Ethical aspects of conducting diary research at work

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Abstract

Due to the growing popularity of using experience sampling methods (i.e., diary studies) in organizational research, it is worth considering the ethical dilemmas faced by researchers employing this method. In this article, we highlight some of these ethical dilemmas and present the results of a workshop conducted among researchers participating in the EAWOP Small Group Meeting (SGM) on *"Ethical issues in psychological assessment in the organizational context"* held at the University of Warsaw, 11–13 September, 2019. Workshop participants tasked with creating their own tools for diary research, identified the following ethical issues: a) copyright of tools; b) the newly developed tools' psychometric values; c) the expediency of using the diary study methodology for a variety of research questions; d) employees' well-being; e) rewarding employees for the effort required by the methodology; f) employees' dignity; and g) employees' time away from work. Workshop participants developed some preliminary solutions for addressing these issues: a) using diary studies as a supplementary method to questionnaire research; and b) participants' sacrifice of personal psychological resources should be adequately appreciated.

Keywords: diary study, ethical aspects of applied research, workshop, EAWOP Small Group Meeting

Introduction

This article discusses a method of data collection called the experience sampling method or diary study method (Larson & Csikszentmihalyi, 1983), which has been gaining popularity in the context of applied organizational psychology research (for example Dalal, Lam, Weiss, Welch & Hulin, 2009). Conducting research during working hours places demands on the employees as it constitutes an interruption of their daily work. Thus, employees must choose whether to continue their work or whether to complete a survey that has been sanctioned by their employer. Measurement during working hours also raises ethical dilemmas on the part of the researchers who, on the one hand must take into account the employees' well-being, and on the other hand, are responsible for safeguarding the integrity of the employed methodology. As the method has become increasingly popular, it is worth considering these ethical dilemmas, especially given that organizational psychologists operate in a profession that has the trust of the public.

The rest of the article has been structured as follows: in the theoretical section, we first describe the experience sampling method and highlight the benefits and ethical challenges it poses to researchers. In the second part of the article, we describe a workshop that was part of the EAWOP SGM on *"Ethical issues in psychological assessment in the organizational context"* held at the University of Warsaw, September 11–13, 2019. This workshop was aimed at developing solutions to ethical dilemmas arising during diary research conducted in the workplace. We end our article with some suggestions for researchers employing the diary study method.

Theoretical framework

What is the experience sampling method?

The experience sampling method (ESM, Larson & Csikszentmihalyi, 1983), also called diary method, is a strategy for gathering information from individuals about their experience of daily life as it occurs. The method can be used to collect both qualitative and quantitative data and the questions are tailored to the purpose of the research. The individual's own thoughts, perceptions of events, and allocation of attention are the primary objects of study, grounding this method in the phenomenological approach. An example of using this method, would be asking participants questions four times a day for two weeks. Measurements can be done via a web application, by sending emails with

links to questions or by using handheld devices which display reminders to complete the survey. The method is not new (Flügel, 1925), but new technology has facilitated this type of research (Dalal et al., 2009).

What are the benefits of ESM?

The experience sampling method has a number of benefits, some of which, we will highlight below:

- Measurement occurs in natural conditions – fluctuation in episodic states can explain the antecedents and outcomes of these states; the more the study captures the daily lives of its participants, the more reliable it is (Wheeler & Reis, 1991);
- Minimising the effects of participants' unreliable memory – by asking questions that pertain to the current point in time it eliminates errors in participants' answers due to gaps in memory; this is especially the case in studies targeting feelings and behaviours in response to a specific situation, given that emotional states and behaviour are highly variable and occur situationally (Beal, Weiss, Barros & MacDermid, 2005);
- Providing the possibility to capture the dynamics of behaviour, emotions or perceptions – only a within person approach can adequately address these dynamics and therefore this method complements the between-person approach (Alliger & Williams,1993).

Partially, due to these benefits, the method has steadily been growing in popularity. There are currently 45,900 records about ESM in Google Scholar (search term "diary study", search performed on 28.07.2020). With the method's ever increasing use, it is worth taking a closer look at the ethical aspects of using it in psychological research.

What are potential ethical challenges posed by ESM?

