number of decisions the subject must make rather than vary the number of donation choices. Third, and also in contrast to Soyer & Hogart, in our study the charities that subjects can donate to are not well known prior to the experiment (but subjects are informed during the study about each one), which can reduce noise as subjects typically donate more to campaigns (and charities) they know better (Eckel & Grossman 1996; Servátka 2009) or that are identifiable (e.g., Small & Loewenstein, 2003; Kogut & Ritov, 2005).

Our results shed light on whether we can extrapolate findings from existing one-recipient and exogenous assignment studies to field situations where individuals are (implicitly) choosing not only how much to donate, but also how many recipients to donate to.

2. Experimental Design and Procedures

The experiment consists of four treatments.[1] In the first two treatments subjects have no choice in the number of recipients: (i) *One Charity:* one charity, no choice; (ii) *Three Charities:* three charities, no choice. In the last two treatments subjects choose the number of charities: (iii) Choice: choose one or three charities; (iv) *Opt-out*: choose one or three charities or opt out. The treatments are implemented in a between-subject design.

In each treatment, subjects are endowed with 150 Czech Crowns (CZK) and decide whether to donate 0, 30, 60, 90, 120, or 150 CZK.[2] In Treatments One Charity and Three Charities, subjects only decide how much to donate to one or three charities, respectively. In the One Charity

[1] Appendix 2 in the Supplemental Online Material presents the English translation of the instructions for all four treatments.
[2] At the time of the experiment 1 CZK = 0.0391 EUR.

treatment, the donation goes to a randomly chosen charity while in the Three Charities Treatment, each charity receives an equal share (1/3) of the donation.[3] This design feature allows us to control the number of decisions subjects make at one.

In the Choice treatment subjects first choose between donating to one or three charities and then choose how much to donate. In the Opt-out treatment subjects first choose between opting-out of the donation process or donating to either one or three charities. If they chose to opt out, they keep their endowment. If they chose to donate to one charity or if they chose to donate to three charities, they then chose how much to donate (including the option to donate 0 or any other amount). All of these procedures were common knowledge before subjects made any choice.

The experiment, programmed in Qualtrics, was conducted in Masaryk University Experimental Economics Laboratory in Brno, Czech Republic. A session lasted about 50 minutes and subjects earned, on average, CZK 80 plus CZK 75 show-up fee and donated a total of CZK 23,190, which was sent to the respective charities. Upon completing the experimental task, subjects filled out a short questionnaire. All sessions were run under a single-blind social distance protocol (Hoffman et al., 1996).

3. Results

Table 1 presents summary statistics of subject behavior.[4] We compare behavior along two dimensions: the intensive margin (distribution of donations using all data) and the extensive margin (frequency of positive donations). Along the extensive margin, Table 1 indicates that seven percent more subjects donated when they had choice (almost 93%) than when they did not have a choice (just under 86%). Along the intensive margin, Table 1 indicates that subjects, on average, gave three more CZK (or about 4.6%) when they had a choice than when they did not. Yet, Table 1 suggests no differences in charitable giving behavior when subjects were assigned to give to one versus three charities. We formally test these differences in Table 2 using non-parametric tests.

Table 1. Descriptive statistics

Treatment	One Charity	Three Charities	*Choice*	*Opt-out*	*Treatments without Choice^*	*Treatments with Choice+*
Number of observations	81	81	82	81 *(8 Opted out)*	162	163
Number of donations (Percent of observations)	70 (86.4%)	69 (85.2%)	78 (95.1%)	73* (90.1%)	139 (85.8%)	151 (92.63%)
Average Donation (Standard deviation)	67.4 (45.9)	68.2 (46.5)	71.3 (42.6)	70.4 (44.3)	67.8 (46.0)	70.9 (43.3)

* In Opt-out among the 73 subjects who did not opt out and thus proceeded to the giving stage, all donated positive amounts.
^ For Treatments without choice we pool data from One Charity and Three Charities
\+ For Treatments with choice we pool data from Choice and Opt-Out.

[3] The potential charities that subjects could make donations to are ACORUS, THEIA and LATA. The online Supplementary Material (Appendix 3) provides the English Language translation of the description of the three charities that subjects were given in the experiment.
[4] Figure 1 in Appendix 1 presents histograms of donations by treatment.

