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EVIDENCE BASED TRAINING APPROACH IN ORGANIZATIONAL PRACTICE

This article centers on the urgent need to reconsider the way trainings are designed and delivered. Based on conducted studies and literature review an approach to training based on evidence as a new movement in HRM practices is presented. The definitions and features of evidence-based practice and existing knowledge on evidence-based human resource management (EBHRM) is discussed and integrated. The article also examines what can be learned from existing research on EBHRM into the effectiveness of evidence based training. The data were collected using surveys. Based on the literature review and data analysis the survey to measure effectiveness of the trainings was designed. The study was conducted among social workers, who participated in comprehensive training program. The research reveals that training is a logical continuing process consisted of four phases: design, delivery, evaluation, and transfer. The new approach to training places those activities in the context of using best available evidence to ensure employee and organizational performance. A rationale for why instructors should embrace evidence best practice during trainings is presented. It also urges trainers to adopt a reflective practitioner approach and the attitude of trainer as a researcher towards efficiency of their practices. The unique value contribution of this paper comes from the development of an evidence-based training approach based on conducted research and an in-depth review of the evidence-based HRM literature.

Keywords: human resource management, evidence-based practices, high-performance work practices, development.

1. INTRODUCTION

The study of evidence-based practices has become popular over the last few decades. In the management field there is a movement to base management practices on research evidence. Many organizations fail to take up effective approach to achieve competitive advantage through people, employees still are perceived as resources rather than humans therefore attention in the research-practice gap has been recently received mostly in HRM field[2].

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[2] B.E. Kaufman, *Strategic human resource management research in the United States: A failing grade after 30 years?*, "Academy of Management Perspectives" 2012, 5, p. 12–37; C. Gill, *Don't*

Recent studies confirm that HRM practitioners lack of knowledge of evidence based management, they also do not seek or value such knowledge[3]. The reason could be a gap between academics and practitioners[4] which reduces the transfer of research knowledge as well as relationship with management. Therefore most attention regarding HRM's failure to implement evidence based management has focused on knowledge transfer from academics to HRM practitioners[5].

Evidence-based practice is a radical and significant change in approach to conventional HRM practices. It entails an efforts to develop critical judgement in making decisions that impact organizations and employees performance. In today's global economy, to maintain competitive advantage it is necessary to focus on practices that lead to organizational performance. Thus, the need to rethink conventional use of HRM practice is urgent. As a part of a set of HRM practices empirical studies identify applying training to achieve higher performance[6]. Although many companies acknowledge training as a strategic investment for developing human capital, they maintain an ambiguous position regarding training, they report a failure to develop skills effectively and anticipate future needs thus involve only a minority of employees in development activities[7].

Organizations make large investments in trainings nevertheless the bulk of training expenditures seemingly do not translate into the effects of training to the workplace. Therefore organizations needs to give more attention to the effectiveness of systematic acquisition of knowledge, skills and competencies of employees. This can be achieved through applying new trend towards training based on evidence approach that is built on available research evidence.

This article will make three contributions. Primarily, it aims to describe a new approach to training based on evidence. To present this new movement in HRM practices the definitions and features of evidence-based practice and existing knowledge on evidence-based human resource management (EBHRM) will be discussed and integrated. The literature review examines what can be learned from existing research into the effectiveness of evidence-based training. A rationale for why instructors should embrace evidence best practice during trainings will be discussed. It also urges trainers to adopt a reflective practitioner approach and the attitude of trainer as a researcher towards efficiency of their practices.

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know, don't care: An exploration of evidence based knowledge and practice in human resource management, "Human Resource Management Review" 2018, 28, p. 103–115..

[3] S.L. Rynes, T.L. Giluk, K.G. Brown, *The very separate worlds of academic and practitioner periodicals in human resource management: Implications for evidence-based management*, "Academy of Management Journal" 2007, 50, 5, p. 987–1008.

[4] *Ibidem*; S.L. Rynes, K.G. Brown, A.E. Colbert, *Seven common misconceptions about human resource practices: Research findings versus practitioner belief*, "The Academy of Management Executive" 2002, 16, 3, p. 92-102.

[5] C. Gill, *Don't know...,* p. 103–115.

[6] P. Neirotti & E. Paolucci, *Why do firms train? Empirical evidence on the relationship between training and technological and organizational change*, "International Journal of Training and Development" 2013, 17, 2.

[7] *Ibidem;* R. Grossman & E. Salas, *The transfer of training: what really matters*, "International Journal of Training and Development" 2011, 15, 2, p. 103–120.

2. BACKGROUND AND LITERATURE REVIEW

The notion of using scientific evidence for professional practice is not new. At the end of the XXth century the evidence-based approach became particularly influential in medical science and health care. Medicine was the first branch of science in which the principle of referring to evidence in clinical proceedings was adopted. Sackett et al.[8] define the concept of "evidence-based medicine" as an application of the latest and most reliable scientific data in making decisions regarding health care for each patient, as a "way of thinking" that can be used to promote the implementation of research findings in clinical routines and practice[9].