The very method of diary research poses challenges for scientists. Especially in the context of conducting the research in the workplace during working hours, the researcher faces ethical challenges in relation to employees and employers. Therefore, considering its growing popularity, the method could also benefit from being scrutinised from an ethical perspective. Ethical dilemmas that a researcher could face are:

- Care for the employees' well-being (dignity, autonomy, dedication to work)

versus interruption of work duties. One solution balancing these two concerns could be using the shortest possible measurement with a user-friendly interface. However, short measurement raises another potential ethical challenge highlighted below;

■ Responsibility for user-friendliness (short multiple measurements) versus quality of the obtained result (offering only a minor contribution to the knowledge in the research area). One solution could be to adjust tools properly and limit the variables / hypotheses under study. However, reducing the number of items or hypotheses may lead to only minor contributions to the knowledge in the research area.

Based on the methodological assumptions (short and multiple measurements, several times a day for several days in natural conditions) of ESM, some ethical problems associated with conducting research in the workplace and during work hours are presented below.

Care for the employees' well-being versus interruption of work duties

One of the ethical dilemmas researchers face when using ESM concerns care for the employees' well-being (e.g., autonomy, dedication to work, fatigue during the survey) versus interrupting their work duties. This dilemma springs from the methodological assumptions of ESM (i.e., short and multiple measurements, several times a day for several days in natural conditions).

Given that ESM requires several measurements during a working day for multiple days, it tends to interrupt employees' daily work routine. In other words, this method of study interferes with the fulfilment of employees' work duties. It might also affect their well-being negatively by raising internal conflicts between a felt responsibility to fulfil their work duties versus completing the survey conscientiously every single time. Since the organization sanctioned employees' participation in the study, employees might be confronted with simultaneously fulfilling their responsibility of completing work tasks as well as an additional task – completing the survey during the working day.

In addition, the ESM requires the use of the same questions for each measurement, and due to the fact that it is a multiple measurement, it could lead to respondent fatigue. Fatigue with questions may be an important issue prompting participants to withdraw from the study or it might undermine the quality of their answers. Participants tired of questions might answer them automatically in order to just get to the end of the study.

They might not understand why they have to answer the same questions repeatedly and, in the end, both the researcher and the study may lose credibility in their eyes. This might pose a threat to the credibility of future psychological research among the general public, which is important given that our profession requires public trust if we are to serve society and improve general well-being.

In sum, the multiple measurements required by the ESM during the working day, could lead to employee productivity losses, internal conflicts between sets of competing duties and fatigue with questions. This, in turn, might affect employees' well-being as well as the quality of the research. One solution could be to use the shortest possible measurement with a user-friendly interface (Dalal et al., 2009).

Responsibility for user-friendliness versus quality of the obtained result

Another ethical dilemma researchers face when using ESM concerns responsibility for user-friendliness (short multiple measurements) versus quality of the obtained result (minor contribution to the knowledge in the research area).

Conducting short measurements inevitably puts limitations on the number of variables and questions that can be fitted into a single measurement. Since, most of the time, it is not possible to test the entire research model in one study, one possible solution could be to design several studies to test parts of the model. This implies reducing the number of variables and hypotheses per study. Even if the research methodology is modified accordingly, the question of a relatively minor contribution to the knowledge in the research area still remains (Wojtkowska, 2021). Limiting the variables and simplifying the research model may not lead to new conclusions, the mechanisms of psychological processes are complex and the basic questions already have answers.

Another possible solution to ensuring short multiple measurements, besides limiting variables and hypotheses under study, would be to limit the number of items per variable in a single measurement. In this scenario, the researcher reduces an existing research tool by choosing those items they think will effectively measure the construct. This raises potential issues regarding the reliability of the shorter version of the employed research tool.

Multiple short measurements involve a great deal of effort and commitment from both the researcher and the participants. So, the question of return on investment (ROI) arises. The researcher shortens the scales, simplifies models and hypotheses, and the employee participates repeatedly in the measurement. Does this effort pay off? It is important

that psychologists consider the possible gains and losses that may result from their methodological choices.

All ethical dilemmas discussed above are related to methodological dilemmas, hence the two issues are inseparable and influence one another. In the next section, we will discuss a workshop aimed at revealing these types of ethical dilemmas when employing ESM and possible ways of dealing them.