Result 1: The number of recipients does not affect the size or the frequency of donations.

Support: Mann-Whitney and Fisher's Exact tests in Table 2 show that there are no significant differences in average donation or frequency of donations between One Charity and Three Charities (p=0.898 and 1.000, respectively).[5]

Table 2: Statistical tests for treatment differences

	Mann-Whitney Test (distribution of donations) P-values	Fisher's exact Test (frequency of donation) P-values
Result 1:		
One Charity vs. Three Charities	-0.898	1.000
Result 2:		
Choice vs. One Charity	0.588	0.063
Choice vs. Three Charities	0.707	0.038
No-Choice vs Choice treatments	0.545	0.051
Result 3:		
Opt-out vs. No Choice	0.649	0.417
Opt-out vs. Choice	0.954	0.247

* All reported- p-values are for two-sided tests.

Result 2: Having the ability to choose the number of charities increases donation frequency, but not the donation amount.

Support: We observe a higher donation frequency in the Choice Treatment compared to both One Charity (p=0.063) and Three Charities (p=0.038) but observe no significant difference in the donation amount (p=0.588 and p=0.707, respectively). We also pool the One Charity and Three Charities Treatments to form the combined No Choice Treatments and find that subjects in the Choice Treatments are more likely to give than in the No Choice treatments (p=0.051) but that they do not give more on average (p=0.545).

Result 3: The possibility to opt out from the donation process has no effect on donation behavior compared to either of the No Choice conditions, the combined No Choice conditions or the Choice Condition.

Support: We find no significant differences in the distribution of donations or frequency of donations between the Opt-out and Choice treatments (p=0.954 and 0.247, respectively) or between the Opt-out and No Choice Treatments (p=0.649 and 0.417, respectively).

4. Discussion

Outside of the laboratory, people can choose between altruistic actions that can help varying numbers of recipients, and this choice can increase the motivation of people to make donations. From a policy perspective, charities that coordinate altruistic activities might want to know whether emphasizing the number of beneficiaries increases help. Our findings suggest this is likely an ineffective strategy. Instead, a more promising avenue is to give donors an opportunity to sort into their preferred scenario by choosing how many recipients they help. The effectiveness of sorting can, however, be limited by ask avoidance.

[5] Our design is sufficiently powered: using Soyer & Hogarth's (2011) main effect between three and eight campaigns, we calculate we would need 62 subjects per treatment to be sufficiently powered to detect a similar effect with 80% power at the 5% significance level.

