

The UPRIGHT Project: Designing and Validating Resilience-Based Interventions for Promoting Mental Wellbeing in Early Adolescence

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ABSTRACT

This paper describes recent work conducted in the EU project UPRIGHT regarding the design of a resilience-based intervention promoting mental wellbeing in early adolescence, including smart coaching solutions for families. In particular, the project is currently conducting a co-design phase, where the content of the training program and the digital tools to deliver it are discussed and assessed in collaboration with the schools' stakeholders. The intervention will be validated within 5 large-scale pilot studies in Spain, Italy, Iceland, Denmark and Poland, involving about six thousand families over the next 4 years.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

KEYWORDS

Resilience coaching, Mental Wellbeing interventions

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1 INTRODUCTION

Early adolescence (10-14 years) is a time of many physical, mental, emotional, and social changes [1]. Few developmental periods are characterized by so many changes at so many different levels, when children face the biological transformations of puberty, the educational transition from elementary to secondary school, and the psychological shifts that accompany the emergence of sexuality [2]. According to recent statistics [3] one in four to five adolescents have at least one mental disorder in any given year, the most commons being: anxiety disorders (31.9%), behavioral disorders (19.1%), mood disorders (14.3%) and substance use disorders (11.4%). Risk factors taking place during adolescence include social isolation, family conflict, stressful life events, emotional immaturity, academic failure, low self-esteem and poor body image as well as health risk behaviors (drug and alcohol use) [4][5]. The European project UPRIGHT, funded by the H2020 Program, is aimed at promoting mental wellbeing and prevent mental disorders by enhancing resilience capacities in youths, through a holistic approach addressing early adolescents, families and education professionals, creating a mental wellbeing culture in schools.

UPRIGHT intervention is based on a core content framework that is being co-developed [6] in 2018 by the project partners by involving adolescents, families, school

staff, mental health professionals and policy makers. It is based on:

- Youths’ and teachers’ intrapersonal factors: develop effective coping skills, social and emotional skills and mindfulness through active participation in the design and implementation. Youths and teachers not only actively participate in learning but also in coaching younger students on the resilient skills: *“I hear and I forget. I see and I remember. I do and I understand”*.
- Familial factors: enhance good parenting strategies to foster family cohesion and warmth, including promoting positive mental health and wellbeing and identifying mental health problems in the adolescents, using guidelines and interactive digital tools. *“It does not matter if your kids are not listening to you because they are watching you all day”*
- Environmental factors (school staff and community): create a culture in the school that promotes good mental health and resilience in the students. Teachers and other school staff will be aware and work together with UPRIGHT staff. The perspectives of all the relevant actors of the “whole school community” should be integrated. *“I hear and I forget. I see and I remember. I do and I understand and I can teach it.*

UPRIGHT program will be adapted to the specific characteristics and mental health needs of participants in the 5 European regions where the program will be piloted (Spain, Italy, Poland, Denmark, Iceland). Based on the UPRIGHT framework, the program will be designed following an active co-creation methodology involving adolescents, families, school staff, mental health professionals, ICT experts and policy makers. It includes identifying the specific challenges related to promoting mental health and resilience, co-design and co-produce the intervention; and validate and co-customize the deployment ensuring regional needs and particularities are met.

In the following sections we will present some key ideas on the digital tools that are going to be developed in UPRIGHT in order to support coaching of teachers and families on the resilience components of the program.

We will also introduce our plan for validation of the UPRIGHT program, by means of 5 European large-scale pilots, aimed at creating a strong impact of the program in the regional sites involved.

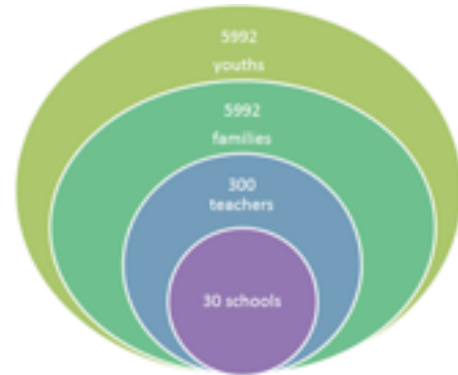


Figure 1: The UPRIGHT Intervention validation: figures of participants involved in the 5 Pilot sites

2 DIGITAL COACHING INTERVENTIONS FOR RESILIENCE TRAINING

2.1 A Web Platform for Supporting Positive Parenting Styles

During the UPRIGHT project digital intervention tools will be developed to support training of positive parenting styles in families of adolescents. In particular, families will be provided access to a dedicated web platform supporting training by means of digital materials, such as videos showing examples of typical problems and possible solutions of raising teenagers, as well as practical exercises and guides. The design and development of the web platform will follow a user-centred design approach [7], where stakeholders will have the opportunity of actively influencing the platform design and future development by informing designers with their specific needs and requirements. The platform will also be a place for sharing possible ideas and discussions on topics of interest by families involved in the different pilot sites, to better understand their parenting styles and face possible challenges in dealing with teenager kids.

