From idea to social change. Opportunities and barriers to the development of social innovations in Poland on the example of solutions for people on the autism spectrum

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ABSTRACT

Goal
The aim of this paper is to describe the procedures for introducing social innovations in psychology in Poland on the example of three implemented solutions for people on the autism spectrum: the "Mary and Max" Peer Volunteering Program, Autilius Therapeutic Game, and PEERS® Social Skills Training. These solutions have been developed under the cooperation of three sectors (NGO, public and private) and based on various financing mechanisms. They will serve as examples for identifying the opportunities and barriers to the development of social innovations in Poland. The article proposes a solution that may contribute to the growth of social innovations.

Theses
Social innovations can be defined as all products, services, processes and regulations that are novel in a given context and have an advantage over the existing solutions to social problems. Innovation is a complex process that consists of the following stages: 1) problem identification, 2) generation of ideas and potential solutions, 3) prototyping and testing (including effectiveness assessments), 4) implementation and sustaining, 5) scaling and dissemination, 6) systemic change. The process of creating and implementing social innovations requires a multidisciplinary team of experts, cross-sector cooperation and

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a long-term financial plan. These elements are discussed in the context of the three described solutions.

Conclusions

Poland lacks well-established procedures for creating and implementing social innovations. Such solutions should include support for team creation, development of financing mechanisms, favourable conditions for cross-sector cooperation and sources of know-how. Academic Incubators of Social Innovation (AIIS) could facilitate the development of social innovations by providing a collaborative platform for stakeholders other than the private sector and the scientific community.

Keywords: social innovation; autism spectrum; applied research; implementation

INTRODUCTION

Application research is still a poorly understood and rarely chosen direction of professional development for many researchers in the field of psychology. Its scope is not limited to traditionally understood clinical trials, i.e. the assessment of the effectiveness of new therapeutic methods, but also includes research on their implementation and dissemination, as well as piloting, prototyping and preparatory research. Many scientists are discouraged by the need for close cross-sector cooperation, taking into account the perspectives of various stakeholders or knowledge of market and system mechanisms enabling the permanent implementation of the developed solutions. All this is seen as detached from the true calling of people of science. The consequences of, and at the same time, the reason for the low interest in application research are the lack of well-developed paths of cooperation between researchers and other entities and the lack of funding mechanisms of innovation at the stage of their creation, testing and implementation.

Innovations are all products, services, processes and regulations that are new in a given context (e.g. for a given target group or area) and show an advantage over the solutions previously used (Mulgan, Tucker, Ali, & Sanders, 2007). When innovations serve to solve a social problem, and at the same time lead to an increase in the self-efficacy and agency of specific social groups, we speak of social innovations (National Center for Research and Development [NCBiR], 2012; TEPSIE, 2014; Wronka-Pośpiech, 2015). Therefore, the target of social innovations are often marginalized groups, and tackled problems include unequal access to health care, education, basic material or cultural goods. Some problems are of a general social nature, such as the increase in addiction and mental disorders in all social strata, or the degradation of the natural environment. Social innovations mostly emerge in the NGO sector, in universities or as grassroots change in a community itself, but their implementation and dissemination usually requires the involvement of the public and/or private sector. The ultimate goal of social innovation is systemic change, i.e. a permanent modification of existing practices, usually permeating economic sectors.

There are many conceptualizations of the very process of creating innovation. Murray, Caulier-Grice, and Mulgan (2010) describe six stages in the emergence

of social innovation that we shall use later in this paper: 1) Identifying the problem, 2) Generating ideas and solution proposals, 3) Prototyping and testing (including effectiveness evaluation), 4) Implementation and sustaining, 5) Scaling and dissemination, 6) System change.

In this article, the authors describe their experiences in walking down this path in order to develop and implement innovative methods of support and therapy for people on the autism spectrum in Poland. We will use examples of three innovative solutions—Autilius Therapeutic Game, "Mary and Max" Peer Volunteering Program, and PEERS® Social Skills Training. The major stages in the emergence of an innovation—from problem to implementation and dissemination—as well as funding mechanisms and the composition of project teams will be taken under consideration. The summary will include recommendations for researchers and practitioners willing to carry out research and development projects in the field of psychology.

