

## REVIEW OF DOCTORAL DISSERTATION

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### *“Study of Effectiveness of Prevention Programs”*

Josipa Mihić works as an assistant at the Department of social pedagogy at the University of Zagreb, Faculty of Education and Rehabilitation Sciences. On March 11<sup>th</sup> 2013 she has defended her doctoral thesis “Study of Effectiveness of Prevention Programs” on a doctoral study “Prevention of Mental and Behavioral Disorders and Promotion of Mental Health”, University of Zagreb, Faculty of Education and Rehabilitation Sciences. Dissertation was written under the supervision of Professor Clemens Hosman from the Maastricht University and Radboud University Nijmegen, The Netherlands. The president of the committee for dissertation evaluation and defense was Professor Josipa Bašić from the University of Zagreb, Faculty of Education and Rehabilitation Sciences. Members of the committee were Professor Gordana Pavleković, School of Public Health Andrija Štampar, University of Zagreb and Professor Damir Ljubotina, Department of Psychology, Faculty of Philosophy, University of Zagreb.

This doctoral study was conducted within the project “Preffi – Quality Assurance in the County of Istria” initiated by the University of Zagreb, Faculty of Education and Rehabilitation Sciences and the Department of Health and Social Services in County of Istria. The long term aim of the project is to contribute to a decrease of mental and behavioral problems of children and youth in Istria region through the incorporation of evidence-based principles into the mental health promotion and prevention practice.

The study had two primary aims. The first one was the analysis of the programs’ quality assessment process through the translation of the Dutch instrument Preffi 2.0, and its application and validation on written proposals of mental health promotion and prevention programs in the county of Istria. The second aim concerned the concept of the programs quality assurance. The aim was to assess if investing in knowledge and skills by training mental health promotion and prevention programs’ managers and deliverers about the principles of effectiveness can improve the level of quality of their written programs’ proposals and improve the outcomes of the programs they develop and deliver.

A special goal of the study was to contribute to relevant knowledge on science-based criteria for financing mental health promotion and prevention programs in Istria County through incorporation of effect predictors into financing criteria.

The dissertation is written in English and has 252 pages of text divided into five main chapters, giving 159 citations of literature and 8 appendices. It contains 15 tables, 25 graphs and 5 text boxes. The chapters are: (1) Introduction, (2) Aims and research problems of the study, (3) Methods, (4) Results and Discussion and (5) Conclusions and Recommendations.

Chapter 1 discusses international developments and progress in mental health promotion (MHP) and prevention science and reviews the history and current state of the art of this field in Croatia. Next a report is given on the current knowledge about the evidence-based effectiveness of MHP and prevention interventions and the moderators that predict effectiveness. These moderators are considered as core variables in quality development and assessment of prevention programs. The theory, content and structure of the Preffi 2.0, a quality assessment instrument for prevention, is presented and the outcomes of the original Dutch validation study. The Training for Prevention is described, that aims to increase the expertise of program managers and deliverers to develop and implement high quality preventive interventions. Finally, the overarching Logic Model of this research and development project is presented, and the empirical studies of this project are introduced. Chapter 2 is about the aims and targeted problems of this doctoral study and the third chapter describes the used research methodologies in the three studies included in the project. These three studies are in accordance with three research tasks of which the outcomes are presented in chapter 4. The three research tasks of this dissertation were:

- To assess metric characteristics of the Preffi 2.0, i.e. its content validity, reliability and predictive validity.
- To examine the impact of the Training for Prevention on the effectiveness and quality

of mental health promotion and prevention programs and

- To identify strengths and weaknesses of the programs of mental health promotion and prevention from the Region of Istria that were involved in the study.

For each of these research tasks hypotheses have been formulated. The fourth chapter about the results, presents the outcomes of the validation and reliability study on the Preffi 2.0 in Istria County; secondly, the results of the quality assessment of 24 MHP and prevention programs implemented in Istria; third, the findings on the impact of the Training for Prevention on the program's effectiveness; and fourth, the results of the test on the predictive validity of the Preffi 2.0 with program effectiveness as validation criterion. Finally, chapter 5 presents the conclusions from this doctoral study and the recommendations for improving the Preffi 2.0 instrument, the Training for Prevention and more in general for improving the policies and capacities for effective prevention in Croatia.

The data in the doctoral study are based in the first place on quality assessments of 24 grant proposals of MHP and prevention programs in Istria, that were offered by NGO's to the Istrian Department of Health and Social Care. After the quality assessment of a first round of grant applications, NGO's were asked to send in a renewed grant application about the same (or improved!) programs one year later, which were then again assessed on their quality. During that year and before the granted programs in the first wave were implemented, managers and deliverers of a randomly selected half of the 24 programs were offered the Training on Prevention, while the other half constitutes the control condition who was promised to get the Training after the finalization of the study. In addition, for all involved programs relevant outcome indicators were selected and administered to participants both before and after the implementation of these programs, to measure the degree of change in on outcome criteria.