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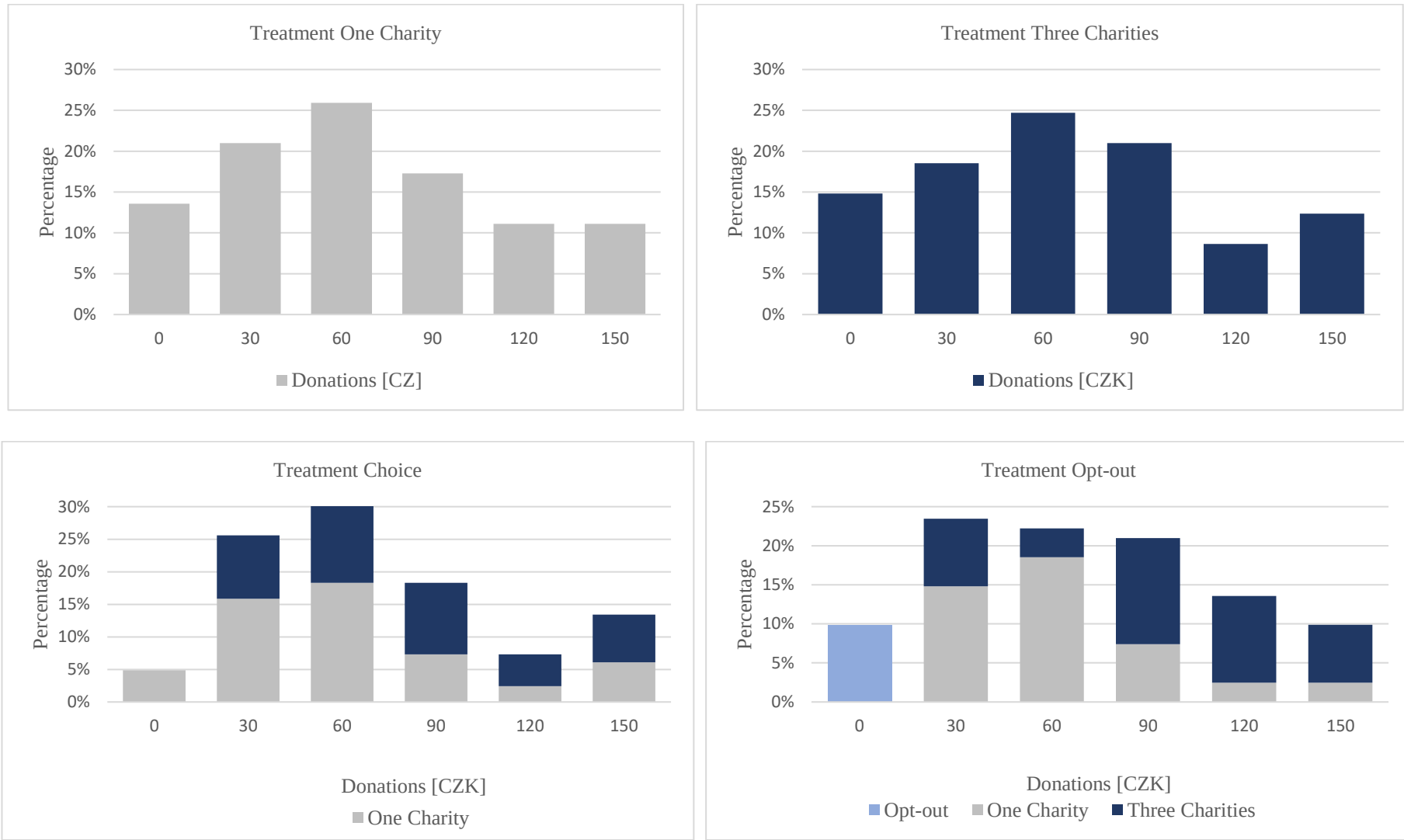
Supplemental Material

This material is to be presented online and includes the following three Appendices:

- Appendix 1: Donation distributions
- Appendix 2: Subject Instructions
- Appendix 3: Charity Information included in the Instructions

Appendix 1: Donation distributions

Supplemental Material Figure 1: Donations distributions across treatments



Appendix 2: Subject Instructions

Verbal instructions – All Treatments

Welcome to our experiment. Each of you will receive a 75 CZK show-up fee, to be paid in cash at the end of the session. You will now have a chance to earn additional money. From now until the end of the session, unauthorized communication of any nature with other participants is prohibited. If you violate this rule we will have to exclude you from the experiment and from all payments. If you have a question, please raise your hand and we will come to you to answer your question privately. Now please proceed to the next step.

Written instructions Treatment One Charity

Instructions

Welcome to our experiment.

Each of you will receive a 75 CZK show-up fee, to be paid in cash at the end of the session. You will now have a chance to earn additional money.

From now until the end of the session, unauthorized communication of any nature with other participants is prohibited. If you violate this rule we will have to exclude you from the experiment and from all payments. If you have a question, please raise your hand and we will come to you to answer your question privately.

You have 150 CZK. During the experiment, you can donate money to charity. You as a Donor decide to distribute 150 CZK by choosing from six options. You decide how much you keep for yourself and how much you contribute to one of these three charities, which will be selected by random selection.

(Description of charities is provided)

The choice is up to you. At the end of the experiment, you will receive a cash reward according to the option you selected, along with the CZK 75 you received for participation.

After the experiment is completed, we will count all donations for charities and send them to their bank account.

You decide only once.

Your decision is private, and none of the other participants in the experiment know the amount of your earnings.