"MARY AND MAX" PEER VOLUNTEERING

Problem

"Mary and Max" Peer Volunteering Program was established in order to reduce the social isolation of adolescents and young adults on the autism spectrum. Difficulties in initiating and maintaining social relationships and communication (American Psychiatric Association, 2013) on the one hand, and autism-related stereotypes and prejudices (CBOS, 2018) on the other, often lead to the marginalization of people on the autism spectrum in their peer group. In the Polish study "Polish Autism Survey", one third of adolescents and young adults on the autism spectrum disorders admitted that they did not have any friends (Płatos et al., 2016). The consequence of this group's social isolation is a sense of loneliness (Whitehouse, Durkin, Jaquet, & Ziatas, 2009), being "different" and alienated from one's peer group (Williams, Gleeson, & Jones, 2019), and finally a high level of depression-anxiety disorders and a low sense of self-esteem and satisfaction with life (Hebron, Humphrey, 2014; Mazurek, 2014).

Unfortunately, despite the fact that the relevance and complexity of peer relations increases significantly during adolescence, this is a period in which the offer of psychosocial support for people on the autism spectrum often ends (Laxman, Taylor, DaWalt, Greenberg, Mailick, 2019; Taylor, Henninger, 2015). This phenomenon—called the *service cliff* in the English-language literature—deepens in early adulthood, limiting one's access to support for a large part of people on the autism spectrum (Płatos, Pisula, 2019).

Description of innovation

The essence of the "Mary and Max" Peer Volunteering Program is to create conditions for people on the autism spectrum to establish and develop a peer

relationship based on acceptance, equality and shared interests. The program is intended for youth from the age of 14 and young adults who feel lonely and have limited access to social and cultural activities. In parallel to the recruitment of the participants, volunteers are recruited who want to support a person on the autism spectrum by spending time with them on joint get-togethers, meetings at home or sports activities. It is up to the psychologists employed as "pair supervisors" to select participants and volunteers, taking into account their mutual expectations, age, place of residence and shared interests. The participant-volunteer pairs meet once a week for about 8 months, arranging meetings on their own and deciding what to do.

In a peer-mediated model, contrary to the traditional model of psychological services, the role of a specialist is not to provide support directly, but to organize favorable conditions for the development of a satisfactory relationship with a peer. It includes a two-day induction training for prospective volunteers, followed by regular contact with each of them in individual and group meetings to keep them motivated to participate in the program and to solve problems at hand. The psychologist also prepares participants for participation in the program, meets them individually every month, and in a small group four times during the program. Finally, the pair caregivers co-organize informal group meetings of participants and volunteers (e.g. going to a museum or a picnic), thanks to which both parties can make new friends. To minimize the burden on participants and volunteers associated with regular reporting the course of the meetings to the psychologist, a web application was developed, which helps both parties confirm that the meeting took place and describe it briefly. If the report contains information about potential difficulties, the psychologist can react quickly by contacting the pair.

Apart from psychologists, the program also employs people responsible for contact with the local community, the so-called field workers. Their role is, e.g., establishing partnerships with cultural, sports, entertainment and catering institutions that provide participants and volunteers with their services free of charge, in the form of vouchers. This type of support equalizes the access of people involved in the program to socio-cultural activities, but also contributes to increasing the presence of people on the autism spectrum in public space and raising social awareness about these people.

Participation in the "Mary and Max" Peer Volunteering Program ends with a ceremonial finale, after which participants and volunteers can end their relationship or continue it outside the program. Importantly, the process of transitioning to a different nature of the relationship or ending it begins early enough and takes place with the support of psychologists. Although a large proportion of participants and volunteers choose to continue their relationship informally, the main goal of the program is not to provide people on the autism spectrum with lasting friendships (which can rarely be arranged top-down), but a positive experience of being in a satisfying peer relationship, sometimes the first in one's life. Thus, participation in the Peer Volunteering Program may be the first step towards establishing more independent peer relationships for many young people on the autism spectrum.

Creation process

The "Mary and Max" Peer Volunteering Program draws on British practices in the field of volunteering for various excluded groups. Programs known as *buddying*, *befriending* or *mentoring* engage the social environment in non-professional support for marginalized groups in their environment (Płatos, Wojaczek, Woźniak-Rekucka, & Zawisny, 2012). For over 20 years, this type of volunteering has been used by the British organization The National Autistic Society to support people on the autism spectrum.