Workshop: Joint reflections on the ESM

The EAWOP SGM *"Ethical issues in psychological assessment in the organizational context"* was held at the University of Warsaw, Poland on 11–13 September, 2019. The meeting was aimed at WOP researchers and practitioners; and focused on discussing the ethical problems they encounter in their activities. As part of this meeting we conducted a workshop, which will be described below. The goal of the workshop was to prompt participants to consider ethical challenges associated with the use of ESM in the workplace, which, so far have tended to be ignored in the literature. The participants had to create a tool (based on an existing one) that could be used in a diary study, discuss the difficulties encountered, reflect on the ethical problems of using the ESM in organizational research and collectively brainstorm about possible solutions.

Introduction to the workshop: An ESM example from the literature

As part of the workshop introduction, the trainer introduced 10 participants to a research study conducted by Dalal et al. (2009), which both exemplifies the use of ESM and provides solutions for some of the ethical dilemmas we have described in the article so far. Importantly, participants were provided with Dalal and colleagues' (2009) reasoning underlying the process of designing the final version of the research tool and study procedure. The presented material from study 1 of Dalal et al. (2009) allowed the workshop participants to better understand and empathise with the role of a researcher using ESM step-by-step.

First, they were informed about the authors' *choice of organization* (an e-business software company) which was dictated by the participants' knowledge of new technology. Participation in the study using a handheld computer was a task that was familiar to them and did not require much additional cognitive involvement. The choice was dictated by the authors' care for the participants and the study itself.

Second, they were informed about the authors' considerations regarding *voluntary participation* in the study. They highlighted that voluntary participation guarantees compliance with ethical principles, but the researcher must always take into account the possibility of participant withdrawal. In the case of an engaging research method and multiple measurements, there is an increased probability of higher drop-out. Indeed, in the cited study, 48 out of 420 employees volunteered to participate. Therefore, the larger the company involved in the study, the more likely the researcher is to collect sufficient data to draw conclusive results. Thoughtful recruitment protects the researcher, but also the employees, from a sense of wasted time and effort.

Third, the workshop participants received information about the authors' procedural considerations. *The procedure* was created for short and repeated measurements during a normal working day. Participants used handheld computers to complete four short surveys each working day for three working weeks (i.e., a total of 15 working days). In a single measurement, participants answered questions about: a) currently felt emotions (four items); the reduced measurement was based on the Positive and Negative Affect Schedule (Watson, Clark & Tellegen, 1988); and b) behaviour since the last measurement (12 behaviours); the reduced measurement was based on the organizational citizenship behaviour typology (OCB) created by Sackett and DeVore (2001) and the counterproductive work behaviour (CWB) typology created by Bennett and Robinson (2000).

The authors described the selection of items in detail. Therefore, we presented our workshop participants with the researchers' reasoning underlying their choice of behavioural items tapping into OCB and CWB. They argued that the measurement must be short (taking only two to three minutes), therefore the researcher should carefully choose the quantity and type of items from the existing tools used in the questionnaire method. In other words, researchers would need to essentially create a new tool in ESM that should retain the psychometric properties of the original tool.

Due to *the short measurement format intended not to interfere with the employees' duties*, the authors had to decide which emotions and behaviours from the full set of questionnaire tools to include in the diary study. For them, the greatest challenge was to create a limited measurement of behaviour. They highlighted that existing scales for both types of behaviour were originally designed to measure differences between persons rather than within-person variability in behaviour and for a one-off measurement. This has led to a number of issues in selecting items for diary research.

First, it turned out that the content of a large number of the 44 CWB items (Spector et al., 2006) did not render them suitable to multiple short measurements. Second, they reasoned that selected items should tap into behaviours more likely to be demonstrated during the study period of two to three weeks (e.g., *"Took money from your employer without permission"*; Spector et al., 2006). Third, they argued that the response scale used cannot refer to the frequency of involvement in a behaviour if the measurement takes place every two to three hours (e.g., it cannot consist of five-point scales ranging from 1 – *never* to 5 – *every day*). They argued that, in this case, a dichotomous scale might be more suitable: the employee either does or does not demonstrate a given behaviour. Finally, they argued that the selection of items should be dictated by the frequency of occurrence of a behaviour in everyday life. For example, this is consistent with using the experience sampling method in stress studies: asking about daily hassles rather than critical life events (Wheeler & Reis, 1991).