Here are the options:
• If you choose `` Option 1, '' then you will get 150 CZK and the Charity will receive 0 CZK.
• If you choose `` Option 2, '' then you will get 120 CZK and the Charity will receive 30 CZK.
• If you choose `` Option 3, '' then you will get 90 CZK and the Charity will receive 60 CZK.
• If you choose `` Option 4, '' then you will get 60 CZK and the Charity will receive 90 CZK.
• If you choose `` Option 5, '' then you will get 30 CZK and the Charity will receive 120 CZK.
• If you choose `` Option 6, '' then you will get 0 CZK and the Charity will receive 150 CZK.

You made your decision, now please fill in the questionnaire.

Written instructions Treatment Three Charities

Instructions

Welcome to our experiment.

Each of you will receive a 75 CZK show-up fee, to be paid in cash at the end of the session. You will now have a chance to earn additional money.

From now until the end of the session, unauthorized communication of any nature with other participants is prohibited. If you violate this rule we will have to exclude you from the experiment and from all payments. If you have a question, please raise your hand and we will come to you to answer your question privately.

You have 150 CZK. During the experiment, you can donate money to charity. You, as a Donor, decide to choose one of the six options offered and thus to distribute 150 CZK. You decide how much you keep for yourself and how much you contribute to the three Charitable Organizations ACORUS, THEIA, LATA. The contribution to charities will be divided equally.

(Description of charities is provided)

The choice is up to you. At the end of the experiment, you will receive a cash reward according to the option you selected, along with the CZK 75 you received for participation.

After the experiment is completed, we will count all donations for charities and send them to their bank accounts.

You decide only once.

Your decision is private, and none of the other participants in the experiment know the amount of your earnings.

Here are the options:
- If you choose `` Option 1, '' then you will get 150 CZK and each charity will receive 0 CZK.
- If you choose `` Option 2, '' then you will get 120 CZK and each charity will receive 10 CZK.
- If you choose `` Option 3, '' then you will get 90 CZK and each charity will receive 20 CZK.
- If you choose `` Option 4, '' then you will get 60 CZK and each charity will receive 30 CZK.
- If you choose `` Option 5, '' then you will get 30 CZK and each charity will receive 40 CZK.
- If you choose `` Option 6, '' then you will get 0 CZK and each charity will receive 50 CZK.

You made your decision, now please fill in the questionnaire.

Written instructions Treatment Choice

Instructions

Welcome to our experiment.

Each of you will receive a 75 CZK show-up fee, to be paid in cash at the end of the session. You will now have a chance to earn additional money.

From now until the end of the session, unauthorized communication of any nature with other participants is prohibited. If you violate this rule we will have to exclude you from the experiment and from all payments. If you have a question, please raise your hand and we will come to you to answer your question privately.

You have 150 CZK. During the experiment, you can donate money to charity.
You, as a Donor, decide to choose one of the six options offered and thus to distribute 150 CZK.

In the first step, you decide whether you want to contribute to one or three Charitable Organizations. In the second step, you decide how much you keep for yourself and how much you contribute to one or three charities of your choice in the first step. If you choose to contribute to three charities, the donation will be distributed equally.

(Description of charities is provided)

The choice is up to you. At the end of the experiment, you will receive a cash reward according to the option you selected, along with the CZK 75 you received for participation.

After the experiment is completed, we will count all donations for charities and send them to their bank accounts.

You decide only once.

Your decision is private, and none of the other participants in the experiment know the amount of your earnings.

Now, please choose if you want to contribute to one or three charities:

- I want to contribute to one Charity.
- I want to contribute to three Charities.

Here are the options:
• If you choose `` Option 1, '' then you will get 150 CZK and the Charity will receive 0 CZK.
• If you choose `` Option 2, '' then you will get 120 CZK and the Charity will receive 30 CZK.
• If you choose `` Option 3, '' then you will get 90 CZK and the Charity will receive 60 CZK.
• If you choose `` Option 4, '' then you will get 60 CZK and the Charity will receive 90 CZK.
• If you choose `` Option 5, '' then you will get 30 CZK and the Charity will receive 120 CZK.
• If you choose `` Option 6, '' then you will get 0 CZK and the Charity will receive 150 CZK.
or
• If you choose `` Option 1, '' then you will get 150 CZK and each charity will receive 0 CZK.
• If you choose `` Option 2, '' then you will get 120 CZK and each charity will receive 10 CZK.
• If you choose `` Option 3, '' then you will get 90 CZK and each charity will receive 20 CZK.
• If you choose `` Option 4, '' then you will get 60 CZK and each charity will receive 30 CZK.
• If you choose `` Option 5, '' then you will get 30 CZK and each charity will receive 40 CZK.
• If you choose `` Option 6, '' then you will get 0 CZK and each charity will receive 50 CZK.