The idea of creating a similar program in Poland arose during the visit of one of the members of the student Club for Supporting People with Autism, operating at the Faculty of Psychology at the University of Warsaw, in the United Kingdom. In order to implement this project, people associated with the Club—psychology students and graduates—established the "Hidden Potential" Association (now "Mary and Max"). The main reason for formalizing the Association's activity was the possibility of applying for funds under grant competitions, which, however—without the appropriate experience of the young members of the association—turned out to be too difficult at first. The pilot of the program took place in 2012/2013 and involved 15 pairs of teenagers on the autism spectrum and volunteers. The program was implemented without funding, with great support from the Department of Psychology, which made its facilities available for training and recruitment meetings. Despite organizational difficulties, we received unambiguously positive feedback from the participants, their families and volunteers about the program, which showed teenagers on the spectrum that peer relationships can be successful and even pleasant (Płatos, Wojaczek, Zawisny, 2015).

After the success of the pilot program, members of the Association decided to apply for a research and development grant under the new program announced by the National Center for Research and Development (NCBiR), entitled "Social Innovation". This time it was decided to act in cooperation with other entities. The Association joined the program as a leader in a consortium in partnership with the University of Warsaw, the Poznan University of Physical Education and the company Titanis. In December 2013, a two-year research and development project was launched. It resulted in a report on the situation of adolescents and adults on the autism spectrum in Poland (National Autism Survey: Płatos, 2016), also covering the demand for Peer Volunteering Program. Consultations and focus groups were also carried out, as a result of which the assumptions of Peer Volunteering Program, which were piloted in the implementation phase of the project, were updated. Finally, a guidebook for the organization of Peer Volunteering Program and a web application for its operation were created.

Team

The project team consisted mostly of psychology graduates and students associated with the student Club for Supporting of Students with Autism at the Faculty of Psychology of the University of Warsaw, with substantive support by

specialists in the autism spectrum (Prof. Ewa Pisula) and rehabilitation of people with disabilities (Prof. Stanisław Kowalik). The advantages of the team consisting predominantly of young people included the openness to the use of new solutions unknown in Poland, and at the same time the willingness to take the risk of implementing an innovative project on a large scale, and with uncertain implementation prospects. However, the team lacked the necessary experience in both project management and conducting application research.

Budget

The consortium led by the Association obtained funding from the above-mentioned NCBiR program "Social Innovations" in the amount of PLN 656,312. The funding included a preparatory research stage to develop a new solution (13 months) and a pilot stage dedicated to its testing (12 months). The grant did not cover the implementation stage, which was to be carried out after the end of the project. The granted funds provided the Consortium with the conditions for carrying out extensive preparatory research, as well as for the development of operating standards and infrastructure (including internet application), which enabled the subsequent implementation of the intervention. Unfortunately, the "Social Innovation" program was suspended after two of the four planned editions, so the funds from this source are no longer available.

Research

Preparatory work included three studies: a survey of adolescents and adults on the autism spectrum and their families, individual in-depth interviews with people on the autism spectrum and focus group interviews with parents of people with autism spectrum disorders as well as specialists working with them. Additionally, in cooperation with Titanis, a web application was developed to operate the program. The pilot phase involved testing the effectiveness of the developed program with the participation of 29 people on the autism spectrum using quantitative (questionnaire, in a pretest-posttest scheme without a control group) and qualitative methods.

Implementation

In 2015, the Board of the Association started work on obtaining funds for the implementation of the developed model. It was decided to seek for state funds earmarked for vocational and social rehabilitation of disabled people. Such funds, administered by the State Fund for Rehabilitation of Disabled People (PFRON), are annually distributed among NGOs that provide support to people with disabilities in Poland.

Acquiring funds for a project that eluded commonly known forms of support turned out to be extremely complicated. PFRON programs are aimed in

particular at financing the support provided locally in therapeutic facilities. The authors of the remaining projects are obliged to provide support in at least a few voivodships. The Peer Volunteering model belongs to the category of "out-of-facility" projects. Due to the requirements of the competition, the Association decided to invite two organizations to cooperate in the implementation of Peer Volunteering: The National Autism Society, branch in Łódź, and the Alpha Foundation from Lublin. The partnership made it possible to support 54 people from the autism spectrum from three provinces as part of the "Mary and Max" Peer Volunteering Program in 2016. Since then, the program has been annually financed from public funds and supports approximately 50 beneficiaries.