Over the past 20 years, the concept of evidence-based practice has also developed in the social sciences. In the late 1990s, the term 'evidence based' became present in other non-medical disciplines and practice areas, including education, social work, criminology, and government policy making[10].

Evidence-based management (EBM) refers to translating principles based on best evidence into organizational practices and to the evaluation of managerial decisions[11] it incorporates scientific knowledge in the content and process of making decisions[12]. Evidence-based management approach enhances the quality of decisions to solve organizational problems by deriving principles from systematic research to guide management practices[13]. Through evidence-based management, managers develop into experts whose organizational decisions are supported by social science and organizational research[14]. It moves their professional decisions away from personal preference and unsystematic experience toward those based on the best available scientific evidence[15]. Good management practice is assumed to be the product of a good knowledge and its application, not least in Human Resource Management (HRM).

Evidence based management research in HRM has focused on High Performance Work Practices (HPWP)[16] which lead to superior employee and organizational performance. The notion of high-performance work practices is in interest over the last years[17].

[8] D.L. Sackett, W. Rosenberg, J.A. Gray, R.B. Haynes & W.S. Richardson, *Evidence based medicine: what it is and what it isn't*, "British Medical Journal", 312, 7023,71–2, 1996; D.L. Sackett, *Evidence-based medicine*, "Seminars in Perinatology", 21, 3–5, 1997.

[9] *Ibidem.*

[10] R.B. Briner & D.M. Rousseau, *Evidence-based I-O Psychology: Not there yet*, "Industrial and Organizational Psychology", 4, 1, 3-22, 2011.

[11] S.L. Rynes, T.L. Giluk & K.G. Brown, *The very separate...,* p. 987–1008 B.E. Kaufman, *Strategic human resource management...,* p. 12–37; A. de Waal & M. Roobol, *Applying evidence-based HRM: the case of bonuses in the home furnishing industry*, "Evidence-based HRM: a Global Forum for Empirical Scholarship", 2, 2, 192-208, 2014; D.M. Rousseau, *Is there such a thing as evidence--based management?*, "Academy of Management Review", 31, 2, 256–269, 2006.

[12] *Ibidem.*

[13] V.V. Baba & F. Hakem Zadeh, *Toward a theory of evidence based decision making*, "Management Decision", 50, 5, 832–867, 2012; D.M. Rousseau, *Is there such a thing...,* p. 256–269; B.E. Kaufman, *Strategic human resource management...,* p. 12–37.

[14] B.E. Kaufman, *Strategic human resource management...,* p. 12–37.

[15] S.L. Rynes, T.L. Giluk, & K.G. Brown, *The very separate worlds...,* p. 987–1008.

[16] B.E. Kaufman, *Strategic human resource management…,* p. 12–37.

[17] P. Boxall, & K. Macky, *Research and theory on high-performance work systems: progressing the high□involvement stream*, "Human Resource Management Journal", 19, 1, 3–23, 2009.

Researchers have conceptualized HPWP through various means. Some scholars view HPWP as a collection of multiple individual HR practices with no explicit linkages which are more likely to lead to superior performance[18]. Following this approach a HPWP system is conceptualized as a set of individual HRM practices that contribute to the enhancement of employee performance.

HPWP aim to assure flexibility, motivation, increase participation of employees in decision making and problem solving. These practices result in enhanced productivity, reflect organizational capital and have an importance for learning and human capital development[19]. Appelbaum et al.[20] claim that productivity gains are greater when companies implement system of complementary practices. They provide a basis for a conceptualization of HPWP through defining following components: employee ability (A), employee motivation (M) and practices that give employees the opportunity to perform (O). These components together, referred as the AMO model of HPWPs[21] build sustainable employee performance.

First component, ability, can predict individual job performance. Practices that contribute to employee ability include training and skill development. Ability-enhancing practices are intended to acquire new or enhance the existing skills of employees[22]. Motivation of employees, second component, deals with an employee's desire to perform. It could be increased through practices such as formal performance appraisal and compensation systems, career opportunities and sharing of information on the company's goals and results[23]. Last component, the opportunity to perform, includes employee involvement and teamwork with theoretical foundation in job design and in the employee empowerment theories[24].

The AMO framework indicates strong links between HPWP and performance. HPWP impact on organizational outcomes through increasing employee ability, motivation, and opportunity to contribute. Therefore HPWPs implementation results in better employees and organization performing. Employees who have the autonomy to take work-related decisions, who have opportunity to work together and share feedback, and influence business results experience greater involvement in their work. The synergy effect of AMO components stimulate individual employee[25] as well as organizational performance.

Nevertheless implementation of HPWP system is complex. It requires the cooperation of leaders in the organization who influence HRM policy and organization's values. Study conducted by Shatha M. et al.[26] revealed significant and positive relationships between

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[18] S.M. Obeidat, R. Mitchell, M. Bray, *The link between high performance work practices and organizational performance: Empirically validating the conceptualization of HPWP according to the AMO model*, "Employee Relations" 2016, 38/4.