The authors also took into account the fact that short scales *with repeated measurements can cause fatigue in participants*, and therefore, designed a study with item rotation on a given scale: a) for emotions, four items were alternatively selected out of an eight item-pool per measurement; b) for behaviour, 12 items were alternatively selected out of a 16 item-pool per measurement. Table 1 shows the design of the ESM used in study 1 of Dalal et al. (2009).

Table 1
Description of the experience sampling method used in study 1 (based on Dalal et al., 2009)

AFFECT				EXTRA-ROLE BEHAVIOUR	
How do you feel? Example: PLEASED				*Since the last beep, I was respectful of other people's needs?*	
1 not at all	2 slightly	3 moderately	4 very	Yes	No
Measurement: 2 items of 4-item scale for positive affect 2 items of 4-item scale for negative affect				**Measurement:** 6 items of 8-item scale for OCB 6 items of 8-item scale for CWB	
Rotation of the items: ■ 4 out of 8 items were alternated ■ two surveys per workday contained one set of 4 items and the other two surveys contained another set of 4 items				**Rotation of the items:** ■ half of the items from the set were used only once per day	

Workshop task 1 - Creating your own tools for ESM research

After the introduction, participants were divided into two groups and asked to assume the role of researchers and create an ESM tool that could be used in organizational

research to measure perceived organizational support. They were presented with a measure of perceived organizational support consisting of 36 items (Eisenberger, Huntington, Hutchison & Sowa, 1986). Participants followed the guidelines for designing ESM research (Dalal et al., 2009):

- Measurement length and quality of measurement (time requirements per measurement, number of measurements per day, total duration of the study);
- Limited scale and selection of items (possible event frequency, variety, choice of rotation or lack thereof);
- Balance between length and quality of the measurement.

During the exercise, participants were asked to also write down their questions and difficulties in creating the tool.

Workshop task 1: Conclusions

The task of creating a tool based on an existing one was met with great resistance, which prompted discussions about the first ethical problem: *copyright of tools*. Participants concluded that any researcher who wishes to adapt existing tools for use via a different research method is required to obtain the original author's consent for the modifications and use of the modified tool in a given study.

In addition, participants had doubts as to whether the new tool met required *psychometric properties*. They concluded that, researchers selecting a small number of items for measurement in a diary study should use the most frequently selected items by participants in previous questionnaire studies; increasing the probability that these items will be meaningful in a diary study. Also it was important that the selected items took into account the factor loadings of specific items, that is, to select those items that load the highest on a given factor.

The final ethical issue that came up during the discussion was related to the *possibility and expediency* of using the popular ESM for any type of research question. Part of the group thought that it made no sense to use ESM when measuring employee attitudes, for instance, because these are stable over time. They argued that the method itself is demanding, therefore, its popularity alone does not mean that it lends itself to answering a variety of types of research questions. Another part of the group was of the opinion that it might be an empirical question to determine whether the method lends itself to a variety of types of research questions. One participant offered an example of researchers

being able to change participants' attitudes in an experiment via manipulating independent variables. The example supported the conclusion that researchers might need to empirically test the assumption that ESM might not lend itself to certain types of research questions. Finally, related to the expediency of using ESM, a closer examination of the issue of using highly engaging research methods, especially in the workplace, points to the potential costs associated with the method, namely the required efforts on the part of respondents.

Workshop task 2 – Discussion about ESM researchers' ethical dilemmas

Remaining in the same groups, participants reflected on those ethical issues that have usually not been considered in the literature on ESM. A lecturer experienced in conducting diary studies also took part in the discussion with the participants. During a session for brainstorming solutions, the lecturer shared their own conclusions with the group.

Workshop task 2: Conclusions

One of the issues that was raised in the group discussion, was related to the *frequent measurement of emotions* in the study that served as input for the first part of the workshop (Dalal et al., 2009). Some participants argued that asking respondents about emotions can build an attitude of openness during the study. However, others argued that sudden and frequent questions during the day about emotions may direct an employee's thoughts away from work tasks and towards internal processes. Questions about feelings can also affect the well-being of the employee. Measurement of emotions can indeed deflect individuals from their baseline, however, research has shown that they return to this baseline (Bowling, Beehr, Wagner & Libkuman, 2005). Moreover, Baumeister, Vohs, DeWall, and Zhang (2007) have proposed that individuals can use past affective experience to anticipate how they would like to feel and then choose behaviors that they believe will attain the feelings they desire. Therefore, repeated measurement studies can help to more consciously influence these affective states.