Dissemination

The association considered three possible dissemination scenarios for the project. The first was the centralized model, in which the Association is responsible for creating local teams, managing them and raising funds for their functioning. The second was the franchise model, in which the Association remains in close cooperation with the organization deciding to implement the project, training and supervising the staff at the new center, but without taking responsibility for obtaining funds for the implementation of activities and direct supervision over the team. The last solution considered was a certification-based model, in which people independently support Peer Volunteering in their region, following appropriate training.

Each of the considered models brought various challenges with it, the common denominator of which was the difficulty in obtaining funds for the implementation of this type of support. As mentioned above, the Peer Volunteering model hardly fits into the framework of both state and local government support programs for people with disabilities. Acquiring funds for its implementation requires a lot of determination and effort, therefore, despite the great interest that the program enjoys among specialists and potential beneficiaries all over Poland, its dissemination is slow. In 2021, the program is implemented in the Mazowieckie, Łódzkie, Podlaskie and Śląskie provinces as part of PFRON funds. The program is implemented by the "Mary and Max" Association of Social Innovations in partnership with the National Autism Society, branch in Łódź. Teams of employees from Warsaw, Białystok and Częstochowa are employed directly in the Association. Extending the scope of support provided under Peer Volunteering in the coming years is planned in the centralized model.

AUTILIUS JOINT ATTENTION

Problem

In 2012, when work on the Autilius project (originally called Autiki) began, new technologies were increasingly used in the therapy and education of people with

autism, but in Poland no computer program supporting the therapy of children on the autism spectrum disorders was available. The growing interest of researchers in computer-assisted therapies has been observed since the late 1990s (Ploog, Scharf, Nelson, & Brooks, 2013). Research indicates that the use of computer aids during learning reduces the incidence of difficult behaviors in children on the autism spectrum (Lee et al., 2015; Lee et al., 2015; Neely, Rispoli, Camargo, Davis, Boles, 2013) and contributes to increased involvement in the performance of tasks (Lee et al., 2015; Moore, Calvert, 2000; Neely et al., 2013; Williams, Wright, Callaghan, Coughlan, 2002). Most of the research concerns the assessment of effectiveness of a selected program (e.g. Golan et al., 2010; Hopkins et al., 2011, Whalen et al., 2016). However, little is known about the specific technological solutions or features of the program that affect its effectiveness. The project originators' intention was therefore (1) to check what elements of the program will affect its effectiveness and increase commitment to science, and (2) to create a product that can be widely used in therapeutic practice.

Description of innovation

Autilius Joint Attention are therapeutic games designed to support the learning of joint attention in children on the autism spectrum aged 3–7 years. The program consists of six games that support learning to follow the pointing gesture, as well as head and gaze direction. The games can be operated using three interfaces: a pad, a touch screen and a motion interface designed in motion capture technology.

Creation process

Work on the program began in 2012 with the search for a new application for motion capture technology, which Mateusz Kruszyński, a computer science graduate, was developing with his friends from the time of his studies. The proposal appealed to Kinga Wojaczek, who at that time was planning to start doctoral studies at the Faculty of Psychology and, having experience in working with children on the autism spectrum, saw the possibility of using this technology for therapeutic purposes. Looking for financing opportunities for the originator's program, in cooperation with Primeon Sp. z o.o., which decided to invest in the idea, Kinga Wojaczek and Mateusz Kruszyński applied for a research and development grant financed by NCBiR. The project assumed that the research part would be commissioned to a scientific institution, and the company would be responsible for the technological work and implementation of the idea. The grant application included both the planned research methodology and activities aimed at launching the product to the market. Mateusz Płatos, a psychologist with experience in working with young children on the autism spectrum, who helped in the development of the methodology and scenarios for therapeutic games, was included in the work at the last stage—the preparation of the final product for

implementation. It was only at this stage that it was decided that the games would support the development of joint attention.

Team

The core of the project team consisted of two young MA graduates—psychology and computer science—who were responsible for coordinating research and implementation activities. Cooperation with Primeon, which had started to build its position on the market of modern solutions for the education industry a few years earlier as a startup, was a good choice and contributed to the successful implementation of the solution. However, the applicants lacked close cooperation at the stage of planning research activities with scientists experienced in conducting application research. Admittedly, the research project was consulted at the stage of development, but to an insufficient extent, which translated into the research scheme being overly broad and impossible to fully implement.

It is worth noting that cooperation with both the university and the company was possible only thanks to the network of contacts that the originators had at their disposal, which may be a great limitation for potential innovators who may need support in establishing this type of relationship.