[19] P. Neirotti & E. Paolucci, *Why do firms...*

[20] E. Appelbaum, T. Bailey, P. Berg & A.L. Kalleberg, *Manufacturing advantage: Why high-performance work systems pay off*, Ithaca: Cornell University Press, 2000.

[21] B. Kroon, K. Van De Voorde & J. Timmers, *High performance work practices in small firms: a resource-poverty and strategic decision-making perspective*, "Small Business Economics" 2013, 41, 1, p. 71–79; S.M. Obeidat, *The link between...*, p. 1281–1301.

[22] S.M. Obeidat, *The link between...*, p. 1281–1301.

[23] E. Appelbaum, T. Bailey, P. Berg & A.L. Kalleberg, *Manufacturing advantage...*; S.M. Obeidat, *The link between...*, p. 1281–1301.

[24] B. Gerhart, *Horizontal and vertical fit in human resource systems*, In C. Ostroff & T. A. Judge (Eds.), Perspectives on organizational fit (p. 317–350). Hillsdale, NJ: Erlbaum, 2007.

[25] E. Appelbaum, T. Bailey, P. Berg & A.L. Kalleberg, *Manufacturing advantage...*

[26] S.M. Obeidat, *The link between...*, p. 1281–1301.

HPWP systems and organizational performance. The results of the study suggest that adoption of formal staffing and training practices, formal performance appraisal and compensation based on group performance are positively linked to organizational performance.

3. METHODOLOGY OF THE RESEARCH AND RESEARCH HYPOTHESIS

The sample of the study was made up of 157 employees of the social work environment who took part in the development program where themes of 54 available trainings were categorized in four different groups: psychological trainings, legal trainings, language trainings, and computer trainings. Participants were allowed to choose trainings they wish to participate in. The survey to measure effectiveness of the trainings including scales with statements describing four phases of training process was designed, each phase of training was described by 10 items and the analyzed variable was the sum of all responses for each scale. For each group of trainings respondents were asked to assess on a 5-point Likert scale (1 – strongly disagree, 5 – strongly agree) whether the activities related to each training phase were delivered in the organizational context. The higher the sum of these items, the higher is the level of the variable. A sample items are as follows: 1) Training Needs Analysis: *Before the training, I was asked which skills could help me to increase my efficiency at work; Before the training, I was asked about the scope of duties which I devote the most time to;* 2) Training Delivery: *Activities during training reflected the real situations from my workplace; Examples and exercises used during the training clearly showed how to use new knowledge and skills at work;* 3) Training Evaluation: *At the end of the training, I completed an action plan in which I set individual goals for implementation after the training; The knowledge tests were used to verify the knowledge acquired before and after the training;* 4) Training Transfer: *My supervisor meets me regularly to talk about problems that I could have to try to use new skills; My supervisor encourages me to share new knowledge and skills with my colleagues.*

Effectiveness (Sk) was the sum of the answers. It was related to the fact that each scale had the same number of questions (n=10) thus counting the average or sum is interpretatively the same indicator. Definitions presented in Table 1. The higher the sum of these items, the higher is the level of the variable. The statements were set up based upon a review of the literature and authors' personal experience.

Table 1. Formulas for training effectiveness

Scales	Formulas
Training Needs Analysis	$Sk_1 = \text{effectiveness}_1 = \sum_{i=1}^{10} sk_{1i}$
Training Delivery	$Sk_2 = \text{effectiveness}_2 = \sum_{i=1}^{10} sk_{2i}$
Training Evaluation	$Sk_3 = \text{effectiveness}_3 = \sum_{i=1}^{10} sk_{3i}$
Training Transfer	$Sk_4 = \text{effectiveness}_4 = \sum_{i=1}^{10} sk_{4i}$

Data were analyzed using standard descriptive statistics methods (comparison in individual groups): the qualitative variables were presented in the form of tables, reporting numbers and percentages and graphically as pie charts (percentage distributions). The quantitative variables were compared with t-test before and after the training as the distribution

of these variables was different from the normal distribution, it was confirmed with the Shapiro-Wolf test.

Based on the subject literature review and own practice the following research hypothesis was adopted: the training is a logical continuing process of designing, delivering, evaluating and transferring training effects to organizational practice using evidence approach during each training phase.

4. RESEARCH RESULTS

Taking into account all the trainings available in the program it can be noticed that 16% of respondents took part in six trainings, 11% in nine, and 10% in five and seven trainings. This result shows that the majority of respondents participated from 3 to 11 trainings, which gives grounds for determining the effectiveness of these trainings. On average, the respondents participated in seven trainings.

Considering psychoeducational it can be seen that most often employees participated in 3 trainings (21.3%), and one person in 10 out of 12 trainings. The most popular was the training "Mobbing", which was attended by 80.7% of respondents. Training "Management by objectives" and "Team building" were the least popular.