However, it is important that the researcher informs potential participants upfront about the purpose and procedure of the study, so that they can make an *informed decision* about their participation. One way to help potential respondents make an informed decision about participating in a diary study would be to conduct a pilot study. For instance, in the research of the first author (Wojtkowska, 2021), a questionnaire survey was conducted as

a pilot prior to the diary study, which might have made it easier for employees to decide to participate in or refrain from participating in the study using ESM. There are several advantages of this type of research procedure: a) direct contact with the researcher allows for the possibility of responding to respondents' doubts and questions; and b) being exposed to the survey, on which the diary study is subsequently based, allows the respondents to get to know the content of the second survey method (ESM) better. These examples can improve engagement or reassure a person in their opt-out decision. Workshop participants argued that presenting a sample measurement to potential respondents, during the informed consent, should be mandatory, because during the diary study the employee may not have the psychological space to consider how they feel about answering certain types of questions while performing work-related duties.

When answering questions about emotions in a diary study, the employee bears additional psychological costs associated with an intimate topic. The workshop participants, felt that the sacrifice of personal psychological resources should be *rewarded*. They argued that, ultimately, participants involved in engaging research should be rewarded for two reasons: a) keeping their commitment and mitigating the drop-out rate; and b) showing the researcher's appreciation of the participants' effort. In the research under discussion (Wojtkowska, 2021), at the end of the diary study, employees received individual feedback that was generated anonymously. Yet, this solution raises ethical issues related to respecting *participants' dignity*. Receiving feedback should be voluntary and the feedback should be clear, allowing respondents to request further clarification. Automated remote feedback provides the option of refusing the feedback by selecting the option not to receive it or simply by closing the window with the information without reading it. In the discussed research (Wojtkowska, 2021), the participants could refuse to accept feedback, but they could not ask additional questions about it. For this reason, feedback was written using very colloquial language, leaving open the possibility of interpreting the information to a certain extent. There was an additional reward in this study; participants were offered a three-day soft skills training in emotion management. During the training, participants could also ask for feedback. Participation in an unpaid diary study and training *takes employees' time away from work.* Even free training or research can be perceived by some organization as a cost, but if the organization and its employees benefit by raising competence, then this investment may pay off in the future. Financially, the time taken to complete the survey is cheaper than having to fund a three-day training programme led by a consulting company.

Outcomes of the workshop

During the workshop, the participants quickly adapted to taking the role of an ESM researcher conducting organizational research. Their challenge was to create a tool to be used in a diary study based on a long questionnaire (36 items). During the workshop, they identified the following ethical challenges: a) copyright of tools; b) the newly developed tools' psychometric values; c) the expediency of using the diary study methodology for a variety of research questions; d) potential impact on employees' well-being; e) rewarding employees for the effort required by the methodology; f) employees' dignity; and g) employees' time away from work.

Participants developed some preliminary solutions for researchers conducting diary studies in organizations. First, they argued that diary studies should be used as a supplementary method to questionnaire research. Due to the time-consuming nature of the method for participants, researchers should consider which variables might better be served being measured by the survey method and which variables would benefit from being studied via ESM. Second, they argued that employees' sacrifice of personal psychological resources should be adequately appreciated. In this respect, it is worth paying attention to the fact that the reward itself does not take time, is adequate to the content of the research and proportionate to the effort made by the employee.

Overall conclusions

Despite the fact that the diary method is gaining popularity in the context of extra-role behaviour research, current studies do not appear to deliver ground-breaking insights (Wojtkowska, 2021). Therefore, is it worth investing the time of the organization, employees and the researchers themselves?

Conducting research in the workplace using engaging research methods places additional demands on employees and also presents them with a dilemma of how to reconcile their work duties with their participation in the research. One could argue that, since the employer has agreed to the employees' participation in the study, they have implicitly consented to their interrupting regular work duties to participate in the study. Therefore, employees should not feel that there is a dilemma to be reconciled.
Yet, is that truly so? Priorities may shift, employers may not have realized how much time it takes for employees to participate in the study, and employees may feel that they have to reconcile work duties with study participation. Therefore, it is the responsibility

of researchers to ensure that the study interferes as little as possible with normal workflow, respecting employees' well-being and their effort involved in completing the study.