Budget

The project was co-financed by the National Center for Research and Development under the Innotech program. The total budget allocated to research and development activities amounted to PLN 1,310,500, of which PLN 276,100 was the required own contribution incurred by the entrepreneur—Primeon Sp. z o.o. The acceptance of the grant obligated the company to implement the project results in business activities. The budget did not include work on the target product. Co-financing in the phase of preparation for implementation could only be used for tasks such as purchasing market research services or consulting. Work on the product had to be financed by the applicant.

Research

The research conducted under the grant concerned (1) checking how children on the autism spectrum and those developing typically use various interfaces, and (2) measuring differences in emotional and behavioral engagement during learning with the use of a computer program and traditional paper teaching aids. The study took into account, inter alia, such independent variables as the view of one's face on the screen while performing tasks and operating the program using three interfaces: touch screen, pad and motion interface designed in motion capture technology. The aim of the research was to determine the most beneficial form of interaction during learning.

The grant could not finance research on the effectiveness of the program developed. The method of a child's interaction with a computer while using the Autilius Joint Attention was designed based on the results of the research conducted. However, the effectiveness of the games themselves has not been tested so far.

Implementation

As a result of research and development activities, a program was created to support the learning of joint attention in children on the autism spectrum. The commercialization of results took place through the creation of a sort of spin-off company, led by the originator of the project, which bought the rights to use the project results and launched the product on the market.

Dissemination

The Autilius Joint Attention has been available for sale since 2014 in two versions—home-use and for therapists—and is used in almost a thousand homes and institutions all over Poland. Since the innovation was a product with commercialization potential, the only limitation in its dissemination could be an unfavorable market response and an incorrect sales strategy adopted by the entrepreneur. In this case, the response of the target group turned out to be positive and the sales strategy was right.

PEERS® SOCIAL SKILLS TRAINING

Problem

PEERS® Social Skills Training respond to the already described problem of social isolation, loneliness and their negative consequences in the group of adolescents and adults on the autism spectrum. However, while Peer Volunteering Program responded to this problem by providing people on the autism spectrum with a positive relationship experience, the goal of the PEERS® program is to equip these people with the skills necessary to establish and maintain friendships and romantic relationships independently.

Contrary to Peer Volunteering Program, social skills programs (known as social skills training, TUS) are widespread in Poland (Płatos et al., 2016). The problem, however, is the limited access to methods of proven effectiveness that are tailored to the needs of adolescents and adults on the autism spectrum, as well as teaching ecologically relevant skills (i.e., those that are actually used by adolescents and adults in a given environment).

Description of innovation

The PEERS® Social Skills Training is a 16-week therapeutic program for people on the autism spectrum. The program has two versions that differ in the scope of the learned skills—PEERS® for teenagers (approx. 12–18 years old; Laugeson & Frankel, 2011) and PEERS® for young adults (approx. 19–24 years old; Laugeson, 2017). Both interventions were developed at the University of California, Los Angeles, where their effectiveness was first proven (Gantman, Kapp, Orenski & Laugeson, 2012; Laugeson, Frankel, Mogil, & Dillon, 2009). In 1.5-hour weekly sessions, participants learn skills such as starting and holding a conversation, organizing get-togethers, dealing with bullying and conflict resolution. In the version for young adults, the program also includes a four-week module on developing romantic relationships.

The program uses cognitive-behavioral techniques such as modeling (*in vivo* and audiovisual), breaking skills into steps, role-play exercises with feedback, and homework. The method of teaching skills takes into account the specificity of information processing by people on the autism spectrum (e.g. specific, non-metaphorical language). A distinctive feature of the training is the involvement of the social environment of people on the autism spectrum—parents, and in the case of the adult version, also volunteers or trainees. Their role is to practice the learned skills with participants, and to help them apply them in different life situations (i.e. generalization). Detailed information on the program can be found in separate publications (Laugeson, 2017; Płatos, in review).