In the legal training category most often the respondents took part in three trainings (25.3%). The most popular was the "Personal Data Protection" training, in which 69.3% of respondents participated and the "Code of Administrative Procedure" (67.3%).

Data summary in the area of language training shows that only 16.7% of people took part in one or two language trainings. The majority of respondents have chosen "English starter" training.

Data in the area of computer training indicate that more than half of the people did not participate in them (54.7%). Most often, employees participated in one training (24.0%) or 2 (15.3%). The most popular was the "MS Excel - basic level" training, in which 26.7% of the respondents and "MS Word" (22%) participated.

The obtained data confirms described in the literature tendency of giving more importance to raising the psychological competencies of social workers rather than computer ones. The reason could be the fact that the customer care is still based on paper documentation therefore there is no need for improvement in the field of computer programs. Interestingly, 82% of people who chose "MS Word Basic" training have over 9 years of experience as a social worker, 47% of whom are aged 46-55. In case of language training obtained data is similar, the older people, the more often they use training courses in the basic fields, such as the basics of language learning, basic MS Office programs for data editing. Therefore it might be considered that they are aware of the need to acquire qualifications in line with the position held. This attitude will certainly improve the quality of the activities undertaken at social work institutions. Moreover, it can be concluded that the respondents are aware of the development of information technologies and that these tendencies will also be applied in social work.

To estimate whether trainings were conducted properly, the effectiveness of the trainings was measured. Respondents assessed on a 5-point Likert scale (1 – strongly disagree, 5 – strongly agree) which activities related to the particular training phase were sustain in the context of training design and delivery. Results indicated that the span of means was

between 26.8 for Training Evaluation in Language Trainings to 36.1 for Training Delivery in Psychological Trainings (Table 2).

Table 2. Effectiveness of the trainings phases for different groups of trainings

	Training Needs Analysis	Training Delivery	Training Evaluation	Training Transfer
Psychological Trainings	32,4±6,1	36,1±4,8	27,6±5,8	33±7,7
Legal Trainings	33,6±5,5	35,5±5,8	27,9±5,2	34±7,2
Language Trainings	31,5±5,9	33,1±5,8	26,8±4,1	28,1±7,7
Computer Trainings	34±6,2	36,7±5,2	29,7±6,4	34,9±7

As part of psychological training, 122 out of 146 respondents participating in this category of training evaluated their effectiveness. High compliance of the respondents may indicate that the training activities in this thematic category were carried out almost to the full extent. The average response range ranged from 27.6 for Training Evaluation to 36.1 for Training Delivery (Table 2), indicating that the evaluation phase is not always carried out.

The results obtained from the scope of legal training show that 96 people rated their effectiveness. The responses ranged from 27.9 for Training Evaluation to 35.5 for Training Delivery (Table 2). The Training Evaluation phase was rated the lowest.

The results from the language training show that 16 people assessed their effectiveness, which is 64% of people who participated in these trainings. The average response ranged from 26.8 for Training Evaluation to 33.1 for Training Delivery (Table 2). Again, Training Evaluation phase was rated the lowest.

Regarding computer training, 60 trainees rated effectiveness, which is less than half of those who chose trainings from this category. The average response ranged from 29.7 for Training Evaluation to 36.7 for Training Delivery (Table 2). High score for Training Delivery phase might result from the specificity of this type of training. Such result indicates that both the training and the examples used referred to real situations at the workplace, the training was practical and responded to real needs. Again the lowest average was noted for Training Evaluation phase.

In each group of trainings, the lowest score was observed for Training Evaluation. In the light of the research hypothesis it is important recommendation for HR managers and training suppliers to give more attention to evaluation of undertaken activities. It is particularly important for the transfer of knowledge and skills to the workplace. By passing this phase supervisors do not receive feedback on the actual impact of the training on the employee's efficiency, which may hinder planning further development.

The results of this study responds to the research question regarding the organization of the training process. The conclusions make it possible to formulate the statement that the training process in the examined social work institutions is carried out in accordance with a systematic model, but not in a manner as extensive as could be derived from the literature recommendations.

5. DISCUSSION – EVIDENCE BASED TRAINING APPROACH

The positive influence of HPWP on organizational performance indicates that investment in HR practices to acquire, maintain and develop highly qualified employees through training and skill development has potential to generate financial gains.

Since the late 1990s the science of training has benefited from an explosion of research activity[27]. As stated by Singh[28], the use of comprehensive training programs, as one of the HPWP components named ability-enhancing practices, is one of the main factor influencing financial performance of the organization and employee productivity. Studies conducted by Neirotti & Paolucci[29] also confirm that the use of high-performance HRM practices positively affects developing new competencies in the organizational context. According to Shatha M. et al.[30] studies adoption of training and skill development practices is also positively linked to organizational performance. In this context evidence based approach to training practices will support and lead to high organizational performance.

From an evidence-based perspective, trainings will focus on developing evidence-based approaches to practice. This approach creates a need and involves training practitioners to identify and evaluate evidence relevant to a specific problem that can be used directly to help solve a problem[31]. Trainings based on the evidence-based practice will use data-based guidelines when making decisions regarding the requirements, design, development, and delivery of training and instructional environments designed to optimize individual or organizational goals[32].