The workshop held at the SGM focused on two main ethical dilemmas:

- Care for the employees' well-being versus interruption of work duties;
- Responsibility for user-friendliness versus quality of the obtained result.

The main conclusion from the theoretical considerations and the workshop was that diary research in the workplace should be carefully planned and serve as a supplement to questionnaire research. On the other hand, the questionnaire method is not able to answer research questions about cause-effect relationships, whereas ESM can. Therefore, it is important to remember that the decision to use ESM in organizational research should be made based on the type of research question one tries to answer and should involve a restrictive selection of variables on the basis of previous questionnaire studies.

References

Alliger, G. M., & Williams, K. J. (1993). Using signal-contingent experience sampling methodology to study work in the field: A discussion and illustration examining task perceptions and mood. *Personnel Psychology*, *46*(3), 525–549. doi: 10.1111/j.1744-6570.1993.tb00883.x.

Baumeister, R. F., Vohs, K., DeWall, C. N., & Zhang, L. (2007). How emotion shapes behavior: Feedback, anticipation and reflection, rather than direct causation. *Personality and Social Psychology Review*, *11*, 167–203. doi: 10.1177/1088868307301033.

Beal, D. J., Weiss, H. M., Barros, E., & MacDermid, S. M. (2005). An episodic process model of affective influences on performance. *Journal of Applied Psychology*, *90*(6), 1054–1068. doi: 10.1037/0021-9010.90.6.1054.

Bennett, S. L., & Robinson, R. J. (2000). A typology of deviant workplace behaviours: A multidimensional scaling study. *Academy of Management Journal*, *38*(2), 555–572. doi: 10.5465/256693.

Bowling, N. A., Beehr, T. A., Wagner, S. H., & Libkuman, T. M. (2005). Adaptation-level theory, opponent process theory, and dispositions: An integrated approach to the stability of job satisfaction. *Journal of Applied Psychology*, *90*, 1044–1053. doi: 10.1037/0021-9010.90.6.1044.

Dalal, R. S., Lam, H., Weiss, H. M., Welch, E. R., & Hulin, C. L. (2009). A within-person approach to work behaviour and performance: Concurrent and lagged citizenship-counterproductivity associations, and dynamic relationships with affect and overall job performance. *Academy of Management Journal*, *52*(5), 1051-1066. doi: 10.5465/amj.2009.44636148.

Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, *71*(3), 500-507. doi: 10.1037/0021-9010.71.3.500.

Flügel, J. C. (1925). A quantitative study of feeling and emotion in everyday life. *British Journal of Psychology*, *15*, 318-355.

Larson, R., & Csikszentmihalyi, M. (1983). The experience sampling method. In H. Reis (Ed.), *New directions for methodology of social and behavioural sciences* (vol. 15, pp. 41-56), San Francisco, CA: Jossey-Bass.

Sackett, P. R., & DeVore, C. J. (2001). Counterproductive behaviours at work. In N. Anderson, D. Ones, H. Sinangil, & C. Viswesvaran (Eds.), *Handbook of industrial, work, and organizational psychology* (vol. 1, pp. 145-164). London, UK: Sage.

Spector, P. E., Fox, S., Penney, L. M., Bruursema, K., Goh, A., & Kessler, S. (2006). The dimensionality of counterproductivity: Are all counterproductive behaviours created equal? *Journal of Vocational Behaviour*, *68*(3), 446-460. doi: 10.1016/j.jvb.2005.10.005.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*, 1063-1070. doi: 10.1037/0022-3514.54.6.1063.

Wheeler, L., & Reis, H. T. (1991). Self-recording of everyday life events: Origins, types, and uses. *Journal of Personality*, *59*(3), 339-354. doi: 10.1111/j.1467-6494.1991.tb00252.x.

Wojtkowska, K. (2021). *Emotional antecedents of counterproductive and organizational citizenship behaviours in the workplace – identification of personal and organizational sources.* Unpublished doctoral dissertation.