Creation process

In 2018, Mateusz Płatos completed a six-month pre-doctoral internship at the University of California in Los Angeles, during which he had the opportunity to undergo an internship at the PEERS® Clinic and training for the PEERS® for Adolescents and PEERS® Young Adults Certified Providers. These experiences made it possible to start work on the Polish adaptation of the program, which from the very beginning were supported by the creator of PEERS®, Dr. Elizabeth A. Laugeson. In 2019, Mateusz Płatos, with the help of Kinga Wojaczek, made the initial translation and adaptation of lesson plans for PEERS® for Young Adults. Between October 2019 and February 2020, a pilot program took place with the participation of 7 adults on the autism spectrum. The pilot program allowed not only to pre-test the effectiveness of the workshops, but also to train the staff of therapists who make up the Polish team implementing the PEERS® program. These activities were financed from the funds of the Capital City of Warsaw.

At the same time, the team applied for funding for more extensive research on the effectiveness of the program in the PFRON competition entitled "Social and technological innovations in the activization of disabled people". Obtaining a grant enabled the commencement of clinical trials on both versions of the program in January 2020. The first training groups were to start in March 2020, which turned out to be impossible due to the outbreak of the coronavirus

pandemic. Ultimately, the groups started in September 2020 and were conducted in a mixed mode (i.e. part of the classes was held online). By June 2021, six groups (four for teens and two for young adults) had taken place and all the materials needed to run the workshop had been produced, including lesson plans, homework sheets and over 100 videos of the skills being learned.

Team

After 9 years of operation, the Association had staff with appropriate experience in the implementation of research and development projects, as well as access to specialists in the diagnosis and therapy of people on the autism spectrum. Apart from Mateusz Płatos and Kinga Wojaczek, who acted as group leaders and researchers, the team consisted of four psychologists supporting recruitment to the program and group management, three psychologists-diagnosticians making psychological measurements, a research assistant, and a dozen or so trainees—psychology students.

Budget

The main source of funding was the aforementioned PFRON grant in the amount of PLN 114,541, which was managed by the Association. PFRON research competitions, usually announced every year, are one of the few sources of funding for application research in the field of psychology. At the same time, they have two serious limitations. First, applicants are required to make an own contribution of 10%, which in the case of NGOs is a large obstacle for entry. This forced the Association to reduce the project costs to the necessary minimum. Second, the project duration was limited to 12 months (eventually extended to 18 months due to the pandemic). This made it impossible to schedule adequate time for the preparatory work and pilot of the program before testing its effectiveness in randomized trials. The solution turned out to be the co-financing of these activities from municipal funds at the Association's disposal, of which approx. PLN 19.5 thousand was allocated to the development of the PEERS® program.

Research

Studies on the effectiveness of the program were conducted in a randomized controlled trial (RCT) design, in which participants are randomly assigned to an intervention group or a control group (in this case, the so-called delayed intervention group). The preliminary qualification of the study participants was carried out using standardized methods for the diagnosis of the autism spectrum (ADOS-2) and cognitive functions (Stanford-Binet 5), as well as questionnaire tools. The accuracy of implementation was checked by means of audiovisual recordings of all sessions and keeping current records of the participants' homework. The results of the study—prepared for publication in scientific journals—show the high

effectiveness of both versions of the program in developing social skills in people on the autism spectrum.

Implementation

Immediately after the end of the research, the Association obtained a grant for the implementation of the first clinical groups of PEERS® for Adolescents from the funds of the Masovian Voivodeship. The program fits well with the available funding schemes for projects supporting people with disabilities. The number of people applying for participation in the program currently exceeds the Association's capability of organizing support for them.

Dissemination

Conducting the PEERS® program requires qualifications obtained after completing the certification training. To make the program available to Polish specialists, it is also necessary to publish manuals for both versions of the workshops. Scaling the program will therefore include: a) the publication of research results on the effectiveness of the program in scientific journals, which is a prerequisite to b) the publication of Polish intervention manuals, and then c) the organization of certification training for Polish specialists. The entire process—from adaptation and pilot work to scaling up the finished program—should therefore take about 5 years.

HOW TO SUPPORT THE DEVELOPMENT OF SOCIAL INNOVATION IN POLAND?

The introduction to this article outlines the six stages that lead to social innovation (Murray et al., 2010). At each of these stages, it is necessary to involve people from different backgrounds. According to the authors of this article, a project team that aims to develop a new solution, should include scientists, experienced in the implementation of application research, practitioners, experts in social policy issues, representatives of the private sector and the target group of a given innovation from the very beginning of their work on said innovation. Identifying the problem, its sources and causes should take place through direct contact with the group which the innovation is designed for.