Conducted study revealed that training is a logical continuing process consisted of four phases: design, delivery, evaluation, and transfer. The new approach based on evidence aims to place those activities in the context of using best available evidence to ensure employee and organizational performance

Using relevant evidence starts with identifying whether the training is the best solution for the problem. Implementation of any of the HR practices starts with the decision-making process leading to the diagnosis by the firm's management of an organizational problem whether it is worth of an HR intervention. The diagnosis is necessary because not all solutions to organizations' problems necessarily point to the need for an HR intervention, it also depends on the expertise and attitude of the firm's management[33].

Personal judgement or experience can result in wrong decision according to the training process as this source of evidence is not a very reliable because it is highly susceptible to systematic errors. The decision about the training should to be based on real evidence of training need. A detailed analysis of the circumstances of the identified problem will allow to gather evidence whether the training will be the best solution. It needs to be decided what

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[27] E.A. Locke, *Handbook Of Principles Of Organizational Behavior: Indispensable Knowledge For Evidence-Based Management*, Second Edition, John Wiley & Sons, 2009.

[28] K. Singh, *Impact of HR practices on perceived firm performance in India*, "Asia Pacific Journal of Human Resources"2004, 42, 3, p. 301–317.

[29] P. Neirotti & E. Paolucci, *Why do firms...*

[30] S.M. Obeidat, *The link between...,* p. 1281–1301.

[31] R.B. Briner & D.M. Rousseau, *Evidence-based...,* p. 3–22.

[32] R.C. Clark, *Evidence-Based Training Methods: A Guide for Training Professionals*, Association for Talent Development, 2010.

[33] B. Kroon, K. Van De Voorde, & J. Timmers, *High performance...,* p. 71–9.

combination of resources will optimize employees performance in ways that help organizations achieve operational objectives[34].Requirements involve gathering data that will guide the selection and specification of solutions, including training that could solve organizational goals.

The process of analyzing training needs is considered to be the most important phase of designing training process[35]. The focus should be given on the purpose of the training. The training need analysis starts when employee's actual performance is less than the expected performance. Performance gap should be analyzed at three levels: organizational, operational and personal analysis[36].Organizational analysis provides information regarding mission and strategies, capital resources, human resources and organizational environment and how it affects the job performance. Operational analysis refers to extensive analysis of job, to determine various tasks and identify required knowledge, skills and attitudes (KSA). Finally, personal analysis determines whether the employees have necessary KSA's, if not, then training is to be provided. Data regarding personal analysis can be collected from performance appraisals, proficiency tests, assessment centres etc.[37].

After it is identified that performance gap exists, the organization must discover the reason for it and provide training only if the gap is due to lack of required KSA's. This is where the level of personal analysis of performance gap plays crucial role. If gap occur due to KSA deficiency then training is required. This is where new approach towards training needs to be applied. Once it is identified that training is the solution, evidence based practice must be applied to design, develop, and deliver most effective solutions. Training needs analysis is a first step to develop an evidence-based training program. The goal of using trainings based on evidence is to help move training practitioners toward a professional level of practice by incorporating research-based evidence to design, develop and facilitate training.

After training needs analysis is conducted next step in the training process is to design and implement training content. The content of evidence-based training needs to be based on psychological knowledge about the learning process and on scientific research. It entails the use of empirically validated pedagogical tools and techniques that promote learning. In this phase instructional design for the training program is prepared.

Training programs are costly in money and time[38] therefore their evaluation aims to determine effects. Evaluation of training aims at improving the training process in future and to ensure that the learners have acquired the necessary skills or knowledge and will be able to contribute to the organization's effectiveness. This phase determines execution of the evaluation plan as well as disseminating training results[39]. The training evaluation most commonly consists of measuring trainees reaction after the training and their perception whether they have learned from it[40]. Study conducted by Steensma & Groeneveld[41] reveled

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[34] R.C. Clark, *Evidence-Based...*

[35] E.A. Locke, *Handbook of...*

[36] T. Boydell & M. Leary *Identifying Training Needs*, London 1996.

[37] *Ibidem.*

[38] H. Steensma & K. Groeneveld, *Evaluating a training using the "four levels model"*, "Journal of Workplace Learning" 2010, 22, 5, p. 319–331.

[39] E.A. Locke, *Handbook of...*

[40] H. Steensma & K. Groeneveld, *Evaluating...*, p. 319–331.

[41] *Ibidem.*

that many training program evaluations are restricted to Kirkpatrick's first level of training evaluation: reactions. For an evidence-based evaluation reactions are necessary, but not sufficient. Kirkpatrick's[42] model aims to improve the quality of training evaluation. Nevertheless, in designing the evaluation, attention should be paid to possible threats to evaluation and variables that can affect the outcomes. These threats and variables should be excluded in designing evaluation[43].