You made your decision, now please fill in the questionnaire.

Written instructions Treatment Opt-out

Instructions

Welcome to our experiment.

Each of you will receive a 75 CZK show-up fee, to be paid in cash at the end of the session. You will now have a chance to earn additional money.

From now until the end of the session, unauthorized communication of any nature with other participants is prohibited. If you violate this rule we will have to exclude you from the experiment and from all payments. If you have a question, please raise your hand and we will come to you to answer your question privately.

You have 150 CZK. During the experiment, you can donate money to charity.
You, as a Donor, decide to choose one of the six options offered and thus to distribute 150 CZK.

In the first step, you decide whether you want to contribute to one or three Charitable Organizations. In the second step, you decide how much you keep for yourself and how much you contribute to one or three charities of your choice in the first step.

The contribution to Charitable Organizations will be divided equally.

(Description of charities is provided)

The choice is up to you. At the end of the experiment, you will receive a cash reward according to the option you selected, along with the CZK 75 you received for participation.

After the experiment is completed, we will count all donations for charities and send them to their bank accounts.
You decide only once.

Your decision is private, and none of the other participants in the experiment know the amount of your earnings.

Now, please choose if you want to contribute to one or three charities:

- I want to contribute to one Charity.
- I want to contribute to three Charities.
- I do not want to contribute to any Charity.

Here are the options:
• If you choose `` Option 1, '' then you will get 150 CZK and the Charity will receive 0 CZK.
• If you choose `` Option 2, '' then you will get 120 CZK and the Charity will receive 30 CZK.
• If you choose `` Option 3, '' then you will get 90 CZK and the Charity will receive 60 CZK.
• If you choose `` Option 4, '' then you will get 60 CZK and the Charity will receive 90 CZK.
• If you choose `` Option 5, '' then you will get 30 CZK and the Charity will receive 120 CZK.
• If you choose `` Option 6, '' then you will get 0 CZK and the Charity will receive 150 CZK.
or
• If you choose `` Option 1, '' then you will get 150 CZK and each charity will receive 0 CZK.
• If you choose `` Option 2, '' then you will get 120 CZK and each charity will receive 10 CZK.
• If you choose `` Option 3, '' then you will get 90 CZK and each charity will receive 20 CZK.
• If you choose `` Option 4, '' then you will get 60 CZK and each charity will receive 30 CZK.
• If you choose `` Option 5, '' then you will get 30 CZK and each charity will receive 40 CZK.
• If you choose `` Option 6, '' then you will get 0 CZK and each charity will receive 50 CZK.
You made your decision, now please fill in the questionnaire.

Appendix 3: Charity Information included in the Instructions

Charities descriptions

ACORUS provides a comprehensive professional assistance to people at risk of domestic violence to overcome the unfavourable social situation and to integrate into everyday life without violence. The organization focuses on helping people psychologically and physically assault, sexual violence, economic constraints and social isolation, helping children and young people aged 6 to 26 years, threatened by socially undesirable phenomena. http://www.acorus.cz/

THEIA provides crisis assistance and professional social counselling services and assistance to children and young people aged 6 to 26 years, threatened by socially undesirable phenomena. The assistance is intended in particular for: persons in crisis; persons who are or may be the victims of crime; persons who are or could be the victims of domestic violence, or who are threatened by domestic violence, or to whom they would like to help; all who find themselves in the so-called debt trap. http://www.theia.cz/

LATA provides help to children, young people and families whose conduct has been in conflict with the law or found themselves in a difficult life situation. The assistance is intended in particular for: persons in crisis; especially young people who cannot cope with their daily lives and fail; single-parent families, single parents who find themselves in situations where they need help. http://www.lata.cz/