At the second stage—generating ideas and solutions—the participation of people showing creativity and thinking out of the box is recommended. This role may be played by students or practitioners at the beginning of their professional career, who are not yet attached to the solutions used so far. At the prototyping stage, the participation of practitioners and institutions, e.g. support centers, is necessary, which will enable the pilot implementation of the solution. In this phase, useful solutions that have successfully passed the prototyping process

should undergo performance testing after improvements. In this phase, the participation of researchers who have experience in planning and implementing application research is recommended.

The fourth phase—implementation and maintenance of innovations over time, and the fifth—scaling and dissemination—involve the development of a business model in which the solution will be able to be maintained over time and available to a growing target group. Representatives of business, NGOs and the public sector may be helpful in developing such a model, depending on its commercialization potential. Only such an extensive process can lead to the last stage, i.e. triggering a system change.

The three social innovations described above — "Mary and Max" Peer Volunteering Program, Autilius Therapeutic Game and the Polish adaptation of the PEERS® Social Skills Training — were created as a result of the meeting of these several environments. The authors of this article are researchers, practicing psychologists, entrepreneurs and third sector representatives, and are constantly in touch with people on the autism spectrum whom these products and services were created for. Such a configuration of experiences is not common, however, and, according to the authors, can be successfully replaced with a place where representatives of various environments can meet and exchange experiences. A similar solution is offered by already existing academic business incubators, established by universities. However, they will only work in the case of ideas with commercialization potential and only at the stage of innovation implementation, but will not respond to the challenges of the remaining stages of work on social innovations.

According to the authors of this publication, the solution that could support the process of creating social innovation would be the Academic Incubators of Social Innovation (AIIS)—meeting spaces for various communities, not only the private sector and science representatives. AIIS could support students in three areas: (1) working on innovations—by helping to understand current social issues, organizing internships in NGOs and public institutions and various forms of meetings with groups which innovations will be created for, or finally conducting courses and training on various methods of working on innovations (e.g. on the design thinking method); (2) testing innovations, creating support centers or cooperating with already existing local institutions, in which pilots of the proposed solutions can be carried out; (3) promoting the innovations developed, for example by training the staff in support centers, organizing conferences or other forms of knowledge transfer between the world of science and practice.

AIIS could be an element of building closer cooperation between researchers and the social environment. The knowledge and experience of researchers in the field of psychology could bring great benefits for the development of social innovations, which require proficiency in both qualitative (e.g. at the stage of needs diagnosis and solution testing) and quantitative methods (e.g. in assessing the effectiveness of the resulting products or services). However, the prerequisite for greater involvement of scientists in application research is strengthening the "implementation" path of academic career (system of promotions, awarding degrees and bonuses adapted to the specificity of this research) and creating more stable funding mechanisms for this research (e.g. within the National Center for Research and Development).

Finally, it is worth noting that recently various social innovation incubators have been operating in Poland, whose task is to support the incubation process of innovative solutions and to provide grants for their implementation, primarily from the European Social Fund under the Operational Programme Knowledge Education Development. The authors' proposal differs from the existing solutions in the form that the Academic Incubator of Social Innovation would take. As a permanent element of the university structure, AIIS is to be not only a place for implementing ideas, but also a space for identifying needs, a meeting place for representatives of various sectors and environments, and an institution responsible for disseminating developed social innovations. Moreover, the existing incubators usually only finance research on the development of innovation, but not on the evaluation of their effectiveness, which hinders the development of evidence-based practice—especially in areas such as psychology.

SUMMARY

As a summary of the above considerations, we would like to invite you to reflect on how many successful implementations in the field of psychology—maintained in time and widespread—created in Poland, you are aware of. Our answer to this question is: still not enough. The sources of this fact should be seen in the systemic barriers encountered by practitioners, researchers and students who want to create and implement innovative products or services. In this article, we tried to show the obstacles we encountered in our work—difficulties in establishing a cross-sectoral team, a shortage of experience in application research or problems in obtaining funding tailored to a given solution's specificity. Though we have managed to overcome these obstacles and lead to the implementation of the services and products described, we believe that the development of social innovation requires a more systemic approach and stimulation. In the last section of this paper, we presented one of the ideas for such systemic activities in the form of the organization of Academic Incubators of Social Innovation. Support for innovation must be a multi-level activity, however, and also include financing mechanisms, legal regulations and study programs. Only then will we have more social innovation, and scientific and applied psychology will jointly contribute to solving important problems of marginalized groups and the society as a whole.

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