Evidence based training approach will be complete when organizations will look also to design transfer of training results to the workplace. The model of training transfer process includes training inputs (trainee characteristics, training design, work environment), training outputs (learning and retention) and conditions of transfer (generalization and maintenance)[44]. The element that significantly impact learning and training outcomes is the design and delivery of training. Appropriate applying training methods is also one of the main challenges in designing evidence based training[45] that enhance learning to increase employee efficiency and organizational performance. Evidence based training approach focus on proven and the most powerful methods to implement and maximize learning along with technology which best suites to what method. There are a number of ways to categorize evidence for training methods. Clark[46] indicates that the sources for training methods for research evidence can come from either academic or practitioners. Practitioner research refers to evidence gathered and disseminated by workforce professionals and their clients to support a specific organizational goal or problem. Practitioner evidence may include performance analysis (interviews, work observation, operational data), design and development (testing, experiments), evaluation (surveys, work observation), and return on investment (financial benefits, intervention costs). Academic research refers to evidence gathered and published by research professionals using scientific methodologies to ensure validity and reliability, such as experiments, factorial experiments, correlational studies, syntheses, psychological mediators[47].

Experimental methods have been used for many years to conduct research in education[48]. It is the foundational evidence-based method that determines whether specific instructional techniques are effective. The critical features of experimental research focus on comparison of learning from an experimental lesson to learning from a control lesson that does not include the instructional method being evaluated[49].

Experimental design can be applied also as an evidence based approach to the training evaluation. In such experimental design trainee performance can be compared with performance of other people who were not trained. In such experimental designs two groups

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[42] D.L. Kirkpatrick, *Evaluating Training Programs: The Four Levels*, Berrett-Koehler, San Francisco, CA, 1994.

[43] H. Steensma & K. Groeneveld, *Evaluating...*, p. 319–331.

[44] T.T. Baldwin & J.K. Ford, *Transfer of training: a review and directions for future research*, "Personnel Psychology" 1998, 41, p. 63–105.

[45] R.C. Rosen, J.I. Ruzek, B.E. Karlin, *Evidence-based training in the era of evidence-based practice: Challenges and opportunities for training of PTSD providers*, "Behaviour Research and Therapy" 2017, 88, p. 37–48.

[46] R.C. Clark, *Evidence-Based...*

[47] *Ibidem.*

[48] S.M. Ross, G.R. Morrison & D.L. Lowther, *Using Experimental Methods in Higher Education Research*, "Journal of Computing in Higher Education" 2005, 16, 2.

[49] R.C. Clark, *Evidence-Based...*

should be formed: the experimental group (trainees) and a control group consisting of persons who are more or less equal to the members of the experimental group, but who will not be trained[50]. In order to get the quality label of being an evidence-based intervention, the result of the study using experimental design should indicate statistically significant differences found between the intervention group and the control/comparison group[51]. De Los Reyes & Kazdin[52] also suggest that such findings supporting the intervention should be replicated, preferably by independent investigators, and lead to multiple outcome measures.

Besides described isolated scientific methodologies also more synthetic techniques can be used. When there are many experiments the conclusions could be drawn using research that synthesizes multiple data sets. One of such techniques, systematic review is a methodology for synthesizing research which aims to aggregate a number of research reports or experiments on a specific question and summarizes overall guidelines based on their analysis[53] [54]. Systematic reviews typically end with meta-analysis which is gaining popularity mostly across the social sciences[55]. Meta-analysis is based on statistical theory and incorporates statistical techniques to combine the results from multiple studies that focus on a similar issue. An important element to consider in both practitioner and experimental research is how learning is measured. Evidence based training approach aims to define and measure trainees competencies and organizational outcomes. Competency evaluation is both a theoretical problem and a practical concern for program administrators and training directors[56]. New approaches to evaluating outcomes of training have employed a mixture of qualitative and quantitative methods, resulting in a broader and more comprehensive evaluation of training outcomes[57]. These article provide broad support for evidence based training.

6. CONCLUSION

In the article the way trainings are designed and delivered was discussed. The study revealed that training is a logical continuing process consisted of four phases: design, delivery, evaluation, and transfer. This results responds to the research hypothesis regarding the organization of the training process. Training facilitates learning by imparting new skills and knowledge, with a view to change or alter the current behavior of employees as desired by the organization so that the employees can work more effectively to attain the goals and objectives of the organization.

Nevertheless the paper aimed primarily to present a new approach to training based on evidence. To present this new movement in HRM practices the definitions and features of

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[50] H. Steensma & K. Groeneveld, *Evaluating…,* p. 319–331.

[51] A. De Los Reyes & A.E. Kazdin, *Conceptualizing changes in behavior in intervention research: the range of possible changes model*, "Psychological Review" 2006, 113, 3, 554–83.

[52] *Ibidem.*

[53] W. Rhodes, *Meta-Analysis: An Introduction Using Regression Models*, "Evaluation Review" 2012, 36, 1, 24–71.