As the most important outcomes of this doctoral study I would like to stress the following:

- Confirmation was found for the reliability and construct validity of the Croatia version of the Preffi 2.0 as is evidenced by the satisfying findings on the Content Validity Ratio (CVR) and the G reliability coefficient for the whole Preffi. This conclusion also applies to the measures of the separate Preffi clusters. Also significant and strong correlations were found

between the separate Preffi cluster scores and the total Preffi score, stressing the coherence of the instrument. This is an important replication of the Dutch findings and supports the value of the Preffi 2.0 as an internationally reliable and theory-based instrument for quality evaluation of prevention programs that deserves a wider use.

- Tested for its accuracy of measurement by using the SEM coefficient, the Preffi 2.0 applied at both assessment moments in this study showed still insufficient precision. This stresses the need to further improve the formulations, instructions and explanations of the Preffi 2.0 instrument and to add interviews with the program designer/manager to the assessment tools of the Preffi 2.0.
- The hypothesized predictive validity of the Preffi 2.0 was not confirmed. Preffi total scores were not related to the measured program effects. Higher Preffi results did not predict higher program effects. For two clusters of the Preffi, however, some indication for their positive predictive validity was found: Determinants Cluster and Objectives cluster. This finding is in a way disappointing, but should be valued as a important stimulation to further improvements. These negative outcomes could be explained in two ways with corresponding different implications. The first and quite likely explanation is that the used design to test the effectiveness of the 24 different programs was a too big challenge given the limited time and resources available in this study. Improvements for a valid design of such a multi-site effectiveness study are possible. Secondly, it stimulates to update the knowledge on effect predictors included in the Preffi 2.0 on the basis of more recent controlled outcome studies and qualitative studies of practice. The value of this doctoral study is that it has opened the way to the development of the next improved version: Preffi 3.0.
- The results from the outcome study on the impact of the Training for Prevention on program quality showed only partial success. Looking to averaged effect sizes of the programs in the experimental and control condition, as expected the effect size in the experimental group was higher than in the control condition ( $d=.43$  versus  $d=.28$ ), but due to the low statistical power of this study this difference was not significant. Neither a significant

effect could be found for the quality of the program proposals when measured with the total Preffi score. However, for three of the eight Preffi 2.0 clusters significant differences were found. The evaluation report showed significant better outcomes among the programs in the experimental condition. These outcomes show at least a promising trend and support the potential of the Training as in instrument of quality assurance.

- The study also reveals that the program quality varies significantly between the assessed MHP and prevention programs in Istria, but in average is still rather low when compared to these high quality standards. This stress the need for investing in quality improvement and training. The Preffi has showed its benefits by identifying specific quality dimension that need special attention in efforts for quality improvement.

This study has also some weaknesses and limitations as discussed in the last chapter. These are mainly due to the fact that this study is the first of this type in Croatia and the researchers could not rely on a research tradition on this topic. For this reason, this study has shown additive value in its explorative parts. Also the restricted time and budget available to run such a complicated study has limited the opportunities for studying the specified research questions and causal relationships. Although, studying the program quality of these 24 programs should be considered as a significant achievement given the limited time frame and resources, from a perspective of statistical power this number and the numbers of participating managers and implementers are still small, and have seriously limited the opportunity to find significant results. This study deserves a replication using a larger number of projects and improved training efforts as part of a national strat-

egy for improving the quality of MHP and prevention programs in Croatia.

This dissertation provides an important contribution to the field of prevention science and to the future of prevention practice and prevention policy in Croatia, but also to the international development of scientific knowledge and assessment tools on program quality. Study is rather unique in the context of prevention research in Europe. To date, only a few studies have been published on testing the program quality of MHP and prevention programs in Europe using a standardized quality assessment instrument. To my knowledge this is the first study in Europe testing the relation between program quality and program effectiveness across a larger group of programs, and testing the impact of Capacity Training on the effectiveness of a group of prevention programs. Taking into account the absolute priority that is given internationally to provide evidence for the effectiveness of prevention programs in this field and to increase their effectiveness; this study is of great significance as pioneering study on the outcomes of program quality and efforts to improve it. I value this study highly also because its very well-thought and elaborated translation of the study results into recommendations for practice and policy. The last chapter contains a valuable collection of boxes, specifying a range of important and very useful recommendations. These include among others recommendations to further improve the Preffi 2.0 instrument, its content and predictive validity and its reliability, to improve the Training for Prevention, to improve the Evaluation report selection procedure for grant giving, and to stimulate the quality of prevention programs in Croatia as a whole.

The study is an outstanding example of bringing science to practice and practice to science.

**Prepared by:  
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