2.2 Digital Coaching for Mindfulness Training

Another digital tool of the UPRIGHT resilience program will consist in a mindfulness-coaching module for mobile devices, see [8] for similar examples, that will be used to support effective coaching of teachers in the mindfulness component of the program. This tool will integrate face-to-face training of teachers in mindfulness, by allowing participants to practice in mindfulness exercising at home. The idea of integrating both online and offline methods of

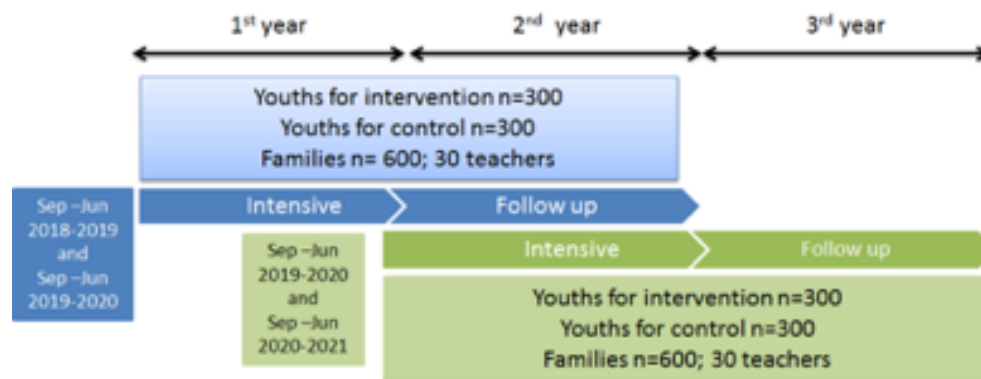


Figure 2: UPRIGHT intervention per pilot site

training in UPRIGHT is meant to optimize participants' effort and time invested during training, so as to achieve the best outcome in the shorter time possible.

3 LARGE SCALE VALIDATION OF THE UPRIGHT PROGRAM

The validation phase of the UPRIGHT project will consist in a randomized trial by clusters, where the unit of randomization will be the schools (treated vs. control). In fact, the randomization will be done at the very beginning of the project to avoid any bias in the co-creation.

Regarding the sample size statistic method used, and assuming an intra-cluster correlation coefficient of 0.2 between individuals of the same conglomerate (similar response patterns between individuals of the same cluster), an effect size of 0.34 in the primary endpoint at 24 months of the beginning of the intervention and taking some losses (20%), 2996 students will be required (1498 per branch) to measure the primary endpoint 'improvement of mental health' (80% statistical power and $\alpha = 0.05$). The intervention schools will tackle the 4 components in youths ($n=5992$), families ($n=5992$), teachers ($n=300$), and schools ($n=30$), see Fig.1.

For the evaluation, a mixed-methods approach, which refers to an emergent methodology of research that advances the systematic integration of quantitative and qualitative data within a single investigation or sustained program of inquiry, will be employed. By means of this method, UPRIGHT aims to strengthen the data obtained by different approaches, providing a broader understanding of what each approach has achieved, and how or why these outcomes have occurred. A simulation modelling methodology will be used to represent the natural history of mental disorders according to the resilience level and calculate the economic and epidemiological impact of UPRIGHT in the long term. Using mixed-methods approach has several advantages, which includes: 1) comparison between quantitative and

qualitative data provides a better understanding of contradictions between quantitative results and qualitative findings; 2) reflects participants' point of view giving a voice to study participants and ensure that study findings are grounded in participants' experiences; 3) provides methodological flexibility elucidating more information than can be obtained in only one type approach.

4 CONCLUSIONS

In this paper we have outlined the main objectives of the UPRIGHT project, which is aimed at creating a mental wellbeing culture in schools to prevent mental health problems in youths by means of resilience-based interventions delivered at schools through a combination of face-to-face and online training methods and materials. The UPRIGHT project is a relevant contribution to the WellBeCoach workshop, since it represents an example of coaching intervention that will be realized and validated with thousands of participants in 5 different European countries with the aim of producing a strong impact in the school communities involved and beyond. In particular, co-creation methods with end-users (youth, families and teachers) will be used to develop and adapt the core intervention to cultural particularities of each pilot site. A randomized trial by clusters design with two years follow up will be conducted to refine and validate the intervention over the next three years. The intervention will be implemented twice in each school during three academic courses (see Figure 2). Qualitative and quantitative indicators will be collected at three time points to measure improvements in participants' resilience. Predictive modeling methods will be used to estimate cost-effectiveness of this intervention.

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