[54] R.C. Clark, *Evidence-Based...*

[55] W. Rhodes, *Meta-Analysis...,* p. 24–71.

[56] R.C. Rosen, J.I. Ruzek, B.E. Karlin, *Evidence-based...,* p. 37–48.

[57] *Ibidem.*

evidence-based practice and existing knowledge on evidence-based human resource management (EBHRM) has been discussed and integrated.

Evidence-based practice involves using multiple sources to seek the best available evidence. It should be noted, though, that evidence may be highly relevant and trustworthy – or it may be irrelevant and completely untrustworthy. Research design do not necessarily lead to a deeper understanding of why interventions work better with evidence. To get this insight, hypotheses derived from theories should be tested, and this should lead to understanding causal connections between characteristics of persons, interventions, and contexts.

Research evidence practice is often based on numbers, quantitative data therefore understanding of basic statistical concepts is useful to evaluate critically some types of evidence. Nevertheless it is not required to become a statistician to undertake evidence-based practice. Evidence-based practice is about preparing yourself and organization to make decisions well by identifying the best available evidence. Although it is true that organizations do differ and are unique, they also tend to face similar issues. Peter Drucker asserted that most management issues are repetitions of familiar problems cloaked in the guise of uniqueness[58]. Evidence-based practitioners need to be flexible enough in any decision making process. Nevertheless, to make sense of evidence, it is needed to understand the organizational context and a critical mindset.

Among HR practitioners there is a lack of evidence based knowledge, irregular beliefs and unfounded intuitions that may influence their attitudes towards evidence based management. This can also results that HR managers do not see value in evidence based management, they do not believe that evidence based knowledge is valuable and that evidence based management will work in practice. Evidence based management can be resolved through increasing HRM knowledge and competence. As Rynes et al.[59] found, those organizations are more successful if HR practitioners rely on the available scientific evidence and incorporate evidence based solutions to every day practice.

The literature review of EBHRM practices revealed that to design, develop, and deliver most effective solutions to address identified gap an evidence-based training approach needs to be applied. Once it is identified that training is the solution for organizational problem, the training should be considered as process planned and designed with systematic and logical approach based on best available evidence practices. This will allow to develop and implement effective instruction to meet current and future needs, ensure that employees possess the skills, knowledge, and attitudes required to perform their job.

In the literature we can find a lot of existing research into the effectiveness of evidence based practice nevertheless it is not referred to applying this approach to trainings. However, it supports the rationale for why instructors should embrace evidence best practice during trainings. It also urges trainers to adopt a practitioner approach and the attitude of trainer as a researcher to ensure efficiency of their practices. Evidence based approach to training fills the gap in the research in terms of efficiency of training practices in the organizations.

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[58] E. Stark, P. Stepanovich, P. Poppler, P. Hopkins, *Surrounded by White Water: Conflicts in Management Sciences Regarding Truth and Reality*, "Journal of Behavioral and Applied Management" 2008, 9, 3, p. 258–274.

[59] S.L. Rynes, K.G. Brown, A.E. Colbert, *Seven common...*, p. 92–102.

REFERENCES

1. André de Waal & Roobol M., *Applying evidence-based HRM: the case of bonuses in the home furnishing industry*, "Evidence-based HRM: a Global Forum for Empirical Scholarship" 2014, 2/2.

2. Appelbaum E., Bailey T., Berg P., & Kalleberg A.L., *Manufacturing advantage: Why high-performance work systems pay off*, Ithaca: Cornell University Press, 2000.

3. Baba V.V. & Hakem Zadeh F., *Toward a theory of evidence based decision making*, "Management Decision" 2012, 50/5.

4. Baldwin T.T. & Ford J.K., *Transfer of training: a review and directions for future research*, "Personnel Psychology" 1988, 41.

5. Boxall P. & Macky K., *Research and theory on high‑performance work systems: progressing the high‑involvement stream*, "Human Resource Management Journal" 2009, 19/1.

6. Boydell T. & Leary M., *Identifying Training Needs*, IPD, London 1996.

7. Briner R.B., & Rousseau D.M., *Evidence-based I-O Psychology: Not there yet*, "Industrial and Organizational Psychology" 2011, 4/1.

8. Clark R.C., *Evidence-Based Training Methods: A Guide for Training Professionals*, Association for Talent Development, 2010.

9. De Los Reyes A. & Kazdin A.E., *Conceptualizing changes in behavior in intervention research: the range of possible changes model*, "Psychological Review" 2006, 113, 3.

10. Gerhart B., *Horizontal and vertical fit in human resource systems*, In C. Ostroff & T.A. Judge (Eds.), *Perspectives on organizational fit*, Hillsdale, NJ: Erlbaum, 2007.

11. Gill C., *Don't know, don't care: An exploration of evidence based knowledge and practice in human resource management*, "Human Resource Management Review" 2018, 28.

12. Grossman R. & Salas E., *The transfer of training: what really matters*, "International Journal of Training and Development" 2011, 15/2.

13. Kaufman B.E., *Strategic human resource management research in the United States: A failing grade after 30 years?*, "Academy of Management Perspectives" 2012.

14. Kirkpatrick D.L., *Evaluating Training Programs: The Four Levels*, Berrett-Koehler, San Francisco, CA, 1994.

15. Kroon B., Van De Voorde K. & Timmers J., *High performance work practices in small firms: a resource-poverty and strategic decision-making perspective*, "Small Business Economics" 2013, 41/1.

16. Locke E.A., *Handbook Of Principles Of Organizational Behavior: Indispensable Knowledge For Evidence-Based Management*, Second Edition, John Wiley & Sons, 2009.

17. Neirotti P. & Paolucci E., *Why do firms train? Empirical evidence on the relationship between training and technological and organizational change*, "International Journal of Training and Development" 2013, 17/2.

18. Obeidat S.M., Mitchell R., Bray M., *The link between high performance work practices and organizational performance: Empirically validating the conceptualization of HPWP according to the AMO model*, "Employee Relations" 2016, 38/4.

19. Rhodes W., *Meta-Analysis: An Introduction Using Regression Models*, "Evaluation Review" 2012, 36/1.

20. Rosen R.C., Ruzek J.I., Karlin B.E., *Evidence-based training in the era of evidence-based practice: Challenges and opportunities for training of PTSD providers*, "Behaviour Research and Therapy" 2017, 88.

21. Ross S.M., Morrison G.R. & Lowther D.L., *Using Experimental Methods in Higher Education Research*, "Journal of Computing in Higher Education" 2005, 16/2.

22. Rousseau D.M., *Is there such a thing as 'evidence-based management?,* "Academy of Management Review" 2006, 31/2.

23. Rousseau D.M. & Barends E.G.R., *Becoming an evidence-based HR practitioner*, "Human Resource Management Journal" 2011, 21/3.

24. Rynes S.L., Giluk T.L., & Brown K.G., *The very separate worlds of academic and practitioner periodicals in human resource management: Implications for evidence-based management*, "Academy of Management Journal" 2007, 50/5.

25. Rynes S.L., Brown K.G., Colbert A.E., *Seven common misconceptions about human resource practices: Research findings versus practitioner belief*, "The Academy of Management Executive" 2002, 16/3.

26. Sackett D.L., *Evidence-based medicine*, "Seminars in Perinatology" 1997, 21.

27. Sackett D.L., Rosenberg W., Gray J.A., Haynes R.B. & Richardson W.S., *Evidence based medicine: what it is and what it isn't'*, "British Medical Journal" 1996, 312, 7023.

28. Singh K., *Impact of HR practices on perceived firm performance in India*, "Asia Pacific Journal of Human Resources" 2004, 42/3.

29. Stark E., Stepanovich P., Poppler P., Hopkins P., *Surrounded by White Water: Conflicts in Management Sciences Regarding Truth and Reality*, "Journal of Behavioral and Applied Management" 2008, 9/3.

30. Steensma H. & Groeneveld K., *Evaluating a training using the "four levels model"*, "Journal of Workplace Learning" 2010, 22/5.

31. Williams D. & Coles L., *Evidence-based practice in teaching: an information perspective*, "Journal of Documentation" 2007, 63/6.

METODA KSZTAŁCENIA OPARTA NA DOWODACH W PRAKTYCE ORGANIZACYJNEJ

Artykuł koncentruje się na potrzebie rozważenia sposobu, w jaki szkolenia są projektowane i przeprowadzane. Na podstawie badań i przeglądu literatury przedstawiono nowy ruch w praktyce zarządzania zasobami ludzkimi, podejście do szkoleń opartych na dowodach. W pracy omawiane są definicje i cechy praktyki opartej na dowodach oraz istniejąca wiedza na temat zarządzania zasobami ludzkimi opartego na dowodach (EBHRM). W artykule przeanalizowano również, czego można się nauczyć z istniejących badań nad EBHRM na temat skuteczności szkoleń opartych na dowodach. Dane zebrano za pomocą ankiety służącej do pomiaru efektywności szkoleń. Badanie przeprowadzono wśród pracowników socjalnych, którzy uczestniczyli w kompleksowym programie szkoleniowym. Badanie ujawnia, że szkolenie jest logicznym ciągłym procesem składającym się z czterech etapów: projektowania, dostarczania, oceny i transferu. Nowe podejście do szkolenia umieszcza te działania w kontekście wykorzystania najlepszych dostępnych dowodów w celu zapewnienia wydajności pracowników i organizacji. Podano uzasadnienie, dlaczego instruktorzy powinni przyjmować najlepsze praktyki dowodowe podczas szkoleń. Zachęca także trenerów do przyjęcia podejścia opartego na refleksji i postawy trenera jako badacza w kierunku skuteczności ich

praktyk. Unikalny wkład wartości tego artykułu pochodzi z opracowania podejścia szkolenio-wego opartego na dowodach na skutek przeprowadzonych badaniach i literatury dotyczącej